

The Effect of Marriage and Divorce on Women's Economic Well-Being Author(s): Pamela J. Smock, Wendy D. Manning, Sanjiv Gupta Source: American Sociological Review, Vol. 64, No. 6 (Dec., 1999), pp. 794-812 Published by: American Sociological Association Stable URL: <u>http://www.jstor.org/stable/2657403</u> Accessed: 11/10/2011 16:54

Your use of the JSTOR archive indicates your acceptance of the Terms & Conditions of Use, available at http://www.jstor.org/page/info/about/policies/terms.jsp

JSTOR is a not-for-profit service that helps scholars, researchers, and students discover, use, and build upon a wide range of content in a trusted digital archive. We use information technology and tools to increase productivity and facilitate new forms of scholarship. For more information about JSTOR, please contact support@jstor.org.



American Sociological Association is collaborating with JSTOR to digitize, preserve and extend access to American Sociological Review.

# THE EFFECT OF MARRIAGE AND DIVORCE ON WOMEN'S ECONOMIC WELL-BEING\*

**Pamela J. Smock** *University of Michigan*  Wendy D. Manning Bowling Green State University

## Sanjiv Gupta

University of Michigan

Some social commentators and social scientists have called for the strengthening of divorce laws, a call based, in part, on the apparently strong economic advantage marriage holds for women and their children. We focus on the question of whether divorced women would experience the same absolute levels of economic well-being by staying married as women who remain married experience. We also examine the argument that all women are economically vulnerable once marriage ends by examining whether the average married woman would, if she were to divorce, experience the same low levels of economic well-being as divorced women do. Using longitudinal data from the National Survey of Families and Households, we estimate endogenous switching regression models that simultaneously predict the odds of divorce and subsequent economic well-being for women who divorce and for those who remain married. Our calculations show that if divorced women were to remain married, their economic well-being would improve substantially but would not attain the level of women who remain married. We also find that if married women were to divorce, their average level of economic well-being would be about the same as that of divorced women, supporting the view that women's economic vulnerability outside of marriage is ubiquitous.

Divorced women's precarious economic well-being is a key factor underlying concerns about high levels of divorce in the contemporary United States. Women experiencing separation or divorce typically undergo marked declines in family

income and in measures of economic wellbeing that take account of family size. In contrast, men's family incomes decline more modestly, and they often experience increases in standard-of-living measures that adjust for family size (e.g., Bianchi, Subaiya, and Kahn 1999; Burkhauser et al. 1991; Corcoran 1979; Duncan and Hoffman 1985; Hanson, McLanahan, and Thomson 1998; Hoffman and Duncan 1988; Morgan 1991; Mott and Moore 1978; Peterson 1989, 1996; Smock 1993, 1994; Weitzman 1985). Not surprisingly, the gap between married women's and divorced women's absolute levels of economic well-being is large. In 1996, the median family income of divorced mothers was about \$20,000 compared to over \$50,000 for married mothers (Lugaila 1998).

Such comparisons result in the seemingly obvious conclusion that, relative to divorce, marriage confers substantial economic ben-

<sup>\*</sup> Direct all correspondence to Pamela J. Smock, Department of Sociology, University of Michigan, Ann Arbor, MI 48109-1382 (pjsmock@ umich.edu). This research was supported by grants from the National Institute of Child Health and Human Development to the first and second authors (HD-34391 and HD-34392). We thank Robert D. Mare, Richard R. Peterson, Yu Xie, Susan Brown, Deborah Carr, Aimée R. Dechter, Peggy Giordano, Monica Longmore, Arthur Sakamoto, Laura Sanchez, participants in the University of Michigan Population Studies Center seminar series, anonymous ASR reviewers, the ASR Editor and a Deputy Editor for their constructive suggestions. This research also benefited from early discussions with Judith A. Seltzer.

efits to women.<sup>1</sup> Indeed, policy proposals that encourage couples to remain married have, at least in part, been based on the welldocumented economic disadvantages experienced by women and children living outside of marriage (e.g., Gallagher 1996; Galston 1996; Ooms 1998). There is, however, a question with critical implications for such proposals: Would a divorced woman, if she had remained married, fare as well economically as women who remain married do? If the economic gains of marriage are smaller for those women who divorce than the gains observed for married women, then the economic grounds for proposals to encourage marriage would be considerably weakened.

A converse question is whether married women would fare as poorly as divorced women if, hypothetically, they were to divorce. Some scholars have argued that all women are economically vulnerable outside of marriage, or at least once a marriage ends (e.g., Delphy 1984; Delphy and Leonard 1992; Okin 1991; Thorne 1992). Yet women who divorce tend to be somewhat more disadvantaged than women who remain married, even before marital disruption occurs (Holden and Smock 1991). Consequently, if a married woman were to divorce, she might experience better economic outcomes than divorced women. This question has important implications for our understanding of contemporary gender inequality in the United States.

Drawing on longitudinal data from the two waves of the National Survey of Families and Households (NSFH), we address these two questions by estimating endogenous switching regression models that assess the effects of a woman's marital status (staying married versus separating or divorcing) on absolute levels of economic well-being while taking account of differences in the measured and unmeasured characteristics between those who divorce and those who stay married. We use the parameter estimates from these models to simulate: (1) divorced women's expected economic well-being were they to remain married, and (2) married women's expected economic well-being were they to divorce. We compare these expected levels of economic well-being to those of actually divorced and married women.

## BACKGROUND

Recently some social scientists and social commentators have called for the strengthening of marriage, highlighting the benefits of marriage for individuals and for society as a whole (e.g., Gallagher 1996; Galston 1996; Ooms 1996; Popenoe 1996; Waite 1995; Whitehead 1996). Some even advocate more restrictive divorce laws to encourage people to remain in their marriages (Gallagher 1996; Galston 1996; Popenoe 1996). While authors' primary emphases differ, ranging from concerns about a "divorce culture" or the effects of a "fatherless" society on children to evaluations of the positive effects of marriage for individuals, the economic benefits of marriage for women and children serve as an important basis for all of their arguments.

Certainly, the economic rationale for such arguments seems sound. The social science literature sometimes assesses the relationship between marriage and economic well-being with descriptive statistics comparing the economic well-being of married people with that of persons in other marital-status groups (e.g., McLanahan and Casper 1995; Spain and Bianchi 1996; Waite 1995). These sorts of statistical comparisons show unequivocally that married women are substantially better-off financially on several measures than are their single or divorced counterparts.

Advocates for strengthening marriage sometimes employ such comparisons to bolster their position. For example, Whitehead (1996) marshals descriptive statistics to support her argument that, as a society, we ought to be encouraging marriage and discouraging divorce. She states, "[R]ecent data suggest that marriage may be a more important economic resource than a college degree" (Whitehead 1996:8). Her data are median family income statistics for married couples versus single-parent families (with and without college degrees) drawn from the Current Population Survey. The implication of this type of comparison is that if divorced women had remained married, they would enjoy the same economic well-being as that observed for married women.

<sup>&</sup>lt;sup>1</sup> The term "divorce," as used here, represents all cases of marital disruption (i.e., both separations and divorces).

Yet comparisons such as these do not necessarily indicate how divorced women would fare economically if they had remained married. In fact, the research literature suggests that the potential economic gains of marriage may not be as great for those women who divorce.

First, many sociological studies suggest that marriage is not only a cause of economic well-being but a consequence as well. Both becoming married and remaining married are associated with socioeconomic status-those with the best economic prospects are more likely to marry and subsequently to enjoy more stable unions. In particular, divorce tends to be more common among those who are less economically advantaged in the first place (Espenshade 1979; Holden and Smock 1991; Morgan 1991). Research consistently shows that the likelihood of divorce is inversely related to indicators of socioeconomic status, such as family income and educational attainment, and positively related to economic hardship (e.g., Espenshade 1979; Hoffman and Holmes 1976; Holden and Smock 1991; Martin and Bumpass 1989; Ono 1998). Differences like these between those who divorce and those who stay married are instances of what researchers generally call "observed selectivity"; that is, those who divorce and those who remain married have somewhat different sets of characteristics and these characteristics are relevant to economic well-being.

Second, there is some evidence that women whose marriages end may also differ from women who stay married in ways not easily measured (Dechter 1992a, 1992b; Holden and Smock 1991; Peters 1993). This type of selectivity is usually referred to as "unmeasured" selection and is present if those who divorce and those who remain married differ in ways that are correlated with economic well-being and are not observable by the researcher. Such selection could arise, for example, if expectations about future economic well-being impact the decision to remain married, as is argued by some theorists (Becker, Landes, and Michael 1977; Levinger 1979) and supported by some empirical research (Dechter 1992a, 1992b; Peters 1993). Unmeasured selection could also simply stem from various unmeasured differences between divorced and married women that are relevant to economic well-being (e.g., "ability" or skill level). If unmeasured selection exists, then the potential economic benefits of marriage will not be the same for those who divorce as the benefits observed for those who stay married.

Taken together, the evidence suggests that women who divorce might not do as well economically if they had remained married as do those who in fact remain married. Consequently, we ask whether divorced women could expect to achieve the same levels of economic well-being by staying married as married women do. The persuasiveness of the case for stricter divorce laws, or other means of encouraging couples to remain married, rests in part on the answer to this question. While some past studies take account of both measured and unmeasured characteristics when assessing the economic advantage of marriage, these studies have either compared marrying versus staying single (e.g., Daniel 1995; Waite 1995) or have focused on somewhat different issues. For example, Dechter (1992a) and Peters (1993) use calculations of women's expected economic well-being in marriage versus divorce as independent variables to predict marital disruption, and Dechter (1992b) uses them to construct estimates of expected economic change for women upon divorce.<sup>2</sup>

<sup>&</sup>lt;sup>2</sup> Peters (1993) examines whether the difference in expected income (and expected changes in income) if a woman remains married and if she divorces affects the probability of marital disruption. That is, the central issue for Peters is whether the expected financial consequences of divorce impact the decision to divorce. Dechter's (1992a) primary aim is similar: She evaluates whether women's economic independence influences marital disruption. She calculates women's expected economic status in marriage and in divorce (Dechter 1992a, app. table A3) and uses these predictions to construct measures of women's economic independence (e.g., economic independence is conceptualized as the expected economic gains to remaining married). These measures then serve as time-varying covariates in an event-history analysis of divorce. Dechter (1992b) compares the expected economic effects of divorce (measured as the ratio of economic status expected in marriage to the level expected in divorce) for women who remain married and for those who divorce. Dechter's models are cor-

The second question we examine is whether married women would, if they were to divorce, fare roughly the same economically as divorced women. On the one hand, the intuitive answer would seem to be "yes." Numerous studies have documented the severe economic consequences of divorce for women (Bianchi et al. 1999; Burkhauser et al. 1991; Corcoran 1979; Duncan and Hoffman 1985; Morgan 1991; Mott and Moore 1978; Nestel, Mercier, and Shaw 1983; Peterson 1989, 1996; Smock 1993, 1994; Stirling 1989; Weiss 1984; Weitzman 1985). Despite variation in samples, analytic design, and precise estimates, studies consistently show that, when they divorce, women from a variety of socioeconomic backgrounds experience relatively steep declines in most measures of economic status, resulting in low absolute levels of economic well-being (for a review, see Holden and Smock 1991).

On the other hand, women who stay married seem to be advantaged in some ways when compared with those who divorce, such as having higher average educational attainment. This suggests that married women might fare somewhat better in absolute terms if they divorced than do divorced women. In any event, if those who divorce differ from those who remain married in either measured or unmeasured ways, then married women might not experience the same post-divorce economic situations as do their divorced counterparts.

Certainly, researchers examining the economic consequences of divorce have often been sensitive to selection issues. Some have empirically taken account of measured selection by using multivariate analyses to predict either women's absolute postdisruption economic well-being or declines in well-being experienced upon marital disruption (e.g., Bianchi et al. 1999; Hanson et al. 1998; Morgan 1991; Smock 1993, 1994); these sorts of studies control for measured characteristics such as educational attainment and predisruption socioeconomic status. Although a few studies have taken account of both measured and unmeasured selection into divorce (Dechter 1992a, 1992b; Peters 1993;

Peterson 1989; Smock 1992), little substantive attention has been paid to women's expected absolute levels of well-being in both divorce and marriage.<sup>3</sup>

The answers to our research questions have important implications for understanding gender inequality in the United States. A primary characteristic of gender stratification is differential access by gender to valued societal resources (Huber and Spitze 1983). In money-based economies, such access is largely determined by income. Prior research has illustrated the economic dependency of women within marriage, with most marriages characterized by men's substantially higher earnings and women's far larger contributions to domestic work and child care (e.g., England and Farkas 1986; Gupta 1999; Sørensen and McLanahan 1987). During marriage, men and women presumably share economic resources and enjoy equivalent standards of living, but once marriage ends, women's true position in the social hierarchy is revealed (Arendell 1986; Delphy 1984; Delphy and Leonard 1992; Okin 1991; Weitzman 1985).<sup>4</sup> Okin (1991), for example, suggests that all women are made economically vulnerable by marriage (or even by the anticipation of marriage) as it currently tends to be struc-

rected for possible self-selection bias. We employ an analytic technique similar to Dechter's (1992a, 1992b).

<sup>&</sup>lt;sup>3</sup> Peterson (1989) takes account of unmeasured selection primarily to adjust coefficients in his models. Smock (1992) estimates endogenous switching models that take account of measured and unmeasured selection in order to evaluate the sources of possible cohort change in the economic consequences of divorce for women. While Dechter (1992a; 1992b) reports absolute levels of expected economic well-being from endogenous switching regression models, she uses them largely to construct measures of economic independence and as the basis for calculations of expected economic changes upon divorce. See note 2 for descriptions of Peters (1993) and Dechter (1992a, 1992b).

<sup>&</sup>lt;sup>4</sup> Some would disagree with the assumption that husbands and wives share equivalent standards of living in marriage (e.g., Ferree 1990). Delphy and Leonard (1992) argue that there may be inequality in consumption within family units, with wives and children having lower levels of consumption than husbands. Also see Vogler and Pahl (1994) and Pahl (1990) for evidence that in many households husbands have more control over money and spending than do wives.

tured. This vulnerability, she argues, is reinforced by other factors such as the continuing gender gap in wages and occupational sex segregation. If the expected economic well-being of married women if they were to divorce is similar to that of actually divorced women, then the view that women's economic vulnerability outside of marriage is ubiquitous would be supported.

## **CURRENT INVESTIGATION**

We estimate endogenous switching regression models (Mare and Winship 1988) that simultaneously predict the likelihood of divorce and economic well-being for women who divorce and also for those who remain married. The endogenous switching model has a wide range of applications and is suitable for accounting for the effects of a categorical variable, such as marital status, on an outcome, such as economic well-being, when the outcome and the observed categorical variable (e.g., marital status) may be jointly determined. "Joint determination" is a way to describe the problem of unmeasured selectivity-the possibility that individuals are observed in a particular social category based not only on measured characteristics but also on unobserved characteristics that are related to the outcome of interest (Gamoran and Mare 1989; Mare and Winship 1988). Endogenous switching regressions have been used to investigate the economic effects of divorce for women (Dechter 1992a, 1992b; Smock 1992) as well as other sociological issues such as the effects of high school tracking on student achievement (Gamoran and Mare 1989) and the effects of primary- versus secondary-sector employment on workers' wages (Sakamoto and Chen 1991).

Using three measures of economic wellbeing as dependent variables, our models predict absolute levels of economic well-being for women who stay married and those who divorce between the two waves of the NSFH. The parameter estimates from these models, along with group-specific means on an array of independent variables, are then used to calculate women's expected economic well-being in the alternative marital statuses (i.e., remaining married or divorcing). Because remarriage or cohabitation frequently occurs after divorce, we present two estimates of women's expected well-being if they were to divorce: One estimate assumes a woman stays single, and the other assumes that she has entered a new union.

### STATISTICAL MODEL

The general endogenous switching model is as follows (Mare and Winship 1988). For the *i*<sup>th</sup> woman, let  $Y_{1i}$  represent economic wellbeing if she stays married and  $Y_{2i}$  represent her economic well-being if she separates or divorces. Let  $X_{ki}$  indicate the  $k^{th}$  characteristic that could affect economic well-being, or both economic well-being and the likelihood of marital disruption. Thus, a model for the effect of marital disruption and other characteristics on economic well-being is:

$$Y_{1i} = \sum_{k} \beta_{1k} X_{ki} + \varepsilon_{1i}, \qquad (1)$$

$$Y_{2i} = \sum_{k} \beta_{2k} X_{ki} + \varepsilon_{2i}, \qquad (2)$$

where  $\beta_{1k}$  and  $\beta_{2k}$  are parameters, and  $\varepsilon_{1i}$  and  $\varepsilon_{2i}$  are disturbances. If unmeasured variables affect both the likelihood of marital disruption and economic outcomes, then estimates of  $\beta_k$  will be inconsistent, and equations 1 and 2 must be estimated jointly with an equation predicting marital disruption. Assuming that women have latent scores  $Z_i$ , which represent their probability of ending a marriage, let the likelihood of marital disruption be a function of variables ( $X_k$ ) that affect economic outcomes and the economic outcomes expected in each marital status. Therefore,

$$Z_{i} = \sum_{k} \gamma_{k} X_{ki} + \eta_{1} Y_{1i} + \eta_{2} Y_{2i} + \zeta_{i}, \qquad (3)$$

where  $\eta_1$ ,  $\eta_2$ , and the  $\gamma_k$  are parameters, and  $\zeta$ is a disturbance that is uncorrelated with  $\varepsilon_1$ and  $\varepsilon_2$ . Because only one  $Y_1$  or  $Y_2$  is observed for each woman, equation 3 can only be estimated indirectly through its reduced form:

$$Z_{i} = \sum_{k} \pi_{k} X_{ki} + \varepsilon_{3i}, \text{ where}$$
  

$$\pi_{k} = \eta_{1} \beta_{1k} + \eta_{2} \beta_{2k} + \gamma_{k}, \text{ and}$$
  

$$\varepsilon_{3i} = \eta_{1} \varepsilon_{1i} + \eta_{2} \varepsilon_{2i} + \zeta_{i}. \qquad (4)$$

The distribution of the disturbances of equations 1, 2, and 4 are assumed by the model to be trivariate normal.

Unlike  $\zeta$ ,  $\varepsilon_3$  is allowed to be correlated with  $\varepsilon_1$  and  $\varepsilon_2$ . The two covariances,  $\sigma_{13}$  and  $\sigma_{23}$ , indicate that a common but unmeasured factor influences both the likelihood of marital disruption and economic outcomes. By allowing unmeasured determinants of marital disruption,  $\varepsilon_3$ , to be correlated with unmeasured determinants of economic outcomes,  $\varepsilon_1$  and  $\varepsilon_2$ , the model incorporates the effects of unmeasured selection into marital status. When estimating the model it is necessary to assume a value for  $\sigma_{12}$ —only one outcome is observed for each woman so this parameter cannot be estimated, but this does not affect the other estimates.

The  $X_k$  affect each of the three endogenous variables. However, some variables can be excluded from some equations when there are substantive reasons to do so. Exclusions also improve identification of the model (Mare and Winship 1988). We make liberal use of this feature of the model, and thus use some variables to predict marital disruption but not economic outcomes; we assume they affect economic well-being only indirectly through their influence on marital status. We also include some variables in the outcome equations that do not appear in the marital disruption equation; we assume they affect economic well-being but not the likelihood of marital disruption.

We estimate the models by maximum likelihood using HOTZTRAN (Avery and Hotz 1985). The covariances,  $\sigma_{13}$  and  $\sigma_{23}$ , show the direction and magnitude of unmeasured selection effects on remaining married versus separating or divorcing. For example, when  $\sigma_{23} > 0$  there is positive unmeasured selection into marital disruption. This means that the observed economic outcomes of maritally disrupted women are higher than for the average case in the population of married women. When  $\sigma_{13} < 0$  there is positive unmeasured selection into staying married because the covariance implies a negative correlation between unmeasured determinants of economic well-being and divorce.

#### **RESEARCH DESIGN**

#### Data and Sample

We use the National Survey of Families and Households 1987–1988 (NSFH1), a national probability sample of 13,008 respondents (Sweet, Bumpass, and Call 1988), and its follow-up survey in 1992–1994 (NSFH2) (Sweet and Bumpass 1996). These data are suitable for our research aims because they provide information on marital status, changes in marital status, human capital characteristics, income, children, and an array of family background measures. The response rate of the NSFH1 was approximately 74 percent, and the NSFH2 had a response rate of 82 percent for main respondents.

The eligible sample for our analysis includes female main respondents who were married, less than 60 years old at the time of the NSFH1, and who were reinterviewed for the NSFH2 (N = 2,665). We use the age restriction because there are distinctive issues associated with economic well-being at employment ages versus retirement ages.<sup>5</sup> We also require that the respondent either remain married between the two waves or experience a separation owing to marital discord or divorce. We do not distinguish between separation and divorce because separation may not quickly, or even ultimately, result in divorce, particularly among less advantaged couples (Morgan 1991; Peterson 1989; Sweet and Bumpass 1987). Some evidence even suggests that a legal divorce may not occur until one partner wishes to remarry (Sweet and Bumpass 1987).<sup>6</sup> These requirements elimi-

<sup>6</sup> One reviewer suggested that our approach does not address the economic case for stricter divorce laws because we include both separated and divorced women in our analyses. However, we believe that including both groups of women

<sup>&</sup>lt;sup>5</sup> Roughly 400 cases were lost by our requirement that the respondent be interviewed at the second wave. Analyses reveal that those who were not reinterviewed report significantly lower family income, education, and earnings at wave 1 than those who were reinterviewed. Consequently, the cases in our sample may be somewhat more advantaged than the population as a whole. Overall, this selectivity has two implications. First, it is likely to increase our estimates of levels of economic well-being for both married and divorced women. Second, to the extent that those who were lost to follow-up are relatively more likely to experience marital disruption, our estimates of the gap in married and divorced women's well-being will be on the conservative side. We do not expect these biases to be large, however, because we use NSFH2 sampling weights to adjust for attrition in our calculations of expected economic well-being.

nated 86 women who lost their spouses through death, leaving 2,579 women. Of these, we excluded 33 cases (1.3 percent of the sample) because of missing income values at the second wave of the survey.

Our analytic sample thus consists of 2,546 women, 2,173 of whom remained married across the waves and 373 of whom separated or divorced between the waves. Approximately one-third of the divorced women (N = 129) remarried or entered a cohabiting union by wave 2, with about two-thirds of these being remarriages. While we are most interested in estimating divorced women's economic well-being outside of marriage, we also recognize that such women may be a select group of all divorced women (Duncan and Hoffman 1985; Smock 1990; Sweeney 1997) and that remarriage or cohabitation is a fairly common occurrence after a divorce (Bumpass and Sweet 1989; Sweet and Bumpass 1987). Moreover, remarriage has strong positive effects on economic well-being and has been described as the surest route to women's economic recovery after divorce (e.g., Holden and Smock 1991). Consequently, we include "repartnered" women in our models and estimate expected well-being under two scenarios for divorced women: staying "single" after divorce and entering a new union.7

#### **Dependent Variables**

Our three dependent variables are absolute levels of *personal income*, *family income*, and the *income-to-needs ratio*, all measured at the second wave of the NSFH. These measures are constructed using detailed data on several specific income sources of the respondent and other family members (if rel-

<sup>7</sup> We also estimated models including only the subsample of divorced women who remained single. Estimated levels of economic well-being derived from these models are virtually identical to those we calculate here (i.e., including both repartnered and divorced women who have not remarried or cohabited).

evant). These sources are: wages and salary, self-employment, social security, supplemental security, pensions, annuities, survivor's benefits, public assistance, assistance from other government programs, child support and alimony, and other income sources.

We use three measures to ensure comprehensiveness. Furthermore, both individual and familial position are important for understanding economic well-being (Curtis 1986). Personal income furnishes information about women's own economic resources, while the other two measures take account of women's living arrangements. We measure personal income as the sum of all earned and unearned income (e.g., public and private transfers) for the respondent. In the majority of cases, personal income is equivalent to earnings. We chose personal income rather than earnings, however, because of the importance of child support to separated and divorced women (Duncan and Hoffman 1985).<sup>8</sup> Family income is the sum of all sources of income for the woman and for her spouse (or partner) if relevant. This measure thus includes the income of spouses (or partners) for divorced women who enter a new union and for continuously married women. Family income can be misleading, however, because it ignores the higher income needs of large families. The *income-to-needs ratio* uses family income as the numerator and a "needs" standard (based on the official poverty threshold) as the denominator. The needs standard assumes economies of scale (i.e., the amount of extra money required to sustain larger household sizes diminishes with each additional person). A value of less than 1 indicates that the family is living below the official U.S. government's definition of the poverty line, and values between 1 and 1.5 are often considered to indicate the "near-poor."

All income amounts are adjusted for inflation using the Consumer Price Index and are presented in 1994 dollars. We use the natural logarithm of these measures as dependent

is essential because obtaining a legal divorce is, at least to some extent, endogenous to remarriage, and less advantaged people are more likely to remain separated for long periods of time. Restricting the analysis to women who have legally divorced would raise serious selectivity issues.

<sup>&</sup>lt;sup>8</sup> In our sample, approximately 84 percent of women who remain married and virtually all (98.5 percent) of the divorced women report at least some personal income at wave 2. Among married women, earnings represent 95 percent of total personal income. Earnings represent 84 percent of total personal income for divorced women.

variables in our models to adjust for positive skewness in the distributions.

#### Independent Variables

*Economic outcome equations.* Our selection of independent variables was guided by the goal of including basic factors that impact economic well-being. The two outcome equations—economic well-being if still married and economic well-being if divorced use slightly different sets of independent variables. To ensure the correct causal ordering of the independent variables, marital disruption, and subsequent economic well-being, we measure all independent variables (with one exception, described below) at the first wave of the NSFH.<sup>9</sup>

This issue is not terribly problematic for three reasons. First, such differences will be captured by the error terms and thus the covariance parameters; our central focus is on the expected wellbeing calculations and not on interpreting the covariance parameters. Second, we examined the sensitivity of our expected well-being calculations by changing the coefficient of work experience in the equation predicting divorced women's economic well-being by substantial amounts (we doubled and even tripled it). The calculations are relatively insensitive to even large changes in the work experience coefficient. Third, we included a variable representing the time between the date of separation and the second interview in the equation predicting divorced women's economic well-being to at least partially control for the lag problem. This coefficient did not attain statistical significance in any of our models so we excluded it from our final model.

Both economic outcome equations include characteristics denoting the respondent's human capital. Human capital theory posits that economic rewards from market work are determined by employment-related skills such as labor market experience and educational attainment. The more human capital an individual possesses, the greater the returns from employment (Becker 1975; Becker et al. 1977). Educational attainment and work experience at wave 1 are each expected to increase women's economic well-being at wave 2, whether or not they remain married. Respondent's educational attainment is measured as a series of dichotomous variables. The omitted category is less than 12 years of schooling; 12 years, 13 to 15 years of schooling, and 16 or more years are entered as dummy variables. Respondent's work experience is coded as total years of market employment at wave 1, including both full-time and part-time employment.

Other variables in both equations are the respondent's age, the presence and ages of children, race/ethnicity, and region of residence. Age is measured at wave 1 and is coded as a series of four dichotomous variables: less than 25 years old, 25 to 34, 35 to 44, 45 to 59. Children at wave 1 are coded into three mutually exclusive categories: no minor children in the home, youngest child at home is less than age 6, and the youngest child at home is age 6 to age 17 (less than age 18). Race/ethnicity is represented by whether the respondent reports herself to be black, white, or another race/ethnicity. Unfortunately, there are too few cases to further differentiate the latter category. We code region into the four conventional groups: West, South, Northeast, and North Central.

Finally, for substantive reasons, two variables appear in one economic outcome equation but not the other. Spouse's earnings at wave 1 is included in the equation for economic well-being if still married at wave 2. We use the following annual earnings categories (in 1994 dollars): less than \$20,000, \$20,000 to \$29,999, \$30,000 to \$39,999, \$40,000 to \$49,999, and \$50,000 or more.<sup>10</sup>

<sup>&</sup>lt;sup>9</sup> The measurement of our independent variables at the first wave of the survey has some potential implications for our analysis. For the divorced subsample, the values of some of the independent variables may vary substantially during the period immediately preceding divorce. For example, a couple might experience a decline in income leading to stress and thus divorce. Similarly, women who divorce between waves will change their labor market involvement after the first wave of the survey in ways that married women do not; women often increase their labor market involvement immediately after divorce and even before divorce (e.g., Peterson 1989). Thus, for example, our measurement of work experience at wave 1 might bias the estimates of the effects of this variable differentially for married women and divorced women.

<sup>&</sup>lt;sup>10</sup> In other analyses we used a measure of total family income at wave 1 in lieu of husband's earnings, and the continuous version of husband's earnings in lieu of the categorical one. The results

We expect spouse's earnings at wave 1 to be positively associated with married women's family income and the income-to-needs ratio measured at wave 2. A husband's earnings at one point in time will clearly be a good predictor of his earnings a few years later. Moreover, husband's earnings tend to constitute the largest share of family income, owing in part to the substantial gender gap in wages and in part to the greater labor force

involvement of married men compared with married women (Bianchi 1995). Preliminary analyses showed that (ex)spouses' earnings do not have a statistically significant impact on any measure of divorced women's economic status, so we exclude that measure from the outcome equation.<sup>11</sup>

The second variable that appears in one economic outcome equation but not the other is whether a divorced woman has entered a new union. (This is also the exception we refer to above.) While repartnering (remarrying or cohabiting) occurs after marital disruption, thus violating correct causal ordering, we use the endogenous switching model primarily for descriptive purposes.<sup>12</sup> For obvious reasons, we exclude repartnering from the equation predicting economic well-being if the respondent is continuously married.

*Marital disruption equation.* We assume that the likelihood of marital disruption is influenced by several of the same factors that also influence subsequent economic outcomes. We include spouse's earnings (coded as in the outcome equations) and the respon-

were almost identical to those we report here.

Roughly 8 percent of the respondents reported that they did not know their husband's earnings or refused to provide that information. We assigned these cases median values and included a dichotomous variable flagging this imputation in our models. The variable was not statistically significant in any of our models.

<sup>11</sup> Our calculations of expected economic wellbeing are much the same whether or not spouses' earnings are included in the equation for divorced women's economic circumstances.

<sup>12</sup> In other analyses we allowed union status to interact with the other independent variables in the equation predicting divorced women's economic well-being. Most of the product terms were not statistically significant, and our calculations of expected well-being in alternative marital statuses were identical to those we present here. dent's educational attainment; we expect these two variables to be inversely related to the likelihood of dissolving a marriage. Couples with high socioeconomic status tend to have more stable marriages, and economic hardship tends to weaken marriage (Becker et al. 1977; Espenshade 1979; Hoffman and Holmes 1976; Mott and Moore 1978; Ono 1998; Ross and Sawhill 1975). Other variables common to both the marital disruption equation and the economic outcome equations are region, race/ethnicity, and age of children.

We also include variables here that do not appear in the economic outcome equations. The first is a variable indicating whether the respondent was employed full-time at wave 1. While such employment, at least in part, may be a response to impending marital dissolution, this indicator also taps the wife's "economic independence." All else equal, the argument goes, a marriage is easier to end when a woman can support herself (and any children) after marital disruption (e.g., Cherlin 1992; Dechter 1992a). We also include several family background and marital characteristics. Generally, people raised in two-parent families and in families with high socioeconomic status appear to be less likely to divorce (McLanahan and Bumpass 1988). We thus construct a dichotomous variable indicating whether the respondent was living with both biological parents at age 14; and we use mother's educational attainment as a proxy for the socioeconomic status of family of origin (coded as less than 12 years, 12 years, and 13 years or more).<sup>13</sup> Marital characteristics include the respondent's age at marriage in years, duration of the marriage in years, and whether the marriage is a first marriage for both spouses. Past studies have shown that age at marriage is a strong correlate of marital disruption-those marrying young are more likely to experience marital disruption (e.g., Becker et al. 1977; Booth and Edwards 1985; Martin and Bumpass 1989). Duration

<sup>&</sup>lt;sup>13</sup> Cases in which mother's education is missing (about 8 percent of our sample) were assigned the mean, and a dummy variable was included in our models to flag those cases with assigned values. This variable was not statistically significant in our models.

is the number of years since the marriage began, measured at the first wave of the NSFH. All else equal, marriages of longer duration should be less likely to dissolve. Finally, in accordance with past research, we expect that second marriages will be more likely to dissolve than first marriages (e.g., Martin and Bumpass 1989).

#### RESULTS

#### **Descriptive** Statistics

Table 1 presents descriptive statistics for our dependent and independent variables for the divorced and continuously married subgroups of women. With the exception of age at marriage and mother's education, statistical tests show that all of the variables differ significantly between the two groups and mostly in ways indicative of somewhat greater "disadvantage" for divorced women, even before marital disruption occurs.

Beginning with the dependent variables, women who divorce between the waves have significantly lower levels of family income and income-to-need ratios at wave 2 than those who remain married. In real metrics and 1994 constant dollars, median family income is about \$26,600 for divorced women compared with \$53,200 for continuously married women (not shown in table).<sup>14</sup> When we exclude those who remarried or who entered a cohabiting union, median family income for divorced women is substantially lower-about \$21,000. Similar differentials exist for the income-to-needs ratio, with continuously married women faring far better than divorced women (a median of 3.87 versus 2.32 for all divorced women and 1.95 for divorced women who remained single).

On the other hand, divorced women have significantly higher personal income than married women—the median is about \$18,000 for women who separate or divorce versus \$12,000 for those who remain married (not shown in table). This differential is not surprising given that married women share in the economic resources of their spouses, with many married couples making decisions about breadwinning and child care that may result in lower labor market involvement for wives. Maritally disrupted women, especially those who do not enter a new union, must rely primarily on their own economic resources.

Women who divorce also have lower economic status *prior* to disruption. Only 19 percent of women who will divorce between the two waves have spouses earning at least \$50,000 compared to 27 percent for women who will remain married. The same pattern holds for family income at wave 1 (not shown in table), indicating that this finding is not an artifact of our use of the husband's earnings alone. Women who will remain married also have somewhat higher levels of educational attainment than do women who will divorce.

Divorced women are substantially more likely to be working full-time at wave 1 (44 percent versus 38 percent). This finding is consistent with past research indicating that wives whose marriages will dissolve tend to have higher labor market involvement than do other wives (Cherlin 1992). Seemingly at odds with this, Table 1 also shows that continuously married women have more years of labor market experience. This is explained, however, by age differences between the two groups—continuously married women are older on average than their divorced counterparts.

The two groups of women differ on several other indicators in ways consistent with past research. Maritally disrupted women have been married a shorter time and are less likely to be in a first marriage. They are also less likely to have been raised by both biological parents. Finally, they are more likely to have minor children in the household than are the women who remained married, probably because of their somewhat younger average age.

### Results from the Endogenous Switching Models

We first briefly discuss the results from the general endogenous switching models. We then use the coefficients from these models to calculate how women would have fared

<sup>&</sup>lt;sup>14</sup> We report medians rather than means because of the skewness of the income distribution. Medians provide a better sense of the typical experience.

Variable	Wome	en Who vorce	Wome Re Ma	en Who main urried	Variable	Wome Dive	n Who orce	Wome Rer Ma	n Who nain rried
Dependent Variables <sup>a</sup>					Age; proportion who a	are:			
Mean personal	9.47	(1.31)	8.31	(2.68)	Under 25	.21	(.38)	.06	(.24)
income (ln)					25 to 34	.43	(.47)	.32	(.46)
Mean income-to-	.69	(1.10)	1.38	(.77)	35 to 44	.26	(.41)	.30	(.46)
Massa faulto (III)	10.02	(1.00)	10.07	( 70)	45 to 59	.10	(.28)	.31	(.46)
income (ln)	10.03	(1.06)	10.87	(.72)	Children in the home	nronor	tion wh	o have	
meenie (m)					No children at home	28	(42)	35	(47)
Independent Variables <sup>1</sup>	)				At least 1 child at	42	(.12)	32	(.17)
Mean duration of	9.72	(7.46)	16.37	(10.89)	home under age 6	.72	(.+7)	.52	(.+0)
marriage (in years)		()		()	All children at home	.29	(.43)	.33	(.47)
Whether first marriag for both spouses	e .47	(.47)	.59	(.49)	are age 6 to age 17		<b>、</b> ,		( )
Mean age at	22.27	(5.69)	22.59	(5.97)	Region; proportion liv	ing in t	he:		
marriage <sup>c</sup>		. ,		. ,	South	.40	(.46)	.32	(.46)
Uushand's comings: r	ronort	ion who	aarn		West	.23	(.40)	.21	(.40)
fusbanu s carnings, p	24	( 45)	21	( 10)	Northeast	.16	(.35)	.21	(.40)
\$20,000 or less	.34	(.45)	.21	(.40)	North Central	.20	(.38)	.26	(.44)
\$20,000 to \$29,999	.22	(.39)	.15	(.35)	Race/ethnicity; propor	tion wł	no are:		
\$30,000 to \$39,999	.14	(.33)	.22	(.41)	Black	.10	(.29)	.06	(.23)
\$40,000 to \$49,999	.09	(.28)	.15	(.36)	Other race/ethnicity	.09	(.28)	.09	(.28)
\$50,000 or more	.19	(.38)	.27	(.44)	Non-Hispanic white	.80	(.38)	.85	(.35)
Husband's earnings	.06	(.22)	.08	(.27)	Mothers' years of edu	cation	nronori	tion wit	h· c
missing					Less than 12 years	40	(46)		
Years of education; p	roporti	on who	have:		12 years	42	(.40)	30	(.49)
Less than 12 years	.18	(.36)	.13	(.33)	13 years or more	18	(36)	17	(.10)
12 years	43	(47)	44	(.55)	Mother's education	.08	(.25)	.08	(.28)
12 years	.+5 27	(.+7)	.++ .21	(.+)	missing	.00	(.20)	.00	(.20)
	.22	(.39)	.21	(.41)	Grow up with both	77	( 10)	81	(26)
16 or more years	.17	(.37)	.22	(.41)	biological parents	.//	(.40)	.04	(.30)
Proportion employed full-time	.44	(.47)	.38	(.48)	In new union at wave 2	.36	(.45)		
Mean years of work experience	8.27	(6.44)	11.50	(8.82)	Number of cases	3	73	2,1	73

Table 1.	<b>Descriptive Statistics</b>	(Means or	<b>Proportions</b> )	for	Variables	Used	in the	Analysis:	Women
	from the NSFH								

Note: Numbers in parentheses are standard deviations; data are weighted.

<sup>a</sup> All dependent variables were measured at wave 2.

<sup>b</sup> With the exception of "in new union at wave 2," all independent variables were measured at wave 1.

<sup>c</sup> With the exception of "age at marriage" and "mother's years of education," all means and proportions for women who divorce differ significantly from those for women who remain married, mostly in a direction favoring those who remain married (p < .05, two-tailed tests).

had they experienced the alternative marital status.

**Determinants of marital disruption.** Table 2 presents the parameters for the determinants of marital disruption. For simplicity, the estimates in the table are drawn from the model predicting wave 2 family income. Co-

efficients and significance levels from the models predicting personal income and income-to-needs ratios are almost identical to these.

Overall the results conform closely to prior work. Both economic status and educational attainment are inversely associated with the

likelihood of marital disruption. Specifically, women with a high school degree or more are less likely to experience marital disruption than are high school dropouts. There is also a negative relationship between spouse's earnings and marital disruption. Women with husbands earning \$30,000 or more are less likely to have their marriages dissolve by wave 2. Working full-time at wave 1 is associated with a higher risk of divorce, although the coefficient does not quite attain statistical significance. Older age at marriage, first marriages, marriages of longer duration, being white, and growing up with both biological parents are each associated with a lower risk of divorce.

*Effects on economic well-being.* Table 3 shows the coefficients for the equations predicting wave 2 personal income, income-to-needs ratio, and family income. For each dependent variable, the first column presents the coefficients predicting economic wellbeing if there was a separation or divorce between the two waves, and the second shows the analogous coefficients if still married at wave 2.

The results are generally unsurprising and consistent with past research. Husband's earnings are positively associated with married women's family income and income-toneeds ratio. When personal income is the dependent variable, however, there is an inverse relationship such that the higher a husband's earnings the lower a wife's personal income. Because earnings from employment are the largest portion of women's personal income, this finding suggests that married women's labor force participation may be responsive to the level of income a husband brings to the family. Other variables important for married women's economic well-being are her educational attainment and work experience; each is positively related to all three dependent measures. Because of assortative mating, the coefficients for married women's education are also likely to reflect the positive impact of husband's schooling on economic wellbeing.

White married women have an economic advantage over black married women in terms of both family income and the incometo-needs ratio, although being black is positively associated with personal income. This

Table 2.	Probit Coefficients for the Probability
	of Marital Disruption from the Model
	<b>Predicting Wave 2 Family Income:</b>
	Women from the NSFH

Independent Variable	π	$\pi/SE_{\pi}$
Duration of marriage	044***	(-13.3)
Whether first marriage	348***	(-6.7)
Age at marriage	037***	(-8.0)
Husband's Earnings		
\$20,000 to \$29,999	127	(-1.9)
\$30,000 to \$39,999	$428^{***}$	(-5.7)
\$40,000 to \$49,999	425***	(-5.1)
\$50,000 or more	$278^{***}$	(-3.8)
Years of Education		
12 years	234**	(-3.2)
13 to 15 years	308***	(-3.6)
16 or more years	$287^{**}$	(-3.1)
Employed full-time	.097	(1.9)
Children		
At least 1 child at home under age 6	101	(-1.6)
All children at home are age 6 to age 17	.072	(1.1)
Region		
West	.105	(1.6)
North Central	097	(-1.6)
Northeast	095	(-1.3)
Race/Ethnicity		
Black	.305***	(4.0)
Other race/ethnicity	038	(4)
Mother's Years of Education		
12 years	.074	(1.3)
13 years or more	.035	(.5)
Grew up with both biological parents	137*	(- 2.4)
Constant	.974***	(5.8)
Number of cases	2,5	546

*Note*: The equation also included dichotomous variables for missing values on mother's education and spouse's earnings.

Omitted categories are "less than 12 years of education," "husband's earnings less than \$20,000," "no children at home," "South," "non-Hispanic white," and "mother's education less than 12 years."

p < .05 p < .01 p < .01 (two-tailed tests)

	Personal I	Income (ln)	Income-to-Needs Ratio (ln)		Family In	come (ln)
Independent Variable	Divorced $\beta$	Married $\beta$	Divorced $\beta$	Married $\beta$	Divorced $\beta$	Married $\beta$
Husband's Earnings						
\$20,000-\$29,999	—	16 (-1.3)	—	.17 <sup>***</sup> (5.8)	_	.20 <sup>***</sup> (6.9)
\$30,000-\$39,999		32** (-2.5)	_	.32*** (9.9)	—	.34*** (10.9)
\$40,000–\$49,999		$38^{**}$		.49*** (14.9)		.49***
\$50,000 and over	_	81*** (-6.9)		.71*** (24.0)	—	.71*** (24.6)
Years of Education						
12 years	.59*** (4.4)	1.12 <sup>***</sup> (8.8)	.52*** (5.2)	.38 <sup>***</sup> (12.2)	.46 <sup>***</sup> (4.6)	.35*** (11.5)
13 to 15 years	1.03*** (6.7)	1.17 <sup>***</sup> (8.3)	.78 <sup>***</sup> (6.8)	.57*** (16.3)	.71 <sup>***</sup> (6.2)	.52*** (15.4)
16 or more years	1.53*** (9.1)	2.0 <sup>***</sup> (13.8)	1.29*** (10.2)	.81*** (22.6)	1.18 <sup>***</sup> (9.4)	.77*** (22.3)
Years of work experience	.05*** (4.9)	.11*** (20.8)	.02** (2.8)	.01 <sup>***</sup> (10.6)	.02* (2.2)	.01 <sup>***</sup> (8.2)
Age						
25 to 34	17 (-1.2)	21 (-1.4)	11 (-1.1)	06 (-1.6)	12 (-1.2)	03 (8)
35 to 44	35 (-1.7)	62*** (-3.8)	13 (9)	07 (-1.6)	18 (-1.2)	08* (-2.1)
45 to 59	79 <sup>**</sup> (-3.2)	-1.40 <sup>***</sup> (-7.9)	24 (-1.3)	02 (5)	35 (-1.8)	14** (-3.1)
Children in the Home						
At least 1 child at home under age 6	.04 (.3)	13 (-1.2)	37*** (-4.0)	31*** (-5.0)	11 (-1.2)	60* (-2.3)
age 6 to age 17	.25 (1.7)	.41 (3.9)	(2.1)	07 (-1.1)	(3.2)	.04 (1.6)
Region						
West	.36** (2.7)	.30** (2.6)	.28** (2.7)	.05 (1.7)	.26** (2.6)	.08 <sup>**</sup> (3.1)
Northeast	.49*** (3.4)	.30** (2.7)	.78 <sup>***</sup> (7.2)	.08 <sup>**</sup> (2.9)	.79 <sup>***</sup> (7.2)	.10 <sup>***</sup> (3.9)
North Central	.23 (1.9)	.24* (2.5)	.39*** (4.4)	.04 (1.8)	.39*** (4.4)	.08*** (3.5)

Table 3.	Coefficients from l	Endogenous Switching	<b>Models Predicting</b>	Wave 2 Economic	Well-Being:
	Women from the N	ISFH			

(Table 3 continued on next page)

is probably because black married women, net of other factors, have typically worked more hours in the labor market than have white married women (e.g., Bianchi 1995). Being white is also associated with higher income-to-need ratios compared to being of another race/ethnicity. There is a general inverse relationship between age and both personal income and family income for married women, probably due to a combination of age and cohort effects involving both women and their spouses. For example, younger cohorts of women are more likely to work fulltime than their predecessors (Bianchi 1995; Hayghe and Bianchi 1994), implying a negative effect of age on both personal and family income. In addition, some of the husbands of the oldest group of women are near-

	Personal I	ncome (ln)	Income-to-Ne	eds Ratio (ln)	Family Income (ln)	
Independent Variable	Divorced $\beta$	Married $\beta$	Divorced $\beta$	Married $\beta$	Divorced $\beta$	Married $\beta$
Race/Ethnicity						
Black	.06 (.4)	.45 <sup>***</sup> (3.3)	14 (-1.4)	14*** (-4.3)	01 (1)	07* (-2.1)
Other race/ethnicity	27 (-1.6)	01 (.0)	06 (.5)	11** (-2.9)	.20 (1.6)	01 (2)
In a new union	09 (8)		.64*** (8.2)	_	.79 <sup>***</sup> (10.0)	
Constant	8.31*** (46.2)	6.56 <sup>***</sup> (34.9)	39** (-2.9)	.55*** (10.7)	8.85*** (65.4)	9.96*** (200.6)
σ	1.27 <sup>***</sup> (38.6)	2.45 <sup>***</sup> (93.2)	.95 <sup>***</sup> (38.6)	.60 (91.9)	.95 <sup>***</sup> (38.6)	.58 <sup>***</sup> (91.8)
$\sigma_{23}, \sigma_{13}$	.00 (1)	28 <sup>**</sup> (-2.6)	.01 (.3)	05 (7)	.02 (.3)	05 (7)
Log-likelihood		-13,186	_	-6,885	_	-6,749
Degrees of freedom	_	64		64	_	64
Number of cases	373	2,173	373	2,173	373	2,173

(Table 3 continued from previous page)

Note: Numbers in parentheses are coefficients divided by their standard errors.

\*p < .05 \*\*p < .01 \*\*\*p < .001 (two-tailed tests)

ing, or are at, retirement age by wave 2, may have reduced their labor supply, and comprise a cohort at particular risk of job displacement (Couch 1998). These factors also imply a negative effect of age on family income. Having a young child is negatively associated with the income-to-needs ratio and family income; when all of a woman's children attain school age, the presence of children has a positive effect on personal income. This finding is suggestive of women's greater labor market activity as children age. Residing in the South tends to be negatively associated with economic well-being for both divorced and continuously married women.

For divorced women, educational attainment and work experience are positively associated with all three measures of well-being just as they are for married women. However, the race differentials apparent in marriage do not attain statistical significance for divorced women. Not surprisingly, being in a new union is positively associated with family income and the income-toneeds ratio. This finding is consistent with past research showing that the surest path to economic recovery for divorced women is remarriage (Duncan and Hoffman 1985; Holden and Smock 1991). Entering a new union is negatively associated with personal income, although the coefficient is not statistically significant. Finally, the presence of a young child tends to decrease divorced women's income-to-needs ratio, although having children that are all of school age is positively related to family income.

The disturbance covariances near the bottom of the table,  $\sigma_{13}$  and  $\sigma_{23}$ , provide information about any unmeasured influences on both marital status and economic well-being. The only statistically significant parameter is that between the error terms of the equation for personal income if continuously married and marital disruption ( $\sigma_{13} = -.28$ ). This coefficient translates into a correlation of -.28/ 2.45 = -.11. Thus, women who remain married would be expected to have somewhat higher personal incomes in marriage than would a random sample of all women who marry and who possess identical measured characteristics. The overall interpretation of this finding is that remaining married may be slightly biased in favor of women with po-

	If Divo	If Remained		
Income Measure and Actual Marital Status	Remarried (1)	Single (2)	Married (3)	
Expected Personal Income				
Divorced	\$12,043	\$13,112	\$2,343	
Married	\$11,930	\$12,988	\$4,065	
Expected Income-to-Needs Ratio				
Divorced	3.1	1.6	3.5	
Married	3.0	1.6	3.9	
Expected Family Income				
Divorced	\$38,365	\$17,480	\$ 46,861	
Married	\$37,184	\$16,942	\$51,976	

Table 4. Women's Expected Economic Well-Being in Alternative Marital Statuses: NSFH

*Note*: Calculations are based on the parameter estimates shown in Table 3 and the group-specific weighted means shown in Table 1.

tentially higher personal incomes. None of the other covariance parameters is statistically significant, suggesting that, overall, unmeasured differences associated with marital status are relatively unimportant in explaining marital status differences in economic well-being.

## Expected Economic Well-Being in Alternative Marital Statuses

Table 4 shows expected levels of economic well-being for women in each marital status group. The numbers are predicted values for a hypothetical woman in alternative marital status positions assuming marital-status-specific weighted means on the independent variables and a probability of divorce equal to the sample proportion divorced (see Mare and Winship 1988:139-42). These values are based on the parameter estimates from the models shown in Table 3 and include unmeasured selection effects. For ease of interpretation, we have transformed the natural logarithm values to their real metrics (dollars for family and personal income and ratios for the income-to-needs ratio).

Table 4 allows us to compare predicted economic well-being for a woman in her actual marital status with the economic wellbeing she would experience in another status (i.e., if she remained married or if she divorced). The divorced status includes two possible outcomes: "remarried" and "single." "Remarried" refers to new union formation. including remarriage and cohabitation, and "single" refers to divorced women living outside of a union.<sup>15</sup> The first row of each panel shows the expected economic well-being of a divorced woman under three conditions: column 1 assumes she has remarried, column 2 assumes she has remained single, and column 3 shows a divorced woman's expected well-being if she had, hypothetically, remained married. Likewise, column 3 in the second row of each panel shows the expected well-being of a married woman in her observed status, while column 1 presents her expected well-being if she had divorced and remarried, and column 2 shows how she would have fared if she had divorced and remained single.

How would divorced women fare economically if they had remained married? Table 4 shows that if a divorced woman were to remain married, she would experience somewhat worse economic circumstances than women who actually remain married. Her personal income would be substantially lower than that of married women (\$2,343 versus \$4,065). Her income-toneeds ratio and family income would also be lower than that of married women: A di-

<sup>&</sup>lt;sup>15</sup> We calculate divorced women's expected well-being if she remarries (or cohabits) and if she stays single by setting the new union variable to either "1" or "0."

vorced woman's income-to-needs ratio would be 3.5 if she had stayed married compared to 3.9 for still-married women, and her family income would be about \$5,000 less than that of still-married women (\$46,861 versus \$51,976).

Nonetheless, switching marital-status groups would substantially increase divorced women's levels of well-being, at least in terms of family income and the income-toneeds ratio. This is true for both remarried and single divorced women. The story for personal income differs somewhat. While personal income for these women would be far lower in marriage than outside of marriage, this does not imply that divorce advantages women in terms of overall economic well-being. Unlike marriage, divorce in the absence of remarriage necessitates women's almost exclusive reliance on their own income rather than on that of other family members (Holden and Smock 1991).

Table 4 also addresses our other primary question: How would a married woman fare if she were to divorce? The results are clear: Married women's expected levels of economic well-being in divorce are virtually the same as those for women who actually divorce. This is true for all three measures of economic status, suggesting that women as a whole are indeed economically vulnerable outside of marriage. In fact, it is only through remarriage that divorced women experience levels of economic well-being that are relatively high, although not as high as those for women who remain married. For example, divorced women who remarry are predicted to have an income-to-needs ratio of 3.1 compared with 1.6 for divorced women who stay single, and 3.9 for women who remain married. Recall that a ratio of less than 1 signifies living below the poverty level and that a ratio of 1.5 is widely considered "near-poor." The similarity in expected levels of income upon marital disruption for both subgroups of women also suggests that divorce itself is largely responsible for divorced women's low level of economic well-being. Measured (and even unmeasured) differences between the two groups of women are simply not large enough to translate into substantial differences in expected economic well-being upon divorce.

#### DISCUSSION

Conclusions about the marked economic advantage of marriage have sometimes been based on observed differences in economic well-being between married persons and those in other marital statuses. This has been the case in some semi-popular writings promoting the benefits of marriage to individuals and to society as a whole (e.g., Whitehead 1996). Even when authors do not use these sorts of comparisons directly, their discussions imply that if divorced people had only remained married they would experience economic circumstances similar to married people (e.g., Gallagher 1996; Galston 1996).

Our findings suggest that these accounts somewhat overstate the potential economic benefits of marriage-divorced women would not fare as well economically as married women had they remained married instead of divorcing. These results are consistent with the findings of other studies that account for selection processes (Dechter 1992a, 1992b; Peters 1993). While our estimated differences are not dramatic, they are substantively meaningful and suggest that the economic case for stricter divorce laws is not quite as strong as it seems. These results reinforce the findings of a large body of sociological research demonstrating that the occurrence and stability of marriage are consequences, and not just causes, of good economic circumstances (e.g., Dechter 1992a; Lichter et al. 1992; Mare and Winship 1991; Oppenheimer 1994; Testa et al. 1989; Wilson 1987).

At the same time, our findings broadly support Waite (1995) and others who argue that the economic benefits of marriage are large, even above and beyond the characteristics of those who marry or, as in our case, those who stay married. Divorced women would certainly enjoy much higher levels of family-based measures of economic well-being were they to remain married. The critical modification we would make to general claims about the economic advantage of marriage is that its potential benefits are smaller for the subgroup that divorces. Thus, if policies were in place to encourage people to remain in their marriages, the overall economic benefits of marriage would probably be smaller than currently observed.

Another central conclusion emerging from our study is that women generally are economically vulnerable outside marriage. Borrowing Hochschild's (1989) terminology, our findings could be interpreted as a "cautionary tale." By virtue of the division of labor in marriage, many women still accrue lower levels and less continuity of employment than do their husbands (Bianchi 1995; Sørensen and McLanahan 1987). This division of labor, we argue, has profound consequences in a context characterized by a continuing and marked gender gap in wages, women's disproportionate responsibility for child care, and high levels of marital disruption (Bianchi 1995). Study after study has shown that divorced women fare poorly economically in both absolute terms and when compared with divorced men (e.g., Holden and Smock 1991). Our study indicates that the typical married woman would experience the same financial distress if she were to divorce, thus underscoring women's economic vulnerability.

**Pamela J. Smock** is Assistant Professor of Sociology at the University of Michigan. She is also affiliated with the Population Studies Center at the Institute for Social Research. Her interests span the subfields of family, social demography, social stratification, and gender. She is particularly interested in gender inequality, changing family patterns, and the implications each has for the other. Her past research has focused on the economic consequences of divorce for women and men, nonresident fatherhood, child support, and cohabitation. With Wendy Manning, she is currently developing a project examining gender and racial-ethnic differences in the meaning of cohabitation.

Wendy D. Manning is Assistant Professor of Sociology at Bowling Green State University. Her work focuses on families and relationships that exist outside the boundaries of marriage. More recently she has evaluated how new family formation of nonresident fathers influences involvement with nonresident children. Her current research examines racial-ethnic differences in the meaning of cohabitation by focusing on fertility behavior. She will undertake a broader examination of the role of cohabitation in the U.S. family system in a new collaborative effort with Pamela Smock.

Sanjiv Gupta is a researcher at the Population Studies Center of the University of Michigan. His areas of interest are cohabitation, marriage and family, gender, and research methods. Recent work includes "The Effects of Transitions in Marital Status on Men's Housework Performance" (Journal of Marriage and the Family, vol. 61, 1999, pp. 700–711), "Gender Display: A Reassessment of the Relationship between Men's Economic Dependence and Their Housework Hours," and his dissertation, "What Makes Men Change Their Housework Time?" Currently he is analyzing trends in nonresident fatherhood and variation in men's housework hours.

#### REFERENCES

- Arendell, Terry. 1986. Mothers and Divorce: Legal, Economic, and Social Dilemmas. Berkeley, CA: University of California Press.
- Avery, Roger B. and V. Joseph Hotz. 1985. "HOTZTRAN User's Manual." Economics Research Center/National Opinion Research Center, Chicago, IL. Unpublished manuscript.
- Becker, Gary. 1975. *Human Capital*. New York: Columbia University Press.
- Becker, Gary, Michael Landes, and Robert Michael. 1977. "An Economic Analysis of Marital Instability." Journal of Political Economy 85:1141-87.
- Bianchi, Suzanne. 1995. "The Changing Economic Roles of Women and Men." Pp. 107–54 in State of the Union: America in the 1990s, edited by R. Farley. New York: Russell Sage.
- Bianchi, Suzanne M., Lekha Subaiya, and Joan R. Kahn. 1999. "The Gender Gap in the Economic Well-Being of Nonresident Fathers and Custodial Mothers." *Demography* 36:195–203.
- Booth, Alan and John Edwards. 1985. "Age at Marriage and Marital Instability." *Journal of Marriage and the Family* 47:67–76.
- Bumpass, Larry and James Sweet. 1989. "National Estimates of Cohabitation." *Demography* 26:615–25.
- Burkhauser, Richard, Greg J. Duncan, Richard Hauser, and Roland Bersten. 1991. "Wife or Frau, Women Do Worse: A Comparison of Men and Women in the United States and Germany after Marital Dissolution." *Demography* 28:353–60.
- Cherlin, Andrew. 1992. *Marriage, Divorce, and Remarriage*. Cambridge, MA: Harvard University Press.
- Corcoran, Mary. 1979. "The Economic Consequences of Marital Dissolution for Women in the Middle Years." *Sex Roles* 5:343–53.
- Couch, Kenneth. 1998. "Late Life Job Displacement." *The Gerontologist* 38:7–17.
- Curtis, Richard. 1986. "Household and Family in Theory on Inequality." *American Sociological Review* 51:168-83.
- Daniel, Kermit. 1995. "The Marriage Premium." Pp. 113–25 in *The New Economics of Human*

*Behavior*, edited by M. Tommasi and K. Ierulli. New York: Cambridge University Press.

- Dechter, Aimée R. 1992a. "The Effect of Women's Economic Independence on Union Dissolution." Working Paper No. 92-28, Center for Demography and Ecology, University of Wisconsin, Madison, WI.
  - ——. 1992b. "The Economic Effects of Union Dissolution for Women." Working Paper No. 92-29, Center for Demography and Ecology, University of Wisconsin, Madison, WI.
- Delphy, Christine. 1984. Close to Home: A Materialist Analysis of Women's Oppression. Amherst, MA: University of Massachusetts Press.
- Delphy, Christine and Diana Leonard. 1992. Familiar Exploitation: A New Analysis of Marriage in Contemporary Western Societies. Cambridge, MA: Polity Press.
- Duncan, Greg J. and Saul D. Hoffman. 1985. "Economic Consequences of Marital Instability." Pp. 427–67 in *Horizontal Equity, Uncertainty, and Well-Being*, edited by M. David and T. Smeeding. Chicago, IL: University of Chicago Press.
- England, Paula and George Farkas. 1986. Households, Employment, and Gender: A Social, Economic, and Demographic View. New York: Aldine.
- Espenshade, Thomas. 1979. "The Economic Consequences of Divorce." *Journal of Marriage and the Family* 41:615–25.
- Ferree, Myra Marx. 1990. "Beyond Separate Spheres: Feminism and Family Research." Journal of Marriage and the Family 52:866– 84.
- Gallagher, Maggie. 1996. The Abolition of Marriage: How We Destroy Lasting Love. Washington, DC: Regnery.
- Galston, William A. 1996. "Divorce American Style." *The Public Interest* 124:12–26.
- Gamoran, Adam and Robert D. Mare. 1989. "Secondary School Tracking and Educational Inequality: Compensation, Reinforcement, or Neutrality?" *American Journal of Sociology* 94:1146-83.
- Gupta, Sanjiv. 1999. "The Effects of Marital Status Transitions on Men's Housework." *Journal* of Marriage and the Family 61:700–711.
- Hanson, Thomas L., Sara S. McLanahan, and Elizabeth Thomson. 1998. "Windows on Divorce: Before and After." Social Science Research 27:329–49.
- Hayghe, Howard and Suzanne M. Bianchi. 1994. "Married Mothers' Work Patterns: The Job-Family Compromise." *Monthly Labor Review* 117:24–30.
- Hochschild, Arlie. 1989. The Second Shift: Working Parents and the Revolution at Home. New York: Viking.

- Hoffman, Saul and Greg J. Duncan. 1988. "What *Are* the Economic Costs of Divorce?" *Demography* 25:641–45.
- Hoffman, Saul and John Holmes. 1976. "Husbands, Wives, and Divorce." Pp. 23–75 in *Five Thousand American Families: Patterns of Economic Progress*, vol. 4, edited by G. Duncan and J. Morgan. Ann Arbor, MI: Institute for Social Research.
- Holden, Karen and Pamela J. Smock. 1991. "The Economic Costs of Marital Dissolution: Why Do Women Bear a Disproportionate Cost?" *Annual Review of Sociology* 17:51–78.
- Huber, Joan and Glenna Spitze. 1983. Sex Stratification: Children, Housework, and Jobs. New York: Academic Press.
- Levinger, George. 1979. "A Social Psychological Perspective on Marital Dissolution." Pp. 37–60 in *Divorce and Separation: Context, Causes, and Consequences*, edited by G. Levinger and O. Moles. New York: Basic.
- Lichter, Daniel, Diane McLaughlin, George Kephart, and David Landry. 1992. "Race and the Retreat from Marriage: A Shortage of Marriageable Men?" *American Sociological Review* 57:781–99.
- Lugaila, Terry. 1998. Marital Status and Living Arrangements: March 1997. Update, Series P20–506. Washington, DC: U.S. Government Printing Office.
- Mare, Robert D. and Christopher Winship. 1988.
  "Endogenous Switching Regression Models for the Causes and Effects of Discrete Variables." Pp. 132–60 in Common Problems in Quantitative Social Research, edited by S. Long. Beverly Hills, CA: Sage.
- . 1991. "Socioeconomic Change and the Decline of Marriage for Blacks and Whites."
   Pp. 175–202 in *The Urban Underclass*, edited by C. Jencks and P.E. Peterson. Washington, DC: Urban Institute.
- Martin, Teresa Castro and Larry L. Bumpass. 1989. "Recent Trends in Marital Disruption." *Demography* 17:39–56.
- McLanahan, Sara S. and Larry Bumpass. 1988. "Intergenerational Consequences of Family Disruption." *American Journal of Sociology* 93:130–52.
- McLanahan, Sara S. and Lynne Casper. 1995. "Growing Diversity and Inequality in the American Family." Pp. 1–45 in *State of the Union: America in the 1990s*, edited by R. Farley. New York: Russell Sage.
- Morgan, Leslie. 1991. After Marriage Ends: Economic Consequences for Midlife Women. New York: Russell Sage.
- Mott, Frank L. and Sylvia F. Moore. 1978. "The Causes and Consequences of Marital Breakdown." Pp. 113–35 in *Women, Work, and Family*, edited by F. Mott. Lexington, MA: Lexing-

ton.

- Nestel, Gilbert, Jacqueline Mercier, and Lois B. Shaw. 1983. "Economic Consequences of Midlife Change in Marital Status." Pp. 109–25 in Unplanned Careers: The Working Lives of Middle-Aged Women, edited by L. B. Shaw. Lexington, MA: Lexington.
- Okin, Susan. 1991. Justice, Gender, and the Family. New York: Basic.
- Ono, Hiromi. 1998. "Husbands' and Wives' Resources and Marital Dissolution." Journal of Marriage and the Family 60:674–89.
- Ooms, Theodora. 1998. Toward More Perfect Unions: Putting Marriage on the Public Agenda. Washington, DC: Family Impact Seminar.
- Oppenheimer, Valerie Kincaide. 1994. "Women's Rising Employment and the Future of the Family in Industrial Societies." *Population and Development Review* 20:293–342.
- Pahl, Jan. 1990. "Household Spending, Personal Spending and the Control of Money in Marriage." *Sociology* 24:119–38.
- Peters, H. Elizabeth. 1993. "The Importance of Financial Considerations in Divorce Decisions." *Economic Inquiry* 31:71–86.
- Peterson, Richard R. 1989. Women, Work, and Divorce. New York: Suny.

——. 1996. "A Re-Evaluation of the Economic Consequences of Divorce." *American Sociological Review* 61:528–36.

- Ross, Heather L. and Isabel Sawhill. 1975. *Time* of Transition: The Growth of Families Headed by Women. Washington, DC: Urban Institute.
- Popenoe, David. 1996. Life without Father: Compelling New Evidence that Fatherhood and Marriage Are Indispensable for the Good of Children and Society. NewYork: Free Press.
- Sakamoto, Arthur and Meichu Chen. 1991. "Inequality and Attainment in a Dual Labor Market." *American Sociological Review* 56:295– 308.
- Smock, Pamela J. 1990. "Remarriage Patterns of Black and White Women: Reassessing the Role of Educational Attainment." *Demography* 27:467–73.
  - ——. 1992. "The Economic Costs of Marital Disruption for Young Women in the United States: Have They Declined over the Past Two Decades?" Ph.D. diss. Department of Sociology, University of Wisconsin, Madison, WI.
  - ——. 1993. "The Economic Costs of Marital Disruption for Young Women over the Past Two Decades." *Demography* 30:353–71.
  - -----. 1994. "Gender and the Short-Run Economic Consequences of Marital Disruption."

Social Forces 73:243-62.

- Sørensen, Annemette and Sara McLanahan. 1987. "Married Women's Economic Dependency." American Journal of Sociology 93:659–87.
- Spain, Daphne and Suzanne Bianchi. 1996. Balancing Act: Motherhood, Marriage, and Employment among American Women. New York: Russell Sage.
- Stirling, Kate J. 1989. "Women Who Remain Divorced: The Long-Term Economic Consequences." Social Science Quarterly 70:549–61.
- Sweeney, Megan. 1997. "Remarriage of Women and Men after Divorce: The Role of Socioeconomic Prospects." *Journal of Family Issues* 18:479–502.
- Sweet, James and Larry Bumpass. 1987. American Families and Households. New York: Russell Sage.
- ——. 1996. "The National Survey of Families and Households—Waves 1 and 2: Data Description and Documenation." Center for Demography and Ecology, University of Wisconsin, Madison, WI. Unpublished manuscript.
- Sweet, James, Larry Bumpass, and Vaughn Call. 1988. "The Design and Content of the National Survey of Families and Households." NSFH Working Paper No. 1, Center for Demography and Ecology, University of Wisconsin, Madison, WI.
- Testa, Mark, Nan Astone, Marilyn Krogh, and Kathryn Neckerman. 1989. "Employment and Marriage among Inner-City Fathers." Annals of the American Academy of Political and Social Science 501:79–91.
- Thorne, Barrie, ed. 1992. *Rethinking the Family: Some Feminist Questions*. Boston, MA: Northeastern University Press.
- Vogler, Carolyn and Jan Pahl. 1994. "Money, Power, and Inequality within Marriage." *The Sociological Review* 42:263–88.
- Waite, Linda. 1995. "Does Marriage Matter?" Demography 32:483-507.
- Weiss, Robert S. 1984. "The Impact of Marital Dissolution on Income and Consumption in Single-Parent Households." *Journal of Marriage and the Family* 46:115–27.
- Weitzman, Lenore. 1985. The Divorce Revolution: The Unexpected Social and Economic Consequences for Women and Children in America. New York: Free Press.
- Whitehead, Barbara Dafoe. 1996. The Divorce Culture: Rethinking Our Commitments to Marriage and Family. New York: Vintage.
- Wilson, William Julius. 1987. The Truly Disadvantaged. Chicago, IL: University of Chicago Press.