Job Displacement, Disability, and Divorce

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Abstract

This paper examines how job displacement and physical disability suffered by a spouse affects the probability that the person's marriage ends in divorce. According to the standard economic model of marriage, the arrival of new information about a partner's earning capacity that an earnings shock conveys might affect the gains that the couple believes it will receive from remaining married. Shocks may therefore affect divorce probability. Little previous work has explored this issue, and in that which has no explicit measures of earning shocks were used. Using the Panel Study of Income Dynamics, this paper finds a short-term increase in the probability of divorce following a spouse's job displacement but no change in divorce probability after a spousal disability. An important reason for the difference across the two types of shocks appears to be that certain types of job loss signal information about a partner's non-economic suitability as a mate.

Introduction

In standard economic models, marriage is presumed to confer pecuniary gains to spouses.[1] Events that lower a spouse's earnings capacity may therefore be expected to affect the person's family in two distinct ways. First, because they lower a family's full income, spousal earnings shocks are likely to have a direct negative effect on the family's consumption of market and home produced goods and of leisure. Second, because they potentially change the gains that a married couple receives from being married, shocks to the earnings of a spouse may affect the probability of the person's marriage ending in divorce or separation. A significant and growing literature analyzes the direct effect of earnings shocks on families' consumption, but very little research studies how earnings shocks affect marital stability.

Using data from the Panel Study of Income Dynamics, this paper assesses how shocks to earnings coming from job displacement or physical disability affect the probability of marital dissolution. We study two explicit earnings shocks, whereas previous authors have relied on the difference between actual and predicted earnings as the measure of earnings shocks. We study marriages between individuals of all ages as well as first and other marriages, so the results we document should be representative of population-wide effects. We also study shocks occurring to both husbands and wives.

We find evidence that job loss significantly raises the divorce hazard, whereas spousal disability has no effect. We present evidence that this difference does not arise because disability has a smaller effect on earnings than does job loss, or that a bout of disability is less informative about the future trajectory of bad health than losing a job is about future episodes of job loss. We speculate and provide

[1] Among the pecuniary gains identified by Weiss (1994) and other economists are: (a) the fact that there is often greater consumption of public goods – such as home-heating, or well-fed and well-clothed children – in marriage than either partner in a married couple could consume in the single state; (b) the fact that married people often act as their partners' creditors where capital markets are imperfect, as occurs when one spouse helps finance another's advanced schooling; and (c) , the fact that married partners provide a type of insurance to their mates, as is evident in the promise to help each other when negative events occur. We note here that many of the gains from marriage are obviously not pecuniary, and most are probably outside the realm of standard economic analysis. We only follow convention in the economics literature in emphasizing pecuniary gains.

evidence which suggests that part of the reason for the difference is that certain types of job loss may signal information about a partner's non-economic suitability as a mate.

1. Overview

In the growing literature on the impact of earnings shocks on family well-being, the consumption of either of leisure or market-produced goods has been the outcome variable on which writers have typically focused. This focus provides a picture of the welfare effects of shocks on married couples which is not only incomplete, but which may also be misleading. Most papers studying how the consumption and labor supply of married couples are affected by earnings shocks focus on families that *remain together* over the interval analyzed.[2] But, observed patterns of consumption of leisure and market-produced goods among families which meet this restriction may differ fundamentally from the *average* consumption changes among all families experiencing such shocks. Indeed, this is necessarily true unless the likelihood of marital dissolution conditional on an earnings shock being suffered and consumption responses to such shocks are systematically unrelated.

Brief reflection suggests that this condition is unlikely to be true. In the population of married couples to whom bad events occur, one would suppose that the couples most likely to divorce would be those for whom within-marriage utility falls by a particularly large amount as a result of a given bad event. That is, one would expect couples who remain together in the face of a bad outcome to be those for whom actual and anticipated consumption and labor supply adjustments are relatively small when compared to those experienced by people whose marriages break up. Thus, understanding how shocks affect marital stability is vitally important, even if the ultimate interest is on how shocks affect a family's consumption.

[2] Recent examples of some of this work include Cullen and Gruber (1996) and Stephens (1998) who analyze whether wives increase their labor supply in response to husbands' job loss – a test of the well known added-worker hypothesis (A.W.E.). Stephens (Forthcoming) analyzes family consumption changes after husbands' job loss. Charles (1999) examines how husbands and wives adjust their labor supply when a spouse's health worsens.

Of course, another justification for studying divorce, separation and other forms of marital dissolution is that these are all directly indicative of the degree to which earnings shocks affect a family's well-being.[3] However, empirical research in economics on the causes of marital dissolution is relatively sparse, despite well-established theoretical results. In particular, only a pioneering paper by Becker, Landes and Michaels (1977) and a more recent study by Weiss and Willis (1997) assess how unanticipated changes to income and earnings affect marital dissolution.[4]

The model by Becker et al (1977) explaining the problem of marital instability is the foundation of all work by economists in this area. The model argues that at the start of marriage people form expectations about their and their spouses future earnings streams. Couples are also characterized at the start of their marriages by their "match quality" – something which measures the likely future stability of their union because of factors such as similar life experiences and goals, and the intensity of their initial connection. Over time, married persons receive information about themselves and their partners which may cause them to re-evaluate the wisdom of remaining married to the spouse. The main point is that the information likely to cause this type of re-evaluation must be *unanticipated*, for things that the couple knew or expected to be true when they became married should have made them dubious about being married in the first place. These unanticipated bits of information, about changes in income, earnings and other prospects are what we call "shocks" in this paper.

[3] Since marital dissolution is something which people choose, this statement may appear initially odd. If people chose to dissolve a marriage then, by revealed preference, how could their welfare fall as a result of what they freely chose? Of course, since any *individual* spouse, if his or preferences are strong enough, can cause a marriage to end, it is possible for the other (reluctant) spouse to be made strictly worse off by the new arrangement. There is evidence (Seeborg (1996)) that ex-wives often suffer financially in the aftermath of a divorce or separation. Even if both spouses agree that they will both personally fare better if their marriage were to end, it is not obvious that they fully internalize the interests of any children that they might have. This means that children's welfare may suffer after marital dissolution.

[4] Other recent research in economics on the subject of marital dissolution includes Lillard and Waite (1990, 1993). The theoretical foundations to work on marriage and divorce can be traced to various papers by Becker. See Becker (1973; 1974; 1991). Weiss (1997) is an excellent summary of research on these questions.

Empirical tests to gauge the importance of shocks on marital instability are frustrated by the fact that the quality of a married couple's initial match is not known to a researcher. The inevitable question then becomes: Is the fact that a married couple breaks up attributable to the earnings shocks which buffet them, or to the fact that they were an ill-matched pair to begin with? And, is the deviation between *the couple's* belief about what each will earn and what they actually earn in the future well approximated by the difference between the *researcher's* estimate of the couple's belief about their prospects and what the couple actually realizes?

Both of these problems complicate the empirical work done by Becker et. al (1977) on the causes of marital instability. Using a large cross sectional data set, the authors examine the importance of income, children and age at marriage on marital dissolution. Because the data are not longitudinal, they are not able to account for match quality in their regressions. The authors measure earnings shocks using (in their words) a crude measure equal to the difference between earnings in the future as predicted by a simple regression model and actual earnings in the future.

Weiss and Willis (1997), building on insights from Becker et al., model "surprises" as the difference between realized earnings and predicted earnings estimated from earnings regressions run on data from previous years. Their results show that a positive surprise to a husband's earnings lowers the chance of marital dissolution, while a positive earnings shock experienced by a wife's raises the odds of divorce. Since they use panel data from the National Longitudinal Survey of Youth (NLSY), Weiss and Willis are able to control for possible biases introduced by latent match quality. However, Willis and Weiss, like Becker et al, use no explicit measure of shocks. Their regressions therefore relate divorce probability to a measure which may be a very imperfect measure of earnings changes which are un-anticipated by the couple.

In this paper, we study two explicit outcomes which satisfy the conventional understanding of the term "shock" or "surprise", and which are in keeping with the spirit of the original formulation of "surprises" due to Becker et al (1977). Our hope is that the effects we identify are therefore truly due to

unanticipated shocks to earnings. Also, because we study two different, explicitly-defined earnings shocks, our work is able to address the fact that different shocks which have broadly similar effects on the earnings of a spouse may have quite different effects on the probability of marital dissolution. This is so for two reasons.

The first is that two unanticipated shocks which affect current earnings similarly may yet provide different pieces of information to a partner about a spouses' future earnings capacity. The second reason is that the precise nature of the shock may matter in a couple's dissolution decision because of how others may react to a divorce or separation which is initiated by a particular type of shock. For example, friends and other loved ones may withhold their post-separation support if they feel that the separation is unwarranted, unjust, or petty. A person concerned about the treatment that they will receive from their loved ones after their marriage ends might feel that only certain reasons for divorce comfortably pass this social approval test. Of course, to learn whether different types of shocks affect the dissolution decision differently, we can only examine these issues if different, explicit indicators must be used in the analysis.

In our analysis we focus on shocks to earnings arising from the onset of a physical disability or job loss. We use panel data in our analysis as do Weiss and Willis. However, Weiss and Willis only study marital dissolution up to age 32. Their summary statistics reveal that there is a great deal of marital formation and dissolution by this age, but it is possible that patterns of marital dissolution for such young couples may differ systematically from the behavior exhibited by the population at large. It may be therefore be unwise to generalize from results for this group. Our data cover marriages between people of all ages and with very different marital histories, so our results should be representative of population-wide effects.

In the next section, we briefly lay of the theoretical foundation for the work that follows. The estimation technique is then briefly outlined. Next, we describe the data used in the analysis, present the results, and conclude.

2. Earnings Shocks and Marital Dissolution: Theory and Empirical Strategy

Consider a family i consisting of a husband, *h*, and a wife, *f*. Let the utility which the partners *jointly* receive from being married in any period *t* be $V_{it}\left(Y_{ht}, Y_{ft}\right)$.[5] Y_{jt} is the income or labor earnings received by spouse *j*, $j = h, f$ in time period *t*. Assume that marital utility is strictly increasing in its arguments, so that $V_1 > 0$ and $V_2 > 0$ in every *t*. In every period, a spouse has an alternative utility which he or she can receive from not being married to the current spouse - $A_{jt}\left(Y_{jt}\right)$. These alternatives may be very different for a husband and a wife in any given marriage, but notice that they depend only on the characteristics of that particular spouse. If a married person were not with their current spouse, they could either be single, or with a new partner. If single, their welfare would clearly be determined only by what they were able to earn. And, in this simple model where people are distinguished solely by their earnings capacities, the "quality" of any new spouse one is able to attract depends solely on one's own earnings capacity. Finally, suppose that it costs *C* to dissolve a marriage, with the costs shared by husband and wife.

Under these assumptions, the expected gain from remaining married for a married couple i, in year *t* may be expressed as the value function

$$G_i(t) = V_{it}\left(Y_{ht,}Y_{ft}\right) + E_t\left\{Max\left[G_i(t^+),\ A_{ft^+} + A_{ht^+} - C\right] \mid I_{it}\right\} + \nu_{it}\ . \qquad (1)$$

In (1), the expression (t^+) refers to all time in the future from the perspective of period *t*. The first part of (1) reflects the within-family utility in the current period. The second part of (1) is the expectation as of *t* of what the couple expects to receive in the future: either the value of remaining together in the next period or what they would receive from having their marriage dissolve in the future. This is a conditional expectation because the couple will have, at time *t*, a body of information summarized by the information

[5] The most simple form that the function V can take is a sum , but others obviously possible. For example, marriage may be synergistic in the sense that the pair does jointly better than the mere sum of their parts.

set, I_t, which should be pertinent to its dissolution decision. The term ν_{it} refers to idiosyncratic factors which affect a couple in any period: the quality of the couple's match; and purely random events or considerations. That is,

$$\nu_{it} = \mu_i + \varepsilon_{it} \tag{2}$$

where μ_i measures latent match quality, and ε_{it} is a white-noise random error.

Larger gains as measured by (1) should increase the durability of a marriage. A variable which, *ceteris paribus*, decreases current within-marriage utility or the expected future within-marriage utility should thus raise the probability of separation. By similar logic, anything which only raises the costs of divorce lowers the probability of separation. It follows that that an earnings shock to spouse *j* in time period *t*, D_{jt}, has an ambiguous theoretical effect on the likelihood of divorce. On the one hand, an earnings shock decreases the utility that the family currently receives, and might decrease the utility that the family expects to receive in the future as well, so that

$$\frac{\partial V_{it}}{\partial D_{jt}} < 0, \text{ and, } \frac{\partial E\left[V_{it^+} \mid I_t\right]}{\partial D_{jt}} \leq 0. \tag{3}$$

But a shock should also lower both the current and expected future alternatives of the person suffering the shock, for it lowers that person's earnings and renders them less attractive to other possible mates. So

$$\frac{\partial A_{jt}}{\partial D_{jt}} < 0, \text{ and, } \frac{\partial E\left[A_{jt^+} \mid I_t\right]}{\partial D_{jt}} \leq 0, \quad j = h, f. \tag{4}$$

The degree to which a shock lowers expected future within-marriage and alternative returns depends on the inferences drawn about how the affected person's future earnings prospects will be affected. Some types of earnings shocks may lead a spouse to conclude that they have married a person who is likely to face many similar shocks in the future. Divorce should be a more likely outcome in such

instances. Alternatively, other shocks may be perceived as having only fleeting influences on a partner's earnings, with little or no informative value about how the person is likely to fare in the future. In these cases, the adverse effect of earnings shocks on separation probability should be smaller, particularly given that separation is a costly thing.

The precise nature of the spousal shock may also directly affect separation costs. For example, suppose that the person suffering the shock is a husband. Married couples promise explicitly to remain together "in sickness and in health" so that a wife trying to leave a spouse who has fallen ill may meet with significant societal disapproval (high *C*). Alternatively, to the extent that job loss is a type of public signal of a husband's lack of initiative or dedication, a wife might find that leaving him after this event is met with little societal disapproval (low *C*).

If a marriage dissolves in any period in which the expected gains from marriage are less than zero, and if the first two terms of (1) can be written as a linear function of observables, a couple's *separation hazard* – its probability of dissolving at any time, having survived up to that point in time – may be written

$$S_{it}(T) = \beta_1 T_{it} + \beta_2 Z_{it} + \beta_3 \sum_{t=t-\infty}^{t=t} D_{ht} + \beta_4 \sum_{t=t-\infty}^{t=t} D_{ft} + \mu_i + \varepsilon_{it} . \qquad (5)$$

T_{it} is the time that the couple has been married as of year *t*, so the coefficient β_1 measures the degree of duration dependence in marital dissolution. If $\beta_1 < 0$ then marriages become sturdier the longer they last; $\beta_1 > 0$ implies that couples are more likely to separate the longer they have already been together. The variable Z_{it} represents all observable characteristics of the couple which may be presumed to affect marital stability. These include variables which measure the nature of initial sorting, such as shared religious affiliation, or similar education. The variables D_h and D_f measure the history of spouses' earnings shocks. The lagged versions of these variables enter into (5) because earnings shocks may have a delayed effect on marital durability.

The variable ε_{it} is assumed to be Normally distributed, with $E(\varepsilon_{it}) = 0, \quad Var(\varepsilon_{it}) = 1,$ $E(\varepsilon_{it}\varepsilon_{i't}) = 0,$ and $E(\varepsilon_{it}, \varepsilon_{it'}) = 0$. In principle, we can estimate equation (5) using multiple years pooled data, and simple probit estimation. The problem is the match quality term μ_i in the equation. Even if μ_i is not systematically related to any of the regressors of interest, in a non-linear model of the form of (5), unlike a simple linear model, the parameter estimates may still has biased. (See Madalla (1986)). We mainly control for marriage-specific match quality with a rich set of variables which include whether the marriages under examination are the first, second or third or later for each spouse in each marriage; the religious affiliation of the spouses; and differences in their levels of education. A very similar approach is taken by Willis and Weiss, who model the match term as being a linear function of observables in each period, then directly control for these observables in their regressions.

3. Data

Marriages and Divorces

This paper uses data from the standard releases of Panel Study of Income Dynamics (PSID), 1968-1993, combined with detailed marital histories which were collected beginning in 1985. The PSID is a nationally representative sample of households in 1968 as well as an oversample of low-income households. For our paper, we focus on households from the nationally representative sample.[6]

To construct the sample used in the paper, we first identify all married couples in all PSID survey years. Retrospective information on variables such as the date of marriage, and the characteristics of the spouses at the time of marriage is essential for our work, but this information on marital history is first asked in the PSID in 1985. Thus, we delete from the set of all married couples for which this retrospective information is not available. It follows that couples which are present in the PSID prior to

[6] Estimation using the nationally representative and poverty sample and using the PSID sample weights yield very similar results to those presented in the paper.

1985 must last until 1985 to be included in our analysis sample. A natural concern is that our sample might contain a disproportionate number of families with idiosyncratically high levels of durability, given that the initial wave of data collection was in 1968. We believe that having accurate historical information about the marriages that we study overrides this concern. Moreover, if we find that earnings shocks raise the probability of marital dissolution, *even in families which are idiosyncratically stable*, then our results would have to read as conservative lower bounds for the population at large.

We use information on marital history from the marital history file to determine the date of marriage and the number of previous marriages for each couple. Couples for whom no date of marriage is available – people who cohabiting - are dropped from the sample.[7] If a couple is together in the PSID data in one year (say 1973) but give their date of marriage as a later year (say 1977), then we determine their date of marriage as being the year they report begin married, rather than the date we first observe them living together as a couple. Both spouses report their marital history separately in either 1985 or in their first year as a head or a wife if they subsequently enter the survey. In a few cases (less than 5%), the spouses disagree on their date of marriage. Using either the earlier or the later of the dates (or excluding these households) yields nearly identical results.

For the couples that remain after the deletions described above, we next attempt to identify divorces. From annual questions on marital status, we determine if a couple is together and, if not, whether they were together in the previous year. If a couple is together in some survey year t and not in survey year t+1, we focus on the reason given for their not being together. Couples at risk to be labeled "divorced" are those for which both spouses are interviewed in year t+1 but reside in separate households, and those where only one spouse is left in the PSID and the reason for the other spouse no longer being in the PSID is given as "that spouse moved out". From the marital history, we then ask

[7] The fraction of cohabiting couples in a given year averages less than 5%.

whether such couples were separated or divorced in the time when they are found to reside in different households. Since the data show that most couples divorce upon becoming separated, we call all separations "divorces" in the analysis.[8] The final married sample consists of all unique husband-wife pairs, who responded to the PSID marital history information in 1985 or later. We track marital dissolution of the couple in the sample from 1985 until the end of the marriage, or until the end of the survey.

Job Displacements

Job displacements are determined from a question put to respondents with low levels of current job tenure about their previous employer: "What happened to that employer (job)?" Our interest is in those who report either that their plant closed/employer moved and those who were laid off/fired. Workers who are temporarily laid off at the time of the survey are treated by the PSID as if they are still employed and are not asked any questions about a previous employer/job. If such a worker is subsequently terminated, that information would be recorded as a displacement in the following year's survey.

The year of displacement is measured with some error. The earnings and employment questions are designed to elicit information for the previous calendar year. However, questions about job loss are not specific to calendar years. For the first sixteen waves of the PSID, the survey asks what happened to the last job for those reporting job tenure which is less than one year. Subsequent surveys ask what happened to the previous job if the current job started since January 1 of the previous calendar year. Due to the timing of the interviews, job displacements may have occurred either during the previous calendar year or during the first few months of the current calendar year. For this study, a recorded displacement

[8] We do not allow for re-marriages in our analysis. However, only a small fraction of couples are observed getting back together after their initial separation.

is assumed to have occurred during the previous calendar year to match the earnings and employment data recorded in the same survey.[9]

The analysis focuses on the first displacement since the couple has been together. Stevens (1997) finds that for workers suffering multiple job losses, the first job loss is by far the most severe in terms of lost earnings and wages. She also finds that displaced workers face an increased risk of future job loss relative to never displaced workers. Stevens concludes that finding stable employment is an important part of the recovery process after an initial job loss. Since the first job loss is the catalyst for the permanent earnings losses and since subsequent job losses appear to be "aftershocks" following the initial displacement, the analysis here is restricted to the impact of the first job loss.

Displacements recorded in the 1968 (first) survey are counted as first displacements, but these couples are not used in the analysis because these displacements may have occurred anytime in the ten years prior to the survey. For families which first appear in the 1968 survey, the displacement is therefore either the husband's first displacement, or his first one in at least ten years. For families which are split-offs from the original sample (e.g., a daughter is married and sets up her own household), the recorded displacement may not be the first displacement, but it will be the first one since the household was formed.

Disabilities

Disability status is recorded from a question which asks "Do you (HEAD) have any physical or nervous condition that limits the type of work or amount of work you can do?"[10] Whereas displacement

[9] Stephens (1998) presents evidence from the unemployment experience of displaced workers in the PSID which suggests that this dating of displacements is the correct approach to use.

[10]The wording of this question has remained constant throughout the PSID, with the exception of 1969-1971. In these years, disability is recorded from two questions, the first which asks if a condition limits the type of work and the second which asks if a condition limits the amount of work. A disability in these years is recorded as an affirmative response to either question.

information refers to a specific event which occurred within the past year, disability status refers to a subjective state which can be acute, chronic, or intermittent.

Because the disability information comes from self-reports, there has been concern that workers may feel compelled to justify lower amounts of labor force participation, especially retirement, by claiming they are limited in their work capacity. While such bias exists, there is also an attenuation measurement error bias since the work limitation responses are a noisy measure of true work capacity. In fact, the disability literature finds that these opposing biases appear to cancel out one another and concludes that health limitation questions such as those found in the PSID are a good proxy of a worker's disability status (Stern 1989; Bound 1991; Bound et al 1998).

Another issue with the disability measure is determining the date of onset. For this study, a disability is assumed to have occurred within the year prior to the survey date when the respondent first reports an affirmative answer to the disability question. One potential problem with this method is that although people may be reporting a disability for the first time as limiting their work ability, these disabilities could have affected them for varying lengths of time before work activities were affected. Unfortunately, the date of disability onset is only available in a few of the early PSID years and is not used here.[11] To capture "new" disabilities, the disability analysis is limited to those households in which there is at least one pre-disability observation available. Hourly wage and annual earnings regressions estimating the long-run effect of disability using this measure yield results very comparable to Charles (1997). As with displacement, we focus on disabilities which occur during the time that the couple has been together

In the analysis, we present results for shocks which occur to the wives in our sample as well. Unfortunately, for many years, the PSID did not inquire about displacement or disability for married women. This information is not available until 1979 for job loss and 1981 for disabilities. For the various regressions which assess the impact of wives' shocks we impose the same two main requirements

that we do for husbands: the shocks must occur during the particular marriage, and there must be one year in which the person does not report being disabled prior to the first report of disability. We apply the sample-inclusion rules regarding shocks separately for husbands and wives, so the samples we use to study the effect of shocks suffered by the different types of spouses are not identical, though each is drawn from the base sample of SRC married couples who responded to the marital history survey.

Data Summary

Table 1 presents the summary statistics for the sample used to study the effect of men's shocks. The sample consists of 2794 couples, about forty-percent of which experience no shock over the interval studied. The first several rows of the table reveal that there are virtually no differences between families where the husband experienced a shock and those where he did not. For example, in all families, the marriage in question is the first for both 80% of husbands and wives, and husbands were about three years older than their partners at the time of marriage. Similarly, more than ninety percent of husbands are white in the three sets of families.

The various types of families do differ with respect to their levels of education. Families in which there is no shock tend to be better educated by more than a year for both husbands and wives. In the case of job loss, this might be explained by the fact that the jobs of the better educated display greater job security. And, it is well established in empirical health economics that there is a strong positive relationship between good health and better education. (See Kenkel 1991).

Perhaps more noticeable than differences across the families in education may be the differences in the observed incidence of divorce. Couples for whom no earnings shock is experienced by the husband seem much more likely, on average, to experience a marital dissolution in the years after 1984, relative to couples where the husband either lost his job or had a disability. What is the explanation for this? The answer has to do with the way in which match quality, divorce incidence and the onset of

[11] In 1969-1975 and 1978, the PSID asks the respondents how long they have been limited. Charles (1997) uses this

shocks interact. If shocks appear randomly over a couple's life together, the chances that we observe a couple experiencing a shock obviously rises the longer the marriage lasts. But suppose that some marriages are initially bad matches; the partners know soon after marriage that they do not get along. These bad matches will fail quickly. And, *because* they fail quickly, they are likely to fall into the category of marriages for which no earnings shock is observed during the marriage.[12] The means for the number of years that the couple is observed in the P.S.I.D., and the average marital duration of the couple over the years that the couple is observed in the data are consistent with this argument.

The table shows that the couples where the husband had no shock were in marriages which were observed for only twelve years, as compared to twenty and sixteen years for families with the two types of shocks. And, during the years that the couple was in the PSID, they had been married for an average of only 14 years, versus 26 and 18 years for families with the two types of shocks. Because they broke up so quickly, these marriages were simply not together long enough for a bad event like an earnings shock to happen to them.

Recall that the sample used to study the effect of wives' shocks is different because the survey did not inquire into wives' disabilities prior to 1981 and job loss prior to 1979. Table 1b shows the means for this sample. All of the basic patterns described for what we will henceforth call the husband sample are repeated in this wives sample.

Table 2 assesses the extent of sorting among the married couples in terms of observable characteristics.[13] The table shows patterns for race, education and religion – variables which are probably important determinants of the degree to which a couple is well matched. The first column shows the remarkable degree to which the couples in our analysis are of the same race. There is

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information to construct a year of onset variable and to impute year of onset where this variable in not available.

[12] Families with no earnings shocks – the control group – in the regressions are systematically "badly-matched". This means that if we find evidence that families with earnings shocks are more likely to divorce relative to this group, then our results are conservative lower bounds on the adverse effect of disability and job loss on marital stability.

[13] The tables uses the sample used to study husbands' earnings shocks. The results in the sample used to study wives are nearly identical.

significantly less sorting along the dimension of religion, as the second column shows. Nonetheless, the fact that more than 60% of all couples share the same religious affiliation, at least nominally, suggests that substantial sorting occurs with respect to religion as well.

The similarity in schooling between husbands and wives is explored in the remaining columns. We separate completed schooling into three categories: high-school or less (HS); some college, but no college degree (C); and at least a four year college degree (C+). The husband's education is always listed first. Overall, sixty-four percent of husbands and wives have the same level of completed schooling. This level of sorting is about the same as is observed for religion. Unlike religion, however, these patterns mask large differences among the various types of families. Most noteworthy is the relatively rarity of couples in which both the husband and wife have at most a high school education among the set of people who are not observed to experience shocks. The 33% incidence of the HS/HS educational match among couples where the husband experiences no shock is much smaller than is true for the other couples where the incidence is 53% and 55%, respectively. And, the C+/C+ outcome is also is clearly most common among couples who experienced no shock.

Overall, there is a smaller level of educational similarity among families in which the husband experienced a shock. If possessing similar schooling implies that partners have much in common, then it is possible that greater educational dissimilarity might cause marriages to be less stable, with the result that these marriages break up more quickly, and are not together long enough for a spouse to experience a shock.

The next section presents the results of the estimation procedures summarized in Section 2.

4. Results

Table 3 presents results for the effect of husbands' disability and job loss on the subsequent likelihood of divorce for the couple. The dependent variable is a binary variable indicating whether the marriage ends

in divorce by the next year. Probit equations were run on pooled observations for all couples, and the specification is as given by equation (5).[14] The standard errors reported in the table allow for arbitrary correlation between the disturbance terms within a couple. All of the regressions presented in the Table use a rich set of variables to control for marital history, family structure, and observable match quality – the degree to which spouses have the same education, religion and race. We discuss how these variables affect marriage stability before turning attention permanently to the effect of earnings shocks.

In all of the regressions, the marital history variables are found to be significant determinants of divorce hazard. The individuals who are older at the date of marriage are less likely to become divorced. This is consistent with the argument in the theoretical literature on marital search that more time spent search for a spouse, the better the quality of the match when a spouse is found. The theoretical prediction of how having been previously married should affect divorce probability is ambiguous. On the one hand, that a person has had one or more failed marriages could mean that they are not a stable partner. On the other, the experience of having been married before should have provided useful knowledge on how to get along in a marriage which would make any subsequent marriage more secure. We find that second and third marriages are less stable than first, suggesting that former effect dominates in our sample. Finally, we find strong evidence of duration dependence in marital stability: the longer people have been married, the smaller their divorce hazard. This result makes good theoretical sense. The longer people have been married, the more time they have had to familiarize themselves with their partners' flaws, and the more time they have had to evolve strategies for dealing with them.

With respect to the controls for observable match, we find that sharing the same religion has a particularly strong effect on marital stability. Being of the same race does not affect the divorce hazard in a statistically significant way when the race of the husband is controlled for. We control for the different possible types of husband/wife education outcomes with the HS/HS category as the excluded

[14] We estimated several random effects probit models to help account for unmeasured heterogeneity. The results which are very similar to those we present, and are available upon request.

variable. The results suggest that the effect of education on marriage stability is less a matter of the similarity in schooling between husbands and wives, as much as whether the couple is highly educated or not, and whether it is the husband or wife with the higher level of schooling. When the husband has only a high school education, then whatever his wife's education, the probability that their marriage ends in divorce is about the same. When the husband is a college graduate, then regardless of his wife's education, the likelihood that the marriage ends in divorce is significantly reduced relative to that for the HS/HS type of family. In support of the match idea, it is true that the reduction in the hazard relative to HS/HS is smallest when the education is most dissimilar among these marriages where the husband is a college graduate – the CO+/HS category.

The last set of control variables measure family structure. We find that family structure is an important determinant of divorce probability in all of the regressions. In particular, children help to stabilize marriages. People are more likely to divorce the older their youngest child, and are less likely to have their marriages dissolve the more children they have. It should be noted that it is difficult to be certain about the direction of causality here, as it may be their confidence in the stability of their marriages which make people have more children in the first place.

We turn now to a discussion of the results for husbands' earnings shocks. The first set of regressions in the table control only for husbands' job loss. We find that job loss raises the hazard of divorce in the first three years immediately after the shock. By four years out, the divorce hazard is not affected in a statistically significant way according to these results. By contrast, in the second regression which controls for whether the husband suffered a disabling illness, there is no statistically significant effect on the divorce hazard either immediately after or many years after the event. The third regression in the table includes controls for both husbands' job loss and husbands' disability. The same pattern is found as when these shocks are controlled for singly: disability appears to have no effect of marital

dissolution hazard, whereas job loss raises the hazard by a statistically significant amount, though only in the three years immediately after the shock.[15]

Table 4 presents results for the sample used to assess the impact of wives' earnings shocks. The table essentially reproduces the results for the husbands' shock in Table 3. Disabling illness has neither a short nor long term effect on the probability of divorce, and a job loss suffered by a wife raises divorce probability in the short term, but not in the longer run. In sum, the regressions in these two tables weakly support the idea first described by Becker et al (1977) that earnings shocks should matter in the decision to remain married. The support is weak insofar as we find it only for one type of shock (job loss), and not for another which is likely just as serious (disability). Nonetheless, we do find a significant effect using explicit indicators for the source of the shock.

While consistent with the theory of marital dissolution, the results raise two important questions. The first is: Why is it that when we find that shocks affect marital dissolution it is only in the period immediately after the shock, and not later? Our guess is that any new information that an earnings shock brings to a couple is most likely to affect those couples whose assessed gains are not large to begin with. Once they know that their future gains from being married are likely to be smaller in the future as a result of the shock, they do not benefit by lingering in the marriage until well-being *actually* falls.

The second question raised by the results is more difficult to answer. Why do we find that a job loss affects divorce probability but that disability does not, even though both events are negative earnings shocks? Recall from the model outlined in Section 2 the argument that bad events occurring to a spouse cause both husband and wife to re-examine the wisdom of remaining married to the incumbent partner. As a result of the shock, the couple obviously learns that their joint income (and thus their well-being) in the marriage is *immediately* lower, and also that their joint *future* income may be lower as well because of any information that the shock conveys about the affected partner's capacity to get or keep a job.

[15] We estimated regressions in which the time since the occurrence of the shock is measured in single years rather than the three summary measures shown. Not surprisingly, the results from these regressions show the same basic patterns as with the summary measure. They are available upon request.

Notice as well that a shock may provide information about future realizations of important non-financial variables which affect marital well-being. For example, if a wife can conclude that a husband lost his job because of his repeated irresponsibility or bad temper, she should conclude both that he is likely to face employment troubles in the future, and that he may not be a good person with whom to raise children. Both of these are good reasons for her to wish to get out of a marriage, and both can be said to have been "caused" by the earnings shock.

Armed with new information after the shock, the model suggests that the spouses also must be attentive to the costs which arise in the case of dissolution. Financial costs associated with divorce are obviously relevant, but there be certain societal costs which a spouse may face if he or she leaves a partner suffering from a given shock. In other words, there may be *stigma* attached to divorces which have as their proximate cause certain bad events. Of these three possible reasons why the effect of disability and job loss might be different, we are only able to study the role of the first two. [16]

The first possible explanation for the different effect of disability and job loss focuses on what spouses learn about the current and future path of the affected partners earnings and later experience with shocks. Maybe disability does not affect earnings and work capacity. Or, maybe a disability suffered in one period is less indicative about future episodes of disability than is a job loss about subsequent job loss. If either of these is true, spouses should be less willing to divorce when disability occurs than when there is a job loss. Tables 5a and 5b explore whether these explanations can account for the results.

Table 5a summarizes annual hours worked and the annual incidence of shocks before and after the date of the first observed shock for husbands, by the type of earnings shock. Notice that the sample is unbalanced, as men join and attrite from the sample at different times, relative to their date of onset. Recall that we require men to be in the sample for at least one period prior to their first observed

[16] A fourth possibility which we do not consider in the paper is that the onset of disabling illness is not a "shock" at all, whereas job loss is. Maybe spouses can predict the full trajectory of their partners health, but not of job loss. If so, they would have fully incorporated future bouts of poor health into their decision-making at the time of marriage and should not divorce when disability occurs in the future.

disability to be included in the sample. As there are retrospective questions asked about whether this is a first job loss or not, no such restriction is necessary among those who experienced a displacement. The third column of numbers in the upper panel in the table shows average hours worked in the years before and after job loss at date t^*. The fourth column represents the change in hours of work in each year after the shock relative to the average hours worked over the three years directly preceding the job. The fifth column shows the percentage change in hours of work from the pre-shock mean. The fifth column presents the percentage of men who, after experiencing the shock in year t^*, experience a second shock *in* the various years indicated onset. The last column shows the proportion of men who, having suffered a shock in year t^* experience a second shock by the year indicated. This last is a cumulative indicator of shock experience over time. The table is split into two panels, showing the results separately for job loss and for disability.

Table 5a shows that husbands tended to work full time hours (about 40 hours per week for 50 weeks) in the years immediately preceding their job loss. In the year of job displacement and immediately afterwards, hours drop substantially relative to the pre-displacement average. Thus, hours fall by 280 in the year of displacement and by 290 in the year after displacement relative to hours worked in the years before the shock. Hours in these two years are about 13% lower than before job loss. But the severity of these hours losses decreases both sharply and rapidly. Four years after job loss, they are only 6.1% relatively to pre-shock levels, and 5.4% one year later. With respect to subsequent episodes of job loss after the initial shock, husbands face a risk of being displaced again in a future year which reaches 20% only in the year immediately after onset. [17] Afterwards, this annual risk never rises to as high as 15%. These risk levels translate into 38.5% and 43.1% of men having experienced a second shock by four and five years after job loss, respectively.

[17] This high incidence of a new job loss in the year immediately after an initial job displacement is likely the result of the fact that workers may attach themselves to jobs for which they are poorly matched right after they have lost one. The risk of this sort of poor match fades over time.

The second panel of Table 5a depicts very different patterns. Like their counterparts who lost their jobs, husbands experiencing disabilities tended to work full time hours in the years preceding the onset of their conditions. And, the loss in hours over in the year of disability is similar to that for displaced workers both in absolute and percentage terms. But here the similarities end. Not only is there an not improvement is the hours experience of disabled men in their post-onset years, things get gradually worse, on average. Whereas the hours loss is 234 and 11.4% in absolute and percentage terms, respectively, in the year of onset, the corresponding losses are 486 and 24.2% five years after onset. With respect to the subsequent trajectory of their disabled status, disabled workers have an annual risk of a new disability (or a re-occurrence of an old one) which is never smaller than 37% in the five years after onset, and which shows no evidence of decreasing over time. By three years after onset, fully 59.4% of men have had a second disability, and more than two-thirds have had a second disability by five years after onset.

Table 5b presents the results for wives. An important difference between the husbands and wives is in the number of hours worked prior to the occurrence of the two shocks. The third column indicates that wives worked about half the number of hours in their pre-shock years as did the husbands. This difference aside, the patterns in this Table are quite similar to those in Table 5a. For job loss there is a quite small reduction in annual hours of work in the period immediately following job loss. Afterwards, a very modest increase in hours occurs.[18] Wives who experience a job loss face a future risk which averages about 7% per year. And, as late as five years after the loss of a job about 38% of wives had had another such episode. With disabilities there is a large immediate reduction in hours of work which worsens over time, so that by 5 years after disability onset, wives' hours by fallen by about 15% relative to their pre-onset levels. The trajectory of disabilities after the initial episode of illness is also quite negative. Wives face an annual risk of another disability in the years after onset which averages

32% in the years after onset, and which shows no downward trend. Cumulatively, by five years after onset sixty-five percent of wives have had another disability – almost double the re-occurrence rate for another job loss, and very similar to the comparable rate for men.

The results in these two tables provide convincing evidence that the reason we find no effects on marital dissolution for disability but do for job loss cannot be that disability has a less serious effect on hours either in the long or short term. Disability is worse for a couple's labor supply than is true for a job loss. And, it seems that when a spouse suffers a disability, another bout of poor health is almost certain to soon follow. Again, this is not so with a job loss. A spouse who witnesses a partner become disabled ought to know or immediately suspect that their economic future – at least as measured the hours their mate will work - will be more difficult than should a spouse who witnesses a partner experience a job loss. Should not disability therefore be more likely to occasion divorce than displacement, contrary to the results we find?

This question pre-supposes the importance of purely economic considerations in decision-making about marital status. As mentioned above, job loss may reveal important things about a partner's personality, discipline, and temperament which spouses must also consider when deciding whether to remain with a partner. We might think of these traits as something like "non-economic marital fitness" – traits which make a partner desirable, irrespective of purely economic considerations. An event which reveals that someone may in fact lack this fitness may be a greater determinant of divorce than one which lowers earnings by a larger amount, if no such negative inference about fitness could be attached to that second event. Is there any evidence in support of the idea that job loss may communicate information about poor fitness?

To answer this question, we use the fact that the P.S.I.D. has information on the reason for job loss; people either lose a job because they are laid off or because their plant closed. Our hypothesis is

[18] This table presents simple means, with no controls for changes in employment behavior over time. This means that if a trend increase in labor force participation among married women could explain the slight upwards trend in hours after the occurrence of shocks.

simple. Since a plant closing affects *everyone* who worked at a plant, it is quite unreasonable to ascribe negative inferences about laziness, tardiness, discipline or motivation to any individual who has lost his job this way. By contrast, a layoff is personal; presumably the employer learned something which made it necessary to end its relationship with this *individual*. If there is a correlation between things an employer might learn that would motivate him to terminate his relationship with an individual and that person's fitness as a marriage partner, then a husband or wife trying to learn about the non-economic marital fitness of their mate should be more affected by a layoff than they should be from a plant closing.[19]

Table 6 explores this issue. The table presents results from divorce probit regressions identical to those presented in the second columns of Tables 3 and 4, except that we now control for the reason that the job loss occurs. The estimated coefficients and standard errors for the control variables are not presented in the table as they are very similar those presented earlier. In all of the regressions, and for both husbands and wives, the persons who lost their jobs because of plant closing had no statistically significant difference in divorce probability than people who did not experience a shock. For people who were laid off, however, the probability of divorce is greater in all of the regressions in the years immediately after the shock.

The results suggest that virtually all of the greater divorce risk we have identified for couples in which a partner lost their job comes from the greater divorce risk of people suffering layoffs. The results are strongly consistent with the idea that it is information which partners receive about aspects of a spouses' non-economic fitness as a result of the shock they suffer that drives the relationship between job loss and divorce. Purely pecuniary considerations simply do not appear to matter greatly in the divorce decision. To see this last point, note that in the regression in the last column of Table 6, the estimated effect of a plant closing could be thought as the role which purely economic considerations which follow

[19] The idea that the information conveyed about an individual by his being laid off versus having his plant close as been used by economists in other contexts. See Gibbons and Katz (1990) for an example.

an job loss affect the probability of divorce. This effect is not statistically significant in any of the regressions. Nor is there any effect of disability – an outcome whose negative effect on a family's potential earnings we have earlier documented.

We have spoken of a job layoff's effect on marital dissolution as being causal: the fact that the person is fired makes the likelihood of divorced higher. However, it might simply be that case that people who are likely to be laid off are also likely to get divorced, with no directly causal relationship between the two things. Consider someone who is easily bored. He or she would probably be easily bored at work, resulting in missed assignments, daydreaming and other activities which would all make him or her more likely to be fired. Such a person would be easily bored in a marriage as well, and would be anxious to get divorced at the slightest provocation. Correlation between these two things would be caused by the fact that the spouse is easily bored and would not indicate a causal effect of a layoff. We believe that the temporal patterns we find in increased probability of divorce severely circumscribes the extent to which this effect could be true in our data. Presumably people whose divorce probability is higher because of the effect of a factor such as boredom which also affects layoff probability, should exhibit a greater likelihood of divorce in every period, not only those which immediately follow the shock.

5. Conclusion

In this paper, we have examined the effect of two different earnings shocks – disability and job loss –on the probability of marital dissolution. We find that disability experienced by either a husband or a wife does not affect the divorce hazard in any statistically significant fashion. However, we find that a job loss, whether experienced by a husband or a wife, raises the risk of divorce by a large and statistically significant degree in the interval immediately after it occurs. These results are weakly supportive of the idea that the new information conveyed to partners in the event of earnings shocks affect marital durability. However, there is evidence that it is not information about the couple's economic well-being

after a shock that makes divorce more likely. Rather, it appears that the important new information used in the divorce decision may have to do with what the job loss suggests about the partner's fitness as a mate.

There are two reasons we reach this conclusion. First, despite the fact that disability affects labor supply more severely and for a longer interval than is true of a job loss, we find that disability has no effect on divorce probability. Also, an episode of disability is nearly certain to be followed by another one within five years. This is not true for a job loss. If purely economic considerations (as manifested in reduced labor supply) mattered in divorce, we would expect to find that disability had more of an effect on the probability of divorce than a job loss.

Second, we speculate that if economic considerations are all that matter, then the *reason* that a person lost their job should not matter in whether a divorce occurs or not. We split job losses into those which occurred because of plant closing and those due to a layoff. Our hypothesis is that a spouse may more reasonably draw an negative inference about a partner's discipline and temperament (factors which affect both the person's ability to keep a job, and their fitness as a mate in purely non-economic terms) from the fact that he was personally fired than from the fact that his plant ceased operating. Divorce should be therefore be more likely in the case of the layoff. We find strong support for this in the data.

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Table 1a. Means of Selected Variables for Married Couples, By Husbands Experience of Earnings Shocks . (Standard Errors in Parentheses)

Variable	Husband Neither Disabled Nor Displaced During Marriage	Husband Disabled During Marriage	Husband Displaced During Marriage
Husband White?	0.93	0.95	0.93
	(0.25)	(0.22)	(0.26)
Husband's Years of Schooling	13.62	12.14	12.51
	(2.17)	(2.84)	(2.21)
Wife's Years of Schooling	13.36	12.38	12.50
	(1.98)	(2.1)	(1.92)
Husband's Age at Marriage	26.18	26.90	24.79
	(7.57)	(9.91)	(6.72)
Wife's Age at Marriage	23.99	23.82	22.45
	(6.96)	(8.86)	(6.19)
Husband's First Marriage?	0.80	0.78	0.82
	(0.4)	(0.41)	(0.39)
Wife's First Marriage?	0.81	0.81	0.83
	(0.39)	(0.39)	(0.38)
Husband's Second Marriage?	0.17	0.18	0.15
	(0.38)	(0.39)	(0.35)
Wife's Second Marriage?	0.16	0.16	0.15
	(0.37)	(0.37)	(0.35)
Husband's Third or later Marriage	0.02	0.03	0.04
	(0.16)	(0.18)	(0.19)
Wife's Third or later Marriage	0.02	0.03	0.03
	(0.16)	(0.17)	(0.16)
Divorced Observed for Couple?	0.18	0.08	0.14
	(0.38)	(0.27)	(0.35)
Years Couple Observed in PSID	12.09	19.66	16.17
	(8.19)	(6.93)	(7.7)
Years Couple Have Been Married Over Years Observed in PSID	14.35	26.18	17.98
	(11.56)	(15.86)	(12.41)
Husband Displaced From Job During Marriage	0	0.40	1
	(0)	(0.49)	(0)
Husband Disabled During Marriage	0	1	0.35
	(0)	(0)	(0.48)
Number of Couples	1166	754	874

The data are drawn from several waves of the PSID and are drawn solely from the SRC subsample. See text for further explanations.

Table 1b. Means of Selected Variables for Married Couples, By Wives' Experience of Earnings Shocks . (Standard Errors in Parentheses)

Variable	Wife Neither Disabled Nor Displaced During Marriage	Wife Disabled During Marriage	Wife Displaced During Marriage
Husband's Age at Marriage	26.31	26.37	25.59
	(8.19)	(9.25)	(7.42)
Husband's First Marriage?	0.79	0.79	0.79
	(0.41)	(0.41)	(0.41)
Husband's Second Marriage?	0.19	0.17	0.16
	(0.39)	(0.37)	(0.37)
Husband's Third or later Marriage	0.02	0.04	0.05
	(0.15)	(0.20)	(0.21)
Wife's Age at Marriage	23.94	23.76	23.01
	(7.33)	(8.43)	(6.44)
Wife's First Marriage?	0.82	0.80	0.79
	(0.38)	(0.40)	(0.41)
Wife's Second Marriage?	0.16	0.17	0.17
	(0.36)	(0.38)	(0.37)
Wife's Third or later Marriage	0.02	0.03	0.04
	(0.15)	(0.17)	(0.20)
Husband's Years of Schooling	13.33	12.62	12.71
	(2.27)	(2.59)	(2.36)
Wife's Years of Schooling	13.26	12.56	12.53
	(2.02)	(2.01)	(1.90)
Husband White?	0.94	0.93	0.93
	(0.24)	(0.25)	(0.25)
Divorced Observed for Couple?	0.17	0.10	0.16
	(0.37)	(0.30)	(0.37)
Years Couple Observed in PSID	13.03	18.02	15.33
	(8.44)	(7.51)	(7.57)
Years Couple Have Been Married Over Years Observed in PSID	15.94	22.33	16.08
	(12.45)	(15.44)	(11.19)
Wife Displaced From Job During Marriage	0	0.28	1
	(0)	(0.45)	(0)
Wife Disabled During Marriage	0	1	0.32
	(0)	(0)	(0.47)
Number of Couples	1332	689	607

The data are drawn from several waves of the PSID and are drawn solely from the SRC subsample. See text for further explanations.

Table 2. Similarity Between Husbands and Wives in Race, Religion and Education*, By Nature of Husband's Earning Shock

	Same Race	Same Religion	Same Education Level (Hubands Education/Wife's Education)			Different Education Levels					
			HS/HS	SC/SC	C+/C+	HS/SC	HS/C+	SC/HS	SC/C+	C+/HS	C+/SC
All	0.97	0.65	0.43	0.07	0.14	0.07	0.03	0.1	0.03	0.06	0.07
	(0.16)	(0.48)	(0.49)	(0.26)	(0.35)	(0.26)	(0.16)	(0.29)	(0.18)	(0.23)	(0.25)
Head Never Disabled or Displaced During Marriage	0.96	0.63	0.33	0.08	0.2	0.07	0.03	0.09	0.04	0.07	0.08
	(0.18)	(0.48)	(0.47)	(0.28)	(0.4)	(0.26)	(0.16)	(0.28)	(0.21)	(0.26)	(0.27)
Head Disabled During Marriage	0.99	0.71	0.56	0.05	0.09	0.05	0.03	0.09	0.02	0.05	0.05
	(0.09)	(0.45)	(0.49)	(0.22)	(0.3)	(0.22)	(0.16)	(0.29)	(0.14)	(0.22)	(0.22)
Head Displaced During Marriage	0.97	0.63	0.53	0.06	0.08	0.08	0.02	0.11	0.02	0.04	0.05
	(0.16)	(0.48)	(0.49)	(0.24)	(0.27)	(0.28)	(0.15)	(0.31)	(0.15)	(0.19)	(0.21)

This tables resports the propotion of marriead couples who share observed characteristics. Data are from several waves of P.S.I.D and are drawn solely from the SRC subsample.

* The education categoies which correspond to the labels in the table are: HS - high school or less; SC - college but no 4 yr degree ; and C+ - at least a 4 year college degree.

Table 3. Probit Estimates of Effect of Husbands' Earnings Shocks on Probability of Marriage Ending in Divorce By Next Year. (Standard Errors Corrected for Clustering).

Variable	Est.	Robust Std. Error	Est.	Robust Std. Error	Est.	Robust Std. Error
Earnings Shock						
Husband Displaced From Job:						
1-3 Years Ago	**0.187**	0.078			**0.187**	0.078
4-5 Years Ago	**0.011**	0.112			**0.013**	0.112
More than 5 Years Ago	**-0.108**	0.069			**-0.113**	0.070
Husband Suffered Disability:						
1-3 Years Ago			**0.079**	0.095	**0.080**	0.096
4-5 Years Ago			**-0.173**	0.167	**-0.162**	0.166
More than 5 Years Ago			**0.054**	0.086	**0.076**	0.087
Marital History						
Husband's Age at Marriage	**-0.016**	0.007	**-0.016**	0.007	**-0.016**	0.007
Husband's Second Marriage?	**0.213**	0.078	**0.215**	0.078	**0.213**	0.078
Husband's Third+ Marriage	**0.178**	0.152	**0.170**	0.150	**0.174**	0.151
Wife's Age at Marriage	**-0.034**	0.008	**-0.033**	0.008	**-0.034**	0.008
Wife's Second Marriage?	**0.265**	0.080	**0.260**	0.080	**0.264**	0.080
Wife's Third+ Marriage	**0.492**	0.162	**0.489**	0.162	**0.491**	0.163
Duration of Marriage	**-0.041**	0.009	**-0.046**	0.008	**-0.042**	0.009
Observable Match Characteristics						
Husband's/Wife's Education						
HS/SC	**-0.077**	0.086	**-0.069**	0.085	**-0.075**	0.086
HS/C+	**-0.106**	0.148	**-0.098**	0.148	**-0.104**	0.148
SC/HS	**-0.079**	0.080	**-0.067**	0.080	**-0.079**	0.080
SC/SC	**-0.090**	0.091	**-0.081**	0.089	**-0.089**	0.091
SC/CO+	**-0.319**	0.160	**-0.314**	0.160	**-0.318**	0.160
CO+/HS	**-0.232**	0.126	**-0.212**	0.125	**-0.223**	0.126
CO+/SC	**-0.380**	0.125	**-0.367**	0.125	**-0.376**	0.125
CO+/CO+	**-0.319**	0.093	**-0.310**	0.093	**-0.315**	0.093
Husband/Wife Same Religion?	**-0.228**	0.049	**-0.230**	0.049	**-0.227**	0.049
Husband/Wife Same Race?	**-0.027**	0.140	**-0.023**	0.138	**-0.030**	0.140
White?	**-0.324**	0.084	**-0.325**	0.084	**-0.323**	0.084
Family Structure						
Age of Youngest Child	**0.019**	0.009	**0.019**	0.009	**0.019**	0.009
Number of Children	**-0.071**	0.035	**-0.075**	0.035	**-0.070**	0.035
Number of Young Children	**0.022**	0.054	**0.035**	0.054	**0.024**	0.054
Year Effects	**Yes**		**Yes**		**Yes**	
Constant	**0.028**	0.239	**0.047**	0.237	**0.028**	0.238
Log Likelihood	-1540.3		-1543.8		-1539.11	
Pseudo R-Squared	0.09		0.097		0.1005	
# of Observations	15222		15222		15222	

The data in this table are drawn from several waves of the PSID and come solely from the SRC subsample.
See text for further explanations.

Table 4. Probit Estimates of Effect of Wives' Earnings Shocks on Probability of Marriage Ending in Divorce By Next Year. (Standard Errors Corrected for Clustering).

Variable	Est.	Robust Std. Error	Est.	Robust Std. Error	Est.	Robust Std. Error
Earnings Shock						
Wife Displaced From Job:						
1-3 Years Ago	**0.157**	0.082			**0.155**	0.082
4-5 Years Ago	**0.039**	0.106			**0.038**	0.106
More than 5 Years Ago	**0.119**	0.076			**0.120**	0.076
Wife Suffered Disability:						
1-3 Years Ago			**0.053**	0.077	**0.047**	0.077
4-5 Years Ago			**-0.036**	0.107	**-0.041**	0.108
More than 5 Years Ago			**0.011**	0.088	**-0.001**	0.089
Marital History						
Husband's Age at Marriage	**-0.016**	0.006	**-0.0153**	0.006367	**-0.016**	0.006
Husband's Second Marriage?	**0.213**	0.075	**0.211**	0.075	**0.212**	0.075
Husband's Third+ Marriage	**0.174**	0.147	**0.181**	0.145	**0.170**	0.147
Wife's Age at Marriage	**-0.030**	0.008	**-0.031**	0.008	**-0.030**	0.008
Wife's Second Marriage?	**0.262**	0.077	**0.262**	0.077	**0.261**	0.077
Wife's Third+ Marriage	**0.463**	0.152	**0.473**	0.151	**0.463**	0.153
Duration of Marriage	**-0.051**	0.008	**-0.049**	0.008	**-0.051**	0.008
Observable Match Characteristics						
Husband's/Wife's Education						
HS/SC	**-0.047**	0.084	**-0.049**	0.083	**-0.047**	0.083
HS/C+	**-0.0146**	0.133	**-0.032**	0.133	**-0.016**	0.133
SC/HS	**-0.021**	0.079	**-0.022**	0.078	**-0.022**	0.079
SC/SC	**-0.056**	0.088	**-0.064**	0.088	**-0.056**	0.088
SC/CO+	**-0.330**	0.159	**-0.347**	0.158	**-0.330**	0.158
CO+/HS	**-0.104**	0.108	**-0.105**	0.109	**-0.102**	0.108
CO+/SC	**-0.346**	0.124	**-0.348**	0.124	**-0.345**	0.124
CO+/CO+	**-0.281**	0.092	**-0.295**	0.092	**-0.280**	0.092
Husband/Wife Same Religion?	**-0.197**	0.047	**-0.201**	0.047	**-0.197**	0.047
Husband/Wife Same Race?	**0.021**	0.139	**0.020**	0.139	**0.022**	0.139
White?	**-0.316**	0.081	**-0.317**	0.080	**-0.314**	0.080
Family Structure						
Age of Youngest Child	**0.016**	0.009	**0.016**	0.009	**0.016**	0.009
Number of Children	**-0.069**	0.034	**-0.069**	0.034	**-0.069**	0.034
Number of Young Children	**0.023**	0.054	**0.022**	0.054	**0.022**	0.054
Year Effects	**Yes**		**Yes**		**Yes**	
Constant	**-0.119**	0.233	**-0.096**	0.231	**-0.125**	0.232
Log Likelihood	-1546.6		-1548.8		-1546.09	
Pseudo R_Squared	0.095		0.095		0.096	
# of Observations	14868		14868		14868	

The data in this table are drawn from several waves of the PSID and come solely from the SRC subsample.
See text for further explanations.

Table 5a. Hours Worked, Displacement and Disability Status for Husbands Who Experience Shocks in Years Before and After First Observed Shock at t*

	N	Time	Hours Worked	Absolute Hours Change =Average Hours From (t*-4) to (t*-1) - Hours	=(Average Hours From (t*-4) to (t*-1) - Hours at t) / Average Hours From (t*-4) to (t*-1)	Another Shock Occurs at Date t	Another Shock Occurs ***by*** Date t
Job Loss							
	434	t* - 4	2209.7			0	0
	504	t* - 3	2221.7			0	0
	610	t* - 2	2178.0			0	0
	747	t* - 1	2114.5			0	0
	900	t*	1896.9	-284.1	-13.0	1	0
	862	t* + 1	1890.5	-290.5	-13.3	0.213	0.213
	798	t* + 2	2001.5	-179.4	-8.2	0.134	0.292
	728	t* + 3	2044.8	-136.2	-6.2	0.096	0.343
	673	t* + 4	2046.9	-134.1	-6.1	0.086	0.385
	633	t* + 5	2063.1	-117.9	-5.4	0.098	0.431
Disability							
	547	t* - 4	2078.7			0	0
	609	t* - 3	2049.5			0	0
	673	t* - 2	1967.6			0	0
	771	t* - 1	1918.1			0	0
	771	t*	1769.6	-233.9	-11.7	1	0
	728	t* + 1	1702.4	-301.1	-15.0	0.394	0.394
	675	t* + 2	1685.4	-318.1	-15.9	0.409	0.541
	623	t* + 3	1643.6	-359.9	-18.0	0.403	0.594
	563	t* + 4	1598.0	-405.4	-20.2	0.377	0.632
	522	t* + 5	1517.8	-485.6	-24.2	0.372	0.676

Data are from multiple waves of the PSID, and are drawn solely from the SRC subsample. See text for further explanations.
The hours of work numbers in this table refer to the hours that the person spent employed in the year preceding the date they were surveyed.

Table 5b. Hours Worked, Displacement and Disability Status for Wives Who Experience Shocks in Years Before and After First Observed Shock at t*.

	N	Time	Hours Worked	Absolute Hours Change =Average Hours From (t*-4) to (t*-1) - Hours	=(Average Hours From (t*-4) to (t*-1) - Hours at t) / Average Hours From (t*-4) to (t*-1)	Another Shock Occurs at Date t	Another Shock Occurs ***by*** Date t
Job Loss							
	399	t* - 4	1062.9			0	0
	435	t* - 3	1128.7			0	0
	483	t* - 2	1151.2			0	0
	538	t* - 1	1222.3			0	0
	616	t*	1199.8	58.482	5.1	1	0
	581	t* + 1	1037.7	-103.548	-9.1	0.232	0.232
	525	t* + 2	1166.3	24.972	2.2	0.091	0.269
	467	t* + 3	1167.6	26.292	2.3	0.071	0.319
	435	t* + 4	1145.7	4.432	0.4	0.069	0.347
	390	t* + 5	1141.1	-0.188	0.0	0.074	0.385
Disability							
	566	t* - 4	917.9			0	0
	600	t* - 3	910.1			0	0
	646	t* - 2	1001.5			0	0
	694	t* - 1	1012.6			0	0
	694	t*	963.6	3.1	0.3	1	0
	649	t* + 1	871.8	-88.7	-9.2	0.365	0.364
	597	t* + 2	879.8	-80.7	-8.4	0.326	0.477
	530	t* + 3	870.8	-89.7	-9.3	0.321	0.553
	467	t* + 4	817.3	-143.2	-14.9	0.317	0.606
	398	t* + 5	818.1	-142.4	-14.8	0.340	0.656

Data are from multiple waves of the PSID, and are drawn solely from the SRC subsample. See text for further explanations.
The hours of work numbers in this table refer to the hours that the person spent employed in the year preceding the date they were surveyed.

Table 6. Probit Estimates of Effect of Spouse's Job Loss on Probability of Marriage Ending in Divorce By Next Year, by Reason for Job Loss. Robust Standard Errors Corrected for Clustering are In Parentheses.

	Husbands' Job Loss			Wives' Job Loss		
Reason for Job Loss:						
Plant Closed:						
1-3 Years Ago	-0.138		-0.132	0.047		-0.107
	(0.157)		(0.157)	(0.125)		(0.153)
4-5 Years Ago	0.001		-0.006	0.161		0.209
	(0.188)		(0.187)	(0.14)		(0.181)
More than 5 Years Ago	0.033		0.005	0.086		-0.027
	(0.097)		(0.099)	(0.117)		(0.145)
Layoff:						
1-3 Years Ago		0.311	0.306		0.154	0.193
		(0.088)	(0.089)		(0.073)	(0.099)
4-5 Years Ago		0.025	0.021		0.027	-0.062
		(0.136)	(0.136)		(0.106)	(0.139)
More than 5 Years Ago		-0.169	-0.173		0.127	0.138
		(0.08)	(0.081)		(0.079)	(0.099)
Log Likelihood	-1544.5	-1536.1	-1535.7	-1549.69	-1546.59	-1545.15
Pseudo R_Squared	0.10	0.102	0.1025	0.093	0.0942	0.096
# of Observations	15222	15222	15222	14868	14868	14868

The data in this table are drawn from several waves of the PSID and are drawn solely from the SRC subsample . The controls for the six regressions presented in the Table are identical to those in the various regressions presented in Tables 3 and 4.