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## MOVING AND UNION DISSOLUTION\*

PAUL J. BOYLE, HILL KULU, THOMAS COOKE, VERNON GAYLE, AND  
CLARA H. MULDER

*This paper examines the effect of migration and residential mobility on union dissolution among married and cohabiting couples. Moving is a stressful life event, and a large, multidisciplinary literature has shown that family migration often benefits one partner (usually the man) more than the other. Even so, no study to date has examined the possible impact of within-nation geographical mobility on union dissolution. We base our longitudinal analysis on retrospective event-history data from Austria. Our results show that couples who move frequently have a significantly higher risk of union dissolution, and we suggest a variety of mechanisms that may explain this.*

**T**his paper considers the influence of residential mobility and migration on union dissolution. The nature of union dissolution means that at least one partner will almost certainly move *after* the event (Asher and Bloom 1982; Flowerdew and Al-Hamad 2004; Grundy 1985; Sullivan 1986). To date, however, we can find no studies that have modeled the influence of internal (that is, within-nation) migration and residential mobility on subsequent union dissolution. This lack of previous studies is surprising because there are several reasons to expect that such an influence might exist. First, moving to a new home is acknowledged as a relatively stressful life event, and the occurrence of stressful events increases the probability of separation. Second, the literature on family migration has shown that long-distance moves are often undertaken primarily for the benefit of one partner in a couple—most likely, the male partner. Frequently, the male partner's career is enhanced by migration, whereas the female partner's suffers. Just like the stress of the move itself, this inequality might put a strain on the relationship.

By investigating the influence of moving on union dissolution, we not only aim to improve existing explanations of union dissolution but we also contribute to the understanding of the role of residential mobility and migration in the life courses of people living as couples and families. By using retrospective event-history data, we study the effects of both internal, long-distance migration and short-distance residential mobility on union dissolution (defined as divorce or separation, rather than widowhood). We also examine whether frequent moves and moving between urban and rural settings influence union dissolution. Selection effects may exist, with women who move with their partner having different (unobserved) characteristics than those of nonmovers. We therefore consider these possible selection effects by fitting a simultaneous-equations model to estimate joint equations for union dissolution and mobility. In each case, we control for other factors expected to influence union dissolution.

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## MIGRATION AND UNION DISSOLUTION

Early ecological studies in Canada (Fenelon 1971; Trovato 1986) and the United States (Breault and Kposowa 1987; Cannon and Gingles 1956; Wilkinson et al. 1983) related higher divorce rates in the “frontier” West to higher rates of population turnover through migration (although Glenn and Supancic [1984] and Weed [1974] disputed the role of “frontierness”). High population turnover was hypothesized to foster greater individualism and also to weaken social control over the actions of individuals. However, such ecological studies were unable to determine whether population turnover influenced union dissolution because of changes in community-level cohesion or because the migrants themselves were more susceptible to separation.

Other studies have considered the relationship between international migration and union stability. For example, Puerto Rican women living in the United States have considerably higher rates of union disruption than women living in Puerto Rico (Landale and Ogena 1995). Mexican men involved in circular migration to and from the United States also have significantly increased odds of union dissolution (Frank and Wildsmith 2005).

To date, though, the causal relationship between internal migration/residential mobility and union dissolution remains virtually unexplored, despite the extensive literature showing that migration can be a stressful event (McCollum 1990), often involving significant changes in a person’s routines, roles, and identities (Brett 1982). Holmes and Rahe (1967) showed that the social readjustment rating (where higher numbers indicate a more stressful situation) for a change in residence (20) was similar to a son or daughter leaving home (29), trouble with one’s boss (23), or having a considerable mortgage or loan (17). Thus, even apparently desirable life events may cause stress because they require adaptive or coping behavior.

Even short distance changes in residence have been found to influence psychological well-being and depression, particularly among women, who are often expected to cope with the practicalities of changing residence (Magdol 2002; Makowsky et al. 1988; Meyer 1987; Weissman and Paykel 1972). Geographic relocation can negatively affect children, influencing school dropout rates (Astone and McLanahan 1994), educational attainment (Ingersoll, Scamman, and Eckerling 1989), delinquent behavior (Adam and Chase-Lansdale 2002), and substance abuse (DeWit 1988). These kinds of stresses put strain on the parents of these children, and frequent moves are even more stressful for couples because of the cumulative effect of these stressors (Fitchen 1994).

Other factors relate to the place of origin. Moving to a new location may free people from those social networks that discourage separation. For example, union dissolution may be more difficult in locations where friends are more likely to be both long-standing and common to both partners. Also, moving may make a person miss the place that was left. Women are more likely than men to be kinkeepers (Rosenthal 1985), and separation from extended family members may be particularly stressful for women.

Destination characteristics may also be influential. One partner may be less enthusiastic about the destination than the other (Flowerdew and Al-Hamad 2004), and new locations offer different opportunities, including potential new partners (South, Trent, and Shen 2001). Migrants may also become exposed to new environments where separation is more common and socially acceptable. And relocation that results in the geographical separation of partners for a significant period may put strain on a relationship.

It is also important to consider the gendered implications of family migration, which usually benefits the man’s career. Women are less likely to be employed, have smaller incomes, and work shorter hours following a family migration than equivalent women who do not move (Boyle et al. 1999, 2001, 2003; Cooke 2001, 2004; Cooke and Bailey 1999; Morrison and Lichter 1988). It seems reasonable to suppose, therefore, that migration may

lead to union dissolution, particularly when one partner (usually the woman) suffers from the event. Thus, Mincer (1978) compared marriage breakdowns in the United States for those couples who had moved with those of the total married population. Mincer showed that in a 12-month period spanning an interstate move, 5% of families broke up compared with less than 2% for the general population. However, this approach did not distinguish between moves that stimulated separation and separations that stimulated migration; an event-history analysis is required to disentangle these effects.

### **OTHER FACTORS INFLUENCING UNION DISSOLUTION**

Various factors are known to be associated with union dissolution (see Boyle et al. 2006). The independence hypothesis suggests that women with higher wages have less to gain from marriage and, as a result, may have higher divorce rates (Becker, Landes, and Michael 1977), although the evidence for this hypothesis remains mixed (Chan and Halpin 2003). Most research supports the notion that having children discourages union dissolution (Manning 2004; Waite and Lillard 1991), although Chan and Halpin's (2003) recent study found that having children increases the risk of union dissolution in Britain (see, also, Böheim and Ermisch 1999). Gender roles may be influential because women with more egalitarian views may put greater emphasis on autonomy (Kalmijn, de Graaf, and Poortman 2004) and may have fewer moral problems with the idea of relationship breakdown (Lye and Biblarz 1993). However, some studies have not found that women with more progressive gender attitudes are more likely to divorce (e.g., Sayer and Bianchi 2000). Dissolution behavior is also transmitted between parents and children. Amato (1996) showed that divorce was less likely in families in which neither the husband's nor wife's parents divorced (Kiernan and Cherlin 1999). Marital status also influences partnership stability. Because cohabiting relationships involve less investment and legal entanglements, they are easier to terminate than marriages (Bennett, Blanc, and Bloom 1988; Hoem and Hoem 1992).

Other demographic and socioeconomic factors expected to influence separation rates include the duration of the union, which is negatively correlated with separation (Chan and Halpin 2003); the age at union formation, which is negatively correlated (Tzeng and Mare 1995); the age gap between the partners, with couples in which the man is younger having higher risks of separation (Chan and Halpin 2003); the number of previous unions, which is positively correlated with separation (Martin and Bumpass 1989); religion, with religious people being less likely to divorce (Lehrer and Chiswick 1993); geographical location, with those in urban areas being more likely to separate than those in rural areas (Balakrishnan et al. 1987; South 2001); and educational status, with the more educated being less likely to separate (Morgan and Rindfuss 1985; but see Hoem 1997). In this analysis, we control for these various factors before examining whether migration and residential mobility influence union dissolution.

### **DATA**

The data come from the Austrian Family and Fertility Survey (FFS), conducted in 1995–1996 as part of a sweep of surveys in many European nations, Canada, New Zealand, and the United States. An advantage of this survey was the inclusion of detailed retrospective partnership and residential histories, recorded to the accuracy of one month. Austria has about average rates of union dissolution (Andersson 2003) and cohabitation (Kiernan 2004) compared with the rest of the European Union (EU); however, unlike some European countries, the historical increase in Austria has yet to stabilize. Austria also has a mix of urban and rural areas: in 2000, 67% lived in urban areas, and 33% lived in rural areas (United Nations 2002).

The FFS interviewed 4,581 women and 1,539 men born between 1941 and 1976, with a response rate of 72% (Hoem, Neyer, and Prskawetz 2001:252). We consider the 3,118

**Table 1. Person-Years (exposures) and Union Dissolutions (occurrences) Across Residential and Moving Categories**

| Variable                   | Person-Years | Union Dissolutions |
|----------------------------|--------------|--------------------|
| Current Residence          |              |                    |
| Urban area                 | 12,658.49    | 371                |
| Rural area                 | 30,010.87    | 424                |
| Migrant Status             |              |                    |
| Nonmigrants in urban areas | 11,596.82    | 343                |
| Nonmigrants in rural areas | 26,644.62    | 361                |
| Rural-to-rural migrants    | 1,659.28     | 36                 |
| Rural-to-urban migrants    | 931.51       | 21                 |
| Urban-to-rural migrants    | 1,706.97     | 27                 |
| Urban-to-urban migrants    | 130.15       | 7                  |
| Migrations                 |              |                    |
| No migrations              | 38,241.44    | 704                |
| One migration              | 3,791.06     | 68                 |
| Two or more migrations     | 636.86       | 23                 |
| Residential Moves          |              |                    |
| No moves                   | 28,407.94    | 565                |
| One move                   | 11,517.74    | 162                |
| Two or more moves          | 2,743.68     | 68                 |

female respondents who had been in a union at least once, excluding those born outside Austria, those living abroad at age 15, and those with large amounts of missing data. Women are at risk from the time of union formation until union dissolution or the interview (if not separated). Partnerships that ended because of spousal death were censored. The survey recorded 3,118 first, 397 second, 62 third, and 10 fourth unions; the number of union dissolutions per union occurrence was 669, 103, 22 and 1, respectively. Separations that occurred outside Austria as well as after return to Austria were excluded (22 events). Women were considered as being in a union based on coresidence (and an intimate relationship) with a male partner (Berrington and Diamond 1999). "Living apart together" couples were unidentifiable and hence were treated as separated, but this was rare. (We observed only a small number of cases in which a woman had more than one union with the same partner, suggesting that the number of couples who lived apart and then cohabited again was rare.) If at least one of the partners was a weekly commuter, the couple was treated as living together.

We included both time-varying and time-constant explanatory variables. Of particular interest were the couple's mobility experiences during their union. We distinguished between long-distance migration and short-distance residential mobility based on moves between as well as within urban and rural areas. Urban areas were defined as Austrian districts/counties where the population of the largest settlement exceeded 50,000 people. Smaller towns and rural settlements were treated as rural areas. Table 1 provides the distribution of union dissolutions and the time when individuals were under risk across various residential and moving categories. There were 533 migrations (401 to urban destinations and 132 to rural destinations) and 1,816 residential moves (data not shown). Residential episodes outside Austria were excluded because the focus was on internal migration and



residential mobility and because separations were assumed to precede moves if they both occurred in the same month.<sup>1</sup>

## METHODS

We modeled the time from union formation to dissolution using hazard regression (Allison 1984; Hoem 1987). The first two models can be specified as

$$\ln \mu_{ij}(t) = y(t) + \sum_k z_k(u_{ijk} + t) + \sum_l \alpha_l x_{ijl} + \sum_m \beta_m w_{ijm}(t) + \varepsilon_i \quad (1)$$

where  $\mu_{ij}(t)$  denotes the hazard of the  $j$ th union dissolution for individual  $i$ , and  $y(t)$  denotes a piecewise linear spline that captures the impact of baseline (i.e., union) duration on the hazard.<sup>2</sup> The parameter  $z_k(u_{ijk} + t)$  denotes the spline representation of the effect of a time-varying variable that is a continuous function of  $t$  with origin  $u_{ijk}$  (e.g., a woman's age). The parameter  $x_{ijl}$  represents the values of a time-constant variable (e.g., parental divorce), and  $w_{ijm}(t)$  represents a time-varying variable whose values can change only at discrete times (e.g., activity status). We include a person-specific residual,  $\varepsilon_i$ , to simultaneously control for the clustering of events within individuals as well as possible unobserved determinants of union dissolution. The residuals were assumed to be independent and identically distributed according to a normal distribution:

$$\varepsilon_i \sim N(0, \sigma_\varepsilon^2). \quad (2)$$

We also investigate the possible role of endogeneity of moving in the union-dissolution process and unobserved selectivity (Lillard 1993; Lillard, Brien, and Waite 1995). For example, women who move long distances—perhaps because of their partner's career—may be family-oriented and thus less prone to separation and divorce. Alternatively, frequent movers may be generally less satisfied with their circumstances and therefore more prone to end their relationships. We use a simultaneous-equations model to estimate jointly an equation for union dissolution, two equations for migration (distinguishing urban and rural destinations), and an equation for residential moves. We assigned person-specific residuals to all four equations and tested for correlations between them, as shown in Eq. (3):

$$\begin{aligned} \ln \mu_{ij}^D(t) &= y^D(t) + \sum_k z_k^D(u_{ijk} + t) + \sum_l \alpha_l^D x_{ijl} + \sum_m \beta_m^D w_{ijm}(t) + \varepsilon_i^D, \\ \ln \mu_{ij}^R(t) &= y^R(t) + \sum_k z_k^R(u_{ijk} + t) + \sum_l \alpha_l^R x_{ijl} + \sum_m \beta_m^R w_{ijm}(t) + \varepsilon_i^M, \\ \ln \mu_{ij}^U(t) &= y^U(t) + \sum_k z_k^U(u_{ijk} + t) + \sum_l \alpha_l^U x_{ijl} + \sum_m \beta_m^U w_{ijm}(t) + \varepsilon_i^M, \\ \ln \mu_{ij}^{RM}(t) &= y^{RM}(t) + \sum_k z_k^{RM}(u_{ijk} + t) + \sum_l \alpha_l^{RM} x_{ijl} + \sum_m \beta_m^{RM} w_{ijm}(t) + \varepsilon_i^M, \end{aligned} \quad (3)$$

where  $\mu_{ij}^D(t)$  denotes the hazard of the  $j$ th union dissolution,  $\mu_{ij}^R(t)$  and  $\mu_{ij}^U(t)$  represent the risk of the  $j$ th migration to rural and urban destinations, and  $\mu_{ij}^{RM}(t)$  denotes the hazard of the  $j$ th residential move. The parameters  $\varepsilon_i^D$  and  $\varepsilon_i^M$  are person-specific heterogeneity terms for

1. We also checked whether the risk of dissolution was stable following migration and found no evidence of a higher risk in the few months following migration, suggesting that our definition is defensible.

2. We use a piecewise linear spline specification (instead of the widely used piecewise constant approach) to pick up the baseline log-hazard and the effect of (other) time-varying variables that change continuously. Parameter estimates are thus slopes for linear splines over user-defined periods. With sufficient nodes (bend points), piecewise linear-specification can efficiently capture any log-hazard pattern in the data.

the dissolution and spatial mobility equations, respectively. We assumed that the residuals would follow a joint bivariate normal distribution:

$$\begin{pmatrix} \varepsilon_i^D \\ \varepsilon_i^M \end{pmatrix} \sim N \left( \begin{pmatrix} 0 \\ 0 \end{pmatrix}, \begin{pmatrix} \sigma_{\varepsilon^D}^2 & \rho_{\varepsilon^M \varepsilon^D} \\ \rho_{\varepsilon^D \varepsilon^M} & \sigma_{\varepsilon^M}^2 \end{pmatrix} \right), \quad (4)$$

where  $\sigma_{\varepsilon^D}^2$  and  $\sigma_{\varepsilon^M}^2$  denote the variances of the person-specific residuals, and  $\rho_{\varepsilon^D \varepsilon^M}$  is the correlation between the residuals. Model identification was attained through within-person replication: some women experienced several separations, and some moved frequently with the same man (cf. Kulu 2005; Lillard et al. 1995). Standard errors of the estimates were corrected using a Huber-type procedure.

## RESULTS

We fitted three models of union dissolution. The first included migration and residential mobility as explanatory variables; the second distinguished the origins and destinations of the migrations; and the third was the simultaneous-equations model (Table 2).

### Place of Residence, Migration, and Mobility

As shown in Model 1 of Table 2, first long-distance migration did not change the risk of union dissolution, but migrating twice or more increased the hazard of union dissolution 2.5 times, compared with those who moved once.<sup>3</sup> The first short-distance residential move decreased the risk of union dissolution by 25%, whereas the second and subsequent moves raised the hazard by 76% (or by 32%, compared with nonmovers). Couples living in rural settlements had a 37% decreased risk of experiencing union dissolution than those living in urban areas.

Model 2 shows that migrants between urban origins and destinations were most likely to separate subsequently, although the difference was not significant compared with urban nonmigrants. Those moving from urban to rural areas were least likely to separate, with a significantly (44%) lower risk of union dissolution than urban nonmigrants. As in Model 1, migrating more than once also increased the risk of dissolution, whatever the origin and destination of the move.

Finally, we fit a simultaneous-equations model for union dissolution and three types of spatial mobility to control for possible unobserved selectivity of movers (Model 3). The model includes person-specific residuals in the dissolution and the migration/residential mobility equations that are positively but insignificantly correlated (0.19), thus indicating no presence of unobserved selectivity. We also test whether the dissolution risk varied over time following migration or residential mobility, but the disruption levels are stable.

### Other Variables

The results for the other explanatory variables broadly correspond with previous findings. They are also quite consistent between the models, and we discuss Model 2 (Table 2). The hazard of union dissolution increased rapidly during the first year following union formation but increased more modestly thereafter, such that 10 years after union formation, the risk stabilized. The risk of separation decreased significantly with age, and dissolution levels increased significantly from the 1960s to the mid-1990s. Those who experienced a parental divorce in their childhood were more likely to separate than those who did not.

3. The risk for two or more moves is calculated in relation to the estimate for those who moved once, which in this case happens to be very close to 1, at 1.03. The risk compared with those who did not move would be  $\exp(\ln(2.53) + \ln(1.03)) = 2.61$ .



**Table 2. Factors Influencing Union Dissolution: Relative Risks for Categorical Variables and Parameter Estimates for Continuous Variables**

| Variable                                   | Model 1             | Model 2             | Model 3             |
|--|---------------------|---------------------|---------------------|
| Constant (baseline)                        | -6.593**            | -6.544**            | -6.523**            |
| Place of Residence, Migration and Mobility |                     |                     |                     |
| Current residence                          |                     |                     |                     |
| Urban area                                 | 1                   | —                   | —                   |
| Rural area                                 | 0.63**              | —                   | —                   |
| Migrant status                             |                     |                     |                     |
| Nonmigrants in urban areas                 | —                   | 1                   | 1                   |
| Nonmigrants in rural areas                 | —                   | 0.61**              | 0.61**              |
| Rural-to-rural migrants                    | —                   | 0.87                | 0.82                |
| Rural-to-urban migrants                    | —                   | 0.76                | 0.72                |
| Urban-to-rural migrants                    | —                   | 0.56**              | 0.53**              |
| Urban-to-urban migrants                    | —                   | 1.32                | 1.26                |
| Migrations                                 |                     |                     |                     |
| No migrations                              | 1                   | —                   | —                   |
| One migration                              | 1.03                | —                   | —                   |
| Frequency of migrations                    |                     |                     |                     |
| One migration                              | 1                   | 1                   | 1                   |
| Two or more migrations                     | 2.53**              | 2.44**              | 2.34**              |
| Residential moves                          |                     |                     |                     |
| No moves                                   | 1                   | 1                   | 1                   |
| One move                                   | 0.75**              | 0.75**              | 0.72*               |
| Frequency of residential moves             |                     |                     |                     |
| One move                                   | 1                   | 1                   | 1                   |
| Two or more moves                          | 1.76**              | 1.76**              | 1.67**              |
| Other Variables                            |                     |                     |                     |
| Union duration (baseline) <sup>a</sup>     |                     |                     |                     |
| 0–1 years (slope)                          | 1.948**             | 1.944**             | 1.948**             |
| 1–5 years (slope)                          | 0.179**             | 0.178**             | 0.184**             |
| 5–10 years (slope)                         | 0.072 <sup>†</sup>  | 0.074 <sup>†</sup>  | 0.077*              |
| 10+ years (slope)                          | 0.008               | 0.009               | 0.010               |
| Age  |                     |                     |                     |
| 15–19 years (slope)                        | -0.231*             | -0.233*             | -0.231*             |
| 20–24 years (slope)                        | -0.065 <sup>†</sup> | -0.065 <sup>†</sup> | -0.065 <sup>†</sup> |
| 25–29 years (slope)                        | -0.158**            | -0.159**            | -0.160**            |
| 30–34 years (slope)                        | -0.109**            | -0.110**            | -0.111**            |
| 35+ years (slope)                          | -0.053*             | -0.053*             | -0.054*             |
| Year                                       |                     |                     |                     |
| 1969 and earlier (slope)                   | 0.079               | 0.078               | 0.076               |
| 1970–79 (slope)                            | 0.045 <sup>†</sup>  | 0.047*              | 0.046*              |
| 1980–89 (slope)                            | 0.034*              | 0.034*              | 0.035*              |
| 1990+ (slope)                              | 0.059*              | 0.058*              | 0.059*              |

*(continued)*

(Table 2, continued)

| Variable  | Model 1           | Model 2           | Model 3           |
|---|-------------------|-------------------|-------------------|
| Other Variables (cont.)                         |                   |                   |                   |
| Partnership status                              |                   |                   |                   |
| Cohabiting                                      | 1                 | 1                 | 1                 |
| Married without prior cohabitation              | 0.50**            | 0.51**            | 0.51**            |
| Married after cohabitation                      | 0.52**            | 0.52**            | 0.52**            |
| Cohabitation duration for married cohabitants   |                   |                   |                   |
| Duration in years (slope)                       | -0.096*           | -0.095*           | -0.095*           |
| Union order                                     |                   |                   |                   |
| First union                                     | 1                 | 1                 | 1                 |
| Second or subsequent union                      | 1.44 <sup>†</sup> | 1.46*             | 1.46*             |
| Time since first/last conception <sup>a,b</sup> |                   |                   |                   |
| 0-0.75 years (slope)                            | -1.181**          | -1.186**          | -1.186**          |
| 0.75-2.75 years (slope)                         | 0.581**           | 0.580**           | 0.581**           |
| 2.75+ years (slope)                             | 0.010             | 0.009             | 0.009             |
| Number of own children                          |                   |                   |                   |
| One child                                       | 1                 | 1                 | 1                 |
| Two or more children                            | 0.66**            | 0.66**            | 0.65**            |
| Number of stepchildren                          |                   |                   |                   |
| No stepchildren                                 | 1                 | 1                 | 1                 |
| One or more stepchildren                        | 1.16              | 1.17              | 1.17              |
| Educational level                               |                   |                   |                   |
| Basic   | 1                 | 1                 | 1                 |
| Secondary                                       | 0.73 <sup>†</sup> | 0.72 <sup>†</sup> | 0.72 <sup>†</sup> |
| Higher  | 0.55*             | 0.55*             | 0.56*             |
| Educational enrollment                          |                   |                   |                   |
| Not enrolled                                    | 1                 | 1                 | 1                 |
| Enrolled  | 1.14              | 1.12              | 1.11              |
| Religious <sup>c</sup>                          |                   |                   |                   |
| No  | 1                 | 1                 | 1                 |
| Yes   | 0.76**            | 0.76**            | 0.76**            |
| Parental divorce                                |                   |                   |                   |
| No  | 1                 | 1                 | 1                 |
| Yes   | 1.56**            | 1.54**            | 1.54**            |
| Comparative education                           |                   |                   |                   |
| No difference                                   | 1                 | 1                 | 1                 |
| Man better educated                             | 0.98              | 0.98              | 0.97              |
| Woman better educated                           | 2.53**            | 2.51**            | 2.51**            |
| Employment status                               |                   |                   |                   |
| Not employed                                    | 1                 | 1                 | 1                 |
| Employed  | 1.49**            | 1.49**            | 1.48**            |

(continued)

(Table 2, continued)

| Variable                              | Model 1   | Model 2   | Model 3   |
|---------------------------------------|-----------|-----------|-----------|
| Other Variables (cont.)               |           |           |           |
| Employment status (at start of union) |           |           |           |
| Man employed, woman employed          | 1         | 1         | 1         |
| Man employed, woman not employed      | 1.04      | 1.04      | 1.04      |
| Man not employed, woman employed      | 0.96      | 0.96      | 0.95      |
| Man not employed, woman not employed  | 1.54*     | 1.54*     | 1.54*     |
| Relative ages of partners             |           |           |           |
| No difference                         | 1         | 1         | 1         |
| Man younger                           | 1.37*     | 1.36*     | 1.36*     |
| Man older                             | 0.87      | 0.87      | 0.87      |
| Woman's attitudes                     |           |           |           |
| Liberal (slope) <sup>d</sup>          | 0.335**   | 0.335**   | 0.334**   |
| Standard deviation of residuals       |           |           |           |
| Union dissolution                     | 0.476*    | 0.459*    | 0.463*    |
| Migration and residential mobility    | —         | —         | 0.564**   |
| Correlation between the residuals     |           |           |           |
| Dissolution and spatial mobility      | —         | —         | 0.186     |
| Log-likelihood                        | -5,585.1  | -5,582.3  | -22,926.0 |
| Sum of log-likelihoods <sup>e</sup>   | -22,929.0 | -22,926.2 | -22,926.0 |

<sup>a</sup>For linear splines, we present slope estimates, which show how the hazard increases or decreases over a certain period. For example, during pregnancy (see "Time since first/last conception"), the log-risk of dissolution decreases by -1.186 per year (Model 2), reaching a level of -0.89 ( $0.75 \times (-1.186)$ ) by the time of birth. In relative terms, the risk is then 59% lower than prior to conception ( $\exp(-0.89)$ ). The log-hazard of union dissolution increases 0.58 per year during the first two years of the child's life, reaching a level of 0.27 ( $-0.89 + (0.58 \times (2.75 - 0.75))$ ) when the child is 2, which is a 31% higher risk than prior to conception ( $\exp(0.27)$ ).

<sup>b</sup>The reference category for the first conception is parity zero.

<sup>c</sup>Women were asked whether they were religious or not. Those women who answered "certainly yes" or "rather yes" were defined as religious.

<sup>d</sup>Women with liberal gender attitudes were identified based on how much they agreed with five statements (five categories of response): (1) Unmarried couples should have the same rights and responsibilities as married couples; (2) If a woman wants to have a child as a single parent and she does not want to have a stable relationship with a man, it should be accepted by society; (3) Partners of the same sex should also have the possibility to marry; (4) Divorces of married couples with children should be made more difficult; (5) The division of household tasks is a sufficient reason for splitting up. The variable is continuous in which a maximum score of 5 indicates women with the most liberal views, and a score of 0 indicates women with the most traditional views.

<sup>e</sup>The sum of log-likelihoods relates to the union dissolution and spatial mobility equations estimated separately (Models 1 and 2) or simultaneously (Model 3). Because our research focus is on union dissolution, we report only the sum of log-likelihoods, and not the parameter estimates for the spatial mobility equations.

<sup>†</sup> $p \leq .10$ ; \* $p \leq .05$ ; \*\* $p \leq .01$

Marriages were significantly less likely to fail than cohabiting unions, and those who cohabited prior to marriage had no greater risk of dissolution than those who did not; the risk of dissolution did not differ significantly for the two groups when we excluded cohabitation duration, which was negatively correlated with disruption. This corresponds with previous findings for Austria (Kiernan 2002) but does not concur with the experience of the United States and many other EU countries.

Women in second or subsequent unions had a higher risk of union dissolution. Although the parameter estimate decreased significantly when we controlled for the overrepresentation of disruption-prone women in second or subsequent unions (through the inclusion of the person-specific residual), it remained significant.

The effect of having children varied over time. The risk of union dissolution decreased significantly during pregnancy but increased following the first birth, reaching the same risk (or slightly higher) as before the women became pregnant when the child reached two years of age. The effect of having second and subsequent children also varied over time, but the hazards were significantly lower. Our Austrian results do not match recent findings in Britain, in which having children increased the risk of separation (Chan and Halpin 2003). Having stepchildren raised the risk of union dissolution but not significantly.

Supporting the independence hypothesis, couples in which the woman was better educated than her partner were over 2.5 times more likely to dissolve than couples in which the partners had similar educations; employed women had a higher risk of union dissolution than those who were economically inactive or unemployed; and better-educated women were significantly less likely to separate. Participating in education increased the risk of union dissolution but not significantly. Couples in which both partners were not employed at union formation had a higher risk of dissolution; this implies that union stability is weakened if both partners are unable to find stable employment, although our data provide only comparative employment status at the start of the union. Couples in which the man was younger than the woman were more likely to dissolve.

Religious women exhibited lower risks of union disruption, and women with liberal gender attitudes were more likely to separate than those with traditional views. Again, although supporting previous research, this finding requires cautious interpretation because women's attitudes were reported at the time of survey and may have been shaped by previous partnership experiences (including separations).

## DISCUSSION

This is the first study to examine the relationship between internal migration, residential mobility, and subsequent union dissolution. Earlier studies suggested that such an effect may exist (e.g., Mincer 1978), but no large-scale event-history analysis has tested this hypothesis. Our results relating to other demographic, socioeconomic, and attitudinal variables confirm previous findings, suggesting that the factors influencing union dissolution in Austria match those in other developed countries and that our data are reliable.

First, we showed that the first long-distance migration a couple undertakes does not influence separation propensities. Such moves may represent an exciting time for many couples in the early stages of the partnership, and this may balance move-related stress. The first short-distance residential move actually decreased the risk of dissolution, suggesting that such a move is a positive experience, perhaps helping to affirm the independence and strength of the union. For many couples, such moves improve residential circumstances and provide opportunities that may outweigh any (temporary) move-related stress.

Second, we showed that moving twice or more, especially over long distances, raises the risk of union dissolution. Migrating a long distance frequently (twice or more) is likely to be stressful, involving the disruption of local ties and social networks. Previous studies showed that women who move long distances with their partner are less likely to be employed, have smaller incomes, and work shorter hours following such moves than other equivalent women. It is plausible that many of these women conform to traditional gender roles, sacrificing their (economic) well-being for the sake of the family's overall well-being, and Mincer (1978) speculated that this may lead to higher rates of union dissolution. As the number of moves made by a couple to support the man's career increases, the power imbalance between partners may widen, potentially increasing levels of stress and dissatisfaction.

Moving twice or more over short distances also increases the risk of separation. Moving short distances (even if it does improve housing circumstances) can be stressful. Again, women may bear much of the burden because they are more likely to be involved in arranging the move, acquiring new household items, and organizing child care and other child-centered activities (Magdol 2002). Choosing to move frequently may indicate that the couple is generally not satisfied with their circumstances (although our simultaneous-equations model found no correlation between the residuals from the union dissolution and mobility models.) For others, moves may be forced, perhaps because of difficult financial circumstances, which could contribute to union instability.

Third, couples who moved from urban to rural areas had particularly low levels of union dissolution. The real and perceived norms about separation will vary between places, and we might have expected migrant separation rates to fall between the origin and destination rates. This was true for rural-to-urban migrants, who had higher risks of union dissolution than rural nonmigrants but lower risks of union dissolution than urban nonmigrants. However, those who moved from urban to rural areas had the lowest risks of all. Such moves may lead to significant improvements in the residential environment, which, at least for some, will represent a successful transition into an (idyllic) environment (Halfacree and Boyle 1998; Kulu forthcoming).

Of course, this study has limitations. We did not examine the reasons why a couple separated or who stimulated the decision, both of which would help us test whether our speculations relating to gender-roles and power-relations are supported. Examining this properly would require information on union quality from both members of a couple, which is not available here. Also, mobility decisions may precipitate a separation prior to the move occurring. For example, a woman may choose to stay behind (e.g., to maintain her own career) when her partner moves. Although she does not experience a move per se, a mobility decision, nonetheless, precipitated the disruption of the union. These moves would not be distinguished as causing separation because they followed the separation event. However, although this is a potential limitation, it suggests that our results are conservative and that we probably underestimated, rather than overestimated, the influence of mobility on union dissolution. Overall, this event-history analysis of retrospective partnership and residential histories allowed us to order moves and separations temporally, enabling us to go some way toward determining the causal direction in the migration/separation relationship. The results have policy implications, particularly in relation to organizations that encourage mobility among their workforce. Our results suggest that frequent moves may have deleterious implications for unions; consequently, careful consideration should be given to whether the strategy of moving employees is socially desirable.

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