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His and Hers: Economic Factors and Relationship Quality in Germany

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Abstract

Research has linked economic factors to relationship quality in the United States, primarily using cross-sectional data. In the current study, 2 waves of the Panel Analysis of Intimate Relationships and Family Dynamics data (n = 2,937) were used to test the gendered association between economic factors and relationship satisfaction among young German couples. In contrast to U.S.-based studies, the findings showed striking gender differences in the association between economic factors and relationship satisfaction for Germans. In cross-sectional models, women's relationship satisfaction was positively associated with receiving government economic support, and men's satisfaction was positively associated with poverty status and negatively associated with being a breadwinner. Longitudinal models revealed that changes in poverty status are associated with women's satisfaction, but men's satisfaction remains tied to their role as family provider. These unexpected results suggest that men's satisfaction is positively associated with a more equal division of labor market activity between partners.

Keywords

cohabitation; family economics; fixed effects models; marriage; relationship quality; western European families

Economic circumstances and romantic relationship quality are interrelated in adults' lives. Economic well-being predicts entry into romantic relationships (McLaughlin, Lichter, & Johnston, 1993; Oppenheimer, 1988; Oppenheimer, Kalmijn, & Lim, 1997; Sweeney, 2002), whereas union formation can improve both partners' economic stability. Once formed, the quality of these relationships plays a significant role in emotional well-being and physical health (Dush, Taylor, & Kroeger, 2008; Proulx, Helms, & Buehler, 2007; Wickrama & Elder, 1997), which can produce economic returns. Finally, research has demonstrated that

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economic strain is associated with lower relationship quality among couples (Benson, Fox, DeMaris, & Van Wyk, 2003; Conger et al., 1990; Conger, Conger, & Martin, 2010; Conger & Elder, 1994; Conger, Rueter, & Elder, 1999; Fox & Chancey, 1998; Hardie & Lucas, 2010; Robila & Krishnakumar, 2005; White & Rogers, 2000).

However, research on the relationship between economic factors and relationship quality has been based primarily on cross-sectional data from the United States. Considerably less research has examined the association between economic factors and romantic relationship quality in other settings and over time. Studies of relationship dynamics often tacitly assume that findings apply cross-nationally. A growing body of comparative family literature (e.g., Cooke & Gash, 2010; Liefbroer & Dourleijn, 2006; Misra, Moller, & Budig, 2007), however, has underscored the need for testing theories in multiple contexts. In this study, we examined how financial circumstances are associated with relationship satisfaction among German couples over time. No research to date has investigated associations between economic factors and relationship quality for couples in Germany, and few studies have examined the longitudinal association between changes in economic well-being and changes in relationship quality in any setting.

Germany presents a particularly interesting context in which to examine this association. German tax and welfare policies protect couples from economic hardship stemming from job loss (DiPrete & McManus, 2000; Gangl, 2004), unlike in the United States, where economic mobility is relatively fluid (DiPrete, 2002). In Germany, partners can rely on social benefits in response to job loss or other negative life events. German couples' relationship quality may therefore not be very sensitive to financial pressures resulting from fluctuations in employment and family income. Both Germany's family-centered social welfare policies and gender ideology promote a male-breadwinner model (Alwin, Braun, & Scott, 1992; DiPrete & McManus, 2000), however, in which women face greater economic risk from divorce and single parenthood than men do. To the extent that these policies discourage divorce in Germany (Misra et al., 2007), we may be able to see declines in relationship quality following economic events, in contrast to other countries, where such fluctuations would likely be followed by a divorce or separation.

This study addresses gaps in the literature because we used two waves of the Panel Analysis of Intimate Relationships and Family Dynamics (PAIRFAM; http://www.pairfam.de/en/study.html) data set to examine the association between economic well-being and hardship and cohabiting and married couples' relationship satisfaction in Germany. PAIRFAM data include comprehensive information on household and partners' income and employment statuses (Huinink et al., 2011). Both the data and the setting offer new opportunities to study this topic and allowed us to make several important contributions to the literature on economic well-being and romantic relationships. First, we used the case of Germany to examine whether the association between economic well-being and romantic relationship quality is supported in a context of generous social welfare and pro-family policies. Second, we used longitudinal data to test whether economic changes are associated with changes in relationship satisfaction. Most prior work on this topic has relied on cross-sectional data (Conger et al., 2010). Our findings inform theoretical models of economic hardship and romantic relationship quality by providing evidence of a link between these factors

independent of other potentially confounding factors. Third, we investigated whether the relationship between economic factors and relationship satisfaction differs by gender. Our findings shed light on how gender shapes the consequences of economic circumstances for perceptions of one's intimate relationships.

Theoretical Background and Hypotheses

Economic Factors and Relationship Quality

Prior research has repeatedly found evidence of a link between economic resources and relationship quality among married couples in the United States (see Conger et al., 2010, and White & Rogers, 2000, for reviews). Explanations for this association focus on two pathways. First, researchers have argued that socioeconomic resources (most often human and economic capital) are associated with romantic relationship stability and couple happiness and satisfaction (Dakin & Wampler, 2008). Higher income can pay for resources that help resolve conflicts, such as couples therapy or housecleaning services. High-income couples also have the opportunity to engage in activities outside of their relationships, which can reduce stress. Educational attainment may also provide partners with noneconomic resources for handling disagreements. Prior research has found strong support for the association between educational attainment and romantic relationship quality but weaker support for the contention that income is related to this outcome (Duncan, Huston, & Weisner, 2007; Hardie & Lucas, 2010; Martin, 2006; White & Rogers, 2000). Given our focus on economic resources we posed the following hypothesis:

Hypothesis 1A: Among German couples, household income is positively associated with relationship satisfaction, and increases in household income are associated with increases in relationship satisfaction.

A second explanation has argued that economic hardship can elevate stress among couples, leading to lower relationship quality (Conger & Conger, 2002; Conger et al., 1990, 1999; Cutrona et al., 2003; Robila & Krishnakumar, 2005; Van Wyk, Benson, Fox, & DeMaris, 2003; White & Rogers, 2000). Economic hardship has been conceptualized in a number of ways, including low income thresholds, subjective indicators of financial worry, welfare receipt, and indices of economic hardship experiences (see White & Rogers, 2000, for a review; Conger et al. 2010; Hardie & Lucas, 2010). The psychology literature has suggested that distress arising from financial worries can affect partners' interaction patterns and increase interpersonal conflict (Bradbury, Fincham, & Beach, 2000; Neff & Karney, 2009). For example, when couples argue over money, their conflicts are typically more intense and recurrent than arguments that concern other topics (Papp, Cummings, & Goeke-Morey, 2009). Compounding this is the fact that low earnings often co-occur with living in a highpoverty neighborhood, health problems, and other traumatic events, and these factors can have a cumulative effect on relationship satisfaction (Rauer, Karney, Garvan, & Hou, 2008). These explanations suggest that there may be a threshold effect for economic resources, such that couples who fall beneath a level of economic well-being—for example, the poverty threshold—will experience more relationship problems than those who remain economically secure. In addition, if conflict arises in response to economic stress then it is reasonable to assume that changes in economic well-being should be associated with

changes in relationship quality. On the basis of this body of prior research, we posited the following:

Hypothesis 1B: Economic hardship is associated with lower relationship satisfaction, and movements into poverty are associated with declines in relationship satisfaction.

We tested Hypotheses 1A and 1B within both a cross-sectional and longitudinal framework. Finding support for these hypotheses in cross-sectional models would suggest that, in the German context, economic factors have associations with romantic relationship quality similar to those found in previous studies of couples in the United States. A limitation of cross-sectional approaches, however, is that we can assess only whether economic factors are associated with relationship quality net of measurable characteristics. It is not possible to assess whether the same factors explain baseline relationship quality and economic well-being, however. Although a longitudinal design does not completely assess questions of causality, it allowed us to account for all stable background characteristics and focus on whether changes in satisfaction are associated with changes in economic well-being. Furthermore, finding an association between changes in economic resources and relationship quality but no association from the cross-sectional analysis may suggest that changes in economic circumstances matter more for relationship quality than absolute levels of income and economic hardship.

The German Context: Economics and Relationship Quality

There are several aspects of the German social and economic context that may shape the relationship between a couple's financial circumstances and relationship quality. First, Esping-Andersen (1990) described Germany's system of social welfare benefits as "conservative." These policies are designed to insure workers from risks, such as job loss, through a system of social safety nets (DiPrete & McManus, 2000; Gangl, 2004). Social transfers do not seem to hold a stigma in Germany, given that data from the International Social Survey Program revealed that 65.5% of Germans believe that "it is the responsibility of the government to reduce the differences between people with high incomes and those with low incomes" (Svallfors, 1997, p. 288). On the basis of previous research on the German welfare state, we examined whether government transfers operate like other economic resources:

Hypothesis 2: There is a positive association between transfer payments and relationship satisfaction. Net of other factors, receiving transfer payments is associated with greater relationship satisfaction. A change in the receipt of transfer payments will be positively related to relationship satisfaction, such that moving from no to some transfer payments is related to an increase in satisfaction.

In addition, Germany has very specific gendered work–family arrangements. German families more typically follow a male-breadwinner economic model (DiPrete & McManus, 2000), and government policies are built around expectations of this kind of family life. As we discuss below, these arrangements may have important implications for the relationship between economic resources and relationship quality among German couples.

Gendered Assessments of Relationship Quality: Does Gender Matter in the German Context?

German social policy supports a particular kind of family, and this may have implications for how German men's and women's perceptions of relationship quality respond to economic stress. Pro-family tax codes and social policies in Germany provide financial incentives for a male-breadwinner family structure (DiPrete & McManus, 2000). These policies have been referred to as *carer strategies* (i.e., women are treated primarily as carers and secondly as earners) and include encouragement of wives' part-time employment, caregiver allowances, and generous parental leaves but limited state provision of child care and flex time (Cook & Gash, 2010; Misra et al., 2007). Public opinion in Germany supports the male-breadwinner model to a greater degree than in the United States and several other Western nations (Alwin et al., 1992; Drobni, Blossfeld, & Rohwer, 1999). As a result, German women are more likely to work part time (Organisation for Economic Co-operation and Development, 2012) and are less likely to work than married American women, in particular when they have young children at home (Cooke, 2007).

Some research suggests that husbands' earnings may be more important than wives' for relationship quality. Ono (1998) argued that if husbands fail to perform their role as family providers, wives' relationship satisfaction will be affected and they may feel they would be better off with an alternative partner. This may be particularly true in contexts like Germany, in which the male-breadwinner ideal is supported. For example, Lee and Ono (2008) found that in Japan, a context in which the male-breadwinner model has wide public support, women's marital happiness was positively associated with a male-breadwinner arrangement, although in the United States only men's happiness was lower when women worked. Another U.S.-based study found that men's low earnings, but not women's, decreased White women's evaluations of marital quality when they held traditional beliefs about gender roles (Furdyna, Tucker, & James, 2008). Thus, when there is an expectation that men fulfill an economic provider role, a deviation from this gendered model may be associated to lower relationship quality. Furthermore, wives' appraisals of relationship quality may be more influenced by these gendered economic arrangements than husbands'. We thus tested the following hypotheses:

Hypothesis 3A: The more a household deviates from a sole-breadwinner model, the lower the relationship satisfaction is for both German men and woman. We expected to see this difference in both between- and within-person analyses.

Hypothesis 3B: The association between economic arrangements and relationship satisfaction differs by gender, such that German women's satisfaction may be more strongly associated with men's relative contributions to the labor market and household income.

There are two ways to assess deviation from a male-breadwinner model. The first is by examining the gendered arrangement of time spent in the labor market. Partners living in households in which the male partner is the primary breadwinner may express greater satisfaction with their relationship than those in which both partners work full time or in which the male partner works less than full time regardless of the female partner's employment. An alternative is to examine the partners' relative share of income. It may be

that German men and women evaluate men's financial contribution to the household as an indicator of his role in family life, rather than simply the time spent at work.

Finally, several additional factors may be related both to economic resources and relationship satisfaction among German couples. In particular, prior research has demonstrated that the presence of children in the home, relationship duration, and partners' ages all have an influence on relationship quality (e.g., Dush et al., 2008; King & Scott, 2005; Lehrer, 2008). We accounted for these factors in our analysis. In addition, although we were particularly interested in how changes in economic well-being predict changes in satisfaction, we expected to find that schooling will have a strong association with both factors.

The Current Study

Our aim for this study was to examine how economic factors are associated with relationship satisfaction in Germany. Some studies have suggested that partners who are satisfied with their marriage have better self-reported health (Kiecolt-Glaser & Newton, 2001) and live longer (House, Landis, & Umberson, 1988). We included both cohabiting and married couples in our analyses. The incidence of cohabitation is Germany high, the duration is short, and a high percentage of cohabiting unions end in marriage (Heuveline & Timberlake, 2004). Prior research in the United States has suggested that the association between economic factors and relationship quality does not vary by relationship type (Hardie & Lucas, 2010). In this study, we accounted for relationship status, but we did not expect differences by relationship type.

We expanded on prior research by using both cross-sectional and longitudinal data. Using cross-sectional data allowed us to assess the average association between economic factors and relationship satisfaction among cohabiting and married couples in Germany. Longitudinal data allowed us to examine associations between changes in economic wellbeing and changes in relationship satisfaction over time. This highlights how economic changes experienced by individuals, regardless of prior level of economic circumstances, may be associated with changes in their assessment of their relationships. Both analyses provide important insights. Findings from cross-sectional analyses are useful in two ways. First, they are comparable to prior research conducted in the United States that has used cross-sectional data to assess the relationship between economic factors and relationship quality (Conger et al., 2010), allowing us to draw some preliminary cross-cultural conclusions. Some differences remain, however. Social conditions change the meaning of factors such as poverty risk and social welfare. We also did not have a measure of economic hardship that some prior studies have used (e.g., Hardie & Lucas, 2010). Second, crosssectional analyses are informative regarding the distribution of risk across the population. It is important to know whether economically disadvantaged couples are more at risk of having lower quality relationships, regardless of the directionality of this relationship. Findings based on longitudinal data are useful because they help assess the average association of change over time in both factors. Therefore, we can draw preliminary conclusions regarding the impact of changes in economic well-being across the population.

Both approaches are necessary to evaluate how economic factors and relationship satisfaction are associated: in general and over time.

Method

PAIRFAM is a longitudinal, nationally representative study of three age cohorts of Germans (ages 15–17, 25–27, and 35–37). Participants were randomly selected on the basis registry data (for details see Huinink et al., 2011), and data were collected using the computer-assisted personal interview procedure, whereby responses on sensitive topics are entered directly by the respondent (Huinink et al., 2011). The PAIRFAM study was partially motivated by the family stress model as discussed by Conger et al. (2010), and therefore multiple economic and relationship quality measures were collected (Huinink et al., 2011). The availability of disparate economic measures, size and quality of the sample, and panel design make PAIRFAM an ideal data set with which to study the relationship between economic stability and instability and relationship satisfaction.

We used the first two waves of PAIRFAM data, which were collected in 2008–2009 and 2009–2010. The initial sample included data from 12,402 primary respondents. Of these, 9,069 respondents also participated in Wave 2 of the study, for a retention rate of 73%. According to the PAIRFAM methods report, this is only slightly lower than Germany's longest running panel study, the Panel Study of Income Dynamics, which had a response rate of 75.2% but, unlike the PAIRFAM study, required the participation of only one household member (Suckow, Schneekloth, & Wich, 2010). In this research, we focused on the 4,666 respondents who were part of the two adult cohorts, age 25–27 and 35–37 at the time of the first interview and were living with a partner of the opposite sex and no other adults at the time. We also removed sample members whose partners were not between the ages of 17 and 59 (n = 78, 1.7%). Of those, 3,230 (70.4%) participated in both waves. Of our sample of interest, an additional 163 individuals were excluded because their Wave 1 union dissolved. Another 57 respondents were excluded because, although they still had the same partner as in Wave 1, they no longer lived in the same household.

Supplemental analyses examined differences between the analytic sample (n = 3,010), those who were lost to attrition between waves (n = 1,358), those who divorced or separated between waves (n = 163), and those who split residences despite remaining together (n = 57). Those who were lost to attrition earned less income and were less likely to live in male-breadwinner households, be married, or have children in the home than the analytic sample. They were also younger and less educated and more likely to be a woman than individuals who participated in both survey waves. They did not differ significantly on relationship satisfaction. Those who separated or divorced between waves reported significantly lower relationship satisfaction, earned less income, were more likely to be poor, and more evenly divided their labor market activity and earnings between male and female partners at Wave 1 than the analytic sample. Analytic sample members were more likely to be married and have children under age 18, were older and more highly educated, and had been in their current relationships for longer than the comparison groups. Respondents in the analytic sample were also more likely to be women. These differences, though unsurprising, introduce potential bias because some of these factors may also be related to relationship

satisfaction, if the couple had not split up. A logistic regression predicting separation or divorce between waves using Wave 1 predictors revealed that relationship satisfaction, being in a male-breadwinner household, being married, and educational attainment were all negatively related to relationship dissolution.

Our eligible sample size comprised 3,010 (1,239 men and 1,815 women) individuals who were paired to the same partner in both waves. Missing data were imputed using chained equations available through the mi estimate command in Stata 12, and results were obtained by averaging results across five imputed data sets (Little & Rubin, 2002). Prediction models used all variables (varying and invariant) across both waves, but the dependent variable was not imputed (Allison, 2002). Sensitivity analyses using listwise deletion and imputation via the multivariate normal model suggested that results are robust across imputation methods. We chose the chained equations approach because it does not require the assumption that all variables have a multivariate normal distribution. After dropping cases that were missing on our dependent variable (n = 73), our analytic sample size was 2,937.

Key Measures

Outcome variable: Relationship satisfaction—Relationship satisfaction was our key measure of relationship quality. Respondents were asked to indicate how satisfied they were with their relationship overall, on a scale from 0 to 10. This satisfaction rating was highly skewed, with a mean of slightly more than 8. Sensitivity analyses using an alternative dichotomous coding of satisfaction were largely consistent across models. For ease of interpretation, we used the linear form.

Explanatory variables: Economic circumstances and relationship type—The first dimension of economic context we included was economic resources. We examined the effect of three different time-varying measures. First, we constructed a measure of logged household income (net income of all sources) to examine the role that changes in income play in relationship quality. Second, we constructed a dichotomous indicator of poverty risk if respondents' net equivalent income (the household net income from all sources divided by the square root of the household size to adjust for economies of scale, following prior work in cross-national studies of inequality and poverty; Johnson, Smeeding, & Torrey, 2005; Ruggles, 1990) was at or below 60% of the median net equivalent income of all sample members. This measure is an indicator of economic hardship and mirrors official European Union guidelines, which suggest that the poverty risk threshold is at 60% of the median net equivalent income in the population. A report on poverty in Germany from 2008 indicated that, depending on the data source used, this poverty risk threshold lies somewhere between €781 and €980 per month (Deutscher Bundestag, 2008), which, at an exchange rate of about 1.22 USD (as of August 2012) equates to 958–1,202 USD. The measure we created puts the cutoffs for poverty risk at €70, which was determined by averaging the median net income across waves (to establish a consistent threshold), finding the median, and multiplying the median by 0.6. Third, we included an indicator for receipt of direct government social benefits received (the actual amount of benefits received were available for only one of the survey years). This included all types of government transfers, for example, monetary payments toward child expenses, wage compensation of expectant and postpartum mothers,

parental benefits for individuals on parental leave, housing assistance, pension payments, social welfare, short- and long-term unemployment compensation, and sick pay for prolonged illness.

A second dimension was the fit of the household with the male-breadwinner model, which we measured in two ways. First, we constructed a measure of the male partner's share of the household income as measured by the ratio of his yearly income to the total household yearly income. Second, we constructed a dummy variable indicating whether the economic arrangement in the household could be characterized as male breadwinner, indicating that the male partner works full time and the female partner does not work for pay or works part time. The comparison group was all remaining work arrangements.

Control variables—We included a number of control variables in our multivariate analyses. The following time-variant factors were included in both our cross-sectional and longitudinal models: whether the couple was married, whether there were any children under age 18 in the household, whether the respondent was currently enrolled in school, and the respondent's age. Time-invariant controls were years of schooling, the duration of the romantic relationship in years, and partner's age. Descriptive statistics by wave and gender are included in Table 1. We also noted the percentage of all cases whose values increased and decreased between Waves 1 and 2 because our fixed effects models make use of these changes to estimate the association between changes in the independent variables and changes in the dependent variable.

Analytic Strategy

In this study, we asked whether changes in economic factors are associated with changes in relationship quality for German couples. Our analyses proceeded in two steps. We first used cross-sectional ordinary least squares (OLS) regression analyses on Wave 1 data only, to estimate the baseline relationships between levels of economic factors and overall levels of relationship satisfaction across individuals and to understand the association between economic factors and relationship satisfaction across German couples. This included all eligible couples regardless of Wave 2 attrition status (N = 4,535).

Second, we used both waves of data to estimate fixed effects models to shed light on whether, within individuals, a change in economic factors was associated with a change in relationship satisfaction among young German adults. This model ignored between-person variation in favor of within-person variation. Doing so avoids bias due to time-invariant factors that may plausibly influence both the independent and dependent variables of interest but are difficult to empirically account for. Using fixed effects models also has the advantage of modeling changes rather than levels, which might be affected by reporting errors (e.g., persistent over- or underreporting of relationship quality), although bias caused by omitted time-variant variables is not resolved. Unfortunately, we could not preclude the possibility of reverse causation. Increases in relationship quality may spur greater work effort or commitment to a job search, in particular for men, who may take their role as family provider more seriously when feeling a greater level of commitment. Using a fixed effects approach ultimately represents an advance from prior research, allowing us to

account for some of the largest methodological hurdles to understanding the association between economic factors and relationship quality.

Our fixed effects models, therefore, represent estimates of how changes in the independent and control variables predict changes in the dependent variable. For linear predictors, interpretation is straightforward: A positive, statistically significant coefficient would suggest that an increase in the independent variable (e.g., income) is associated with an increase in relationship satisfaction. For categorical variables, coefficients work similarly but represent the effect of moving into or out of the state of interest. For example, a negative, statistically significant coefficient for poverty risk would suggest that moving into the at-risk category is associated with a decrease in relationship satisfaction and moving out of this classification is associated with an increase in relationship satisfaction. In supplemental analyses, we constructed dummy variables indicating movement from being in poverty to not in poverty and movement from being not in poverty to in poverty, to test whether moving out of poverty had no association with our outcome variable but moving into poverty did (or vice versa). We did not find differences in the associations between our explanatory and dependent variable based on direction of movement for our categorical variables.

In all of our models, we examined one purely economic indicator along with one gendered economic indicator. First, we examined logged household income with male partner's share of income, and then we examined the poverty indicator with male partner's share of income. Next, we examined logged household income with our breadwinner indicator, and last we examined the poverty indicator with the breadwinner indicator. Given the social support for and policy encouragement of a male-breadwinner model of family relations in Germany, we present the models separately by gender and tested for differences in the effects across the two groups. To do this, we estimated pooled models for men and women and included interaction effects for the key independent variables with gender in the pooled models. We also tested interactions between gender of respondent and each control variable in a final model (Allison, 2005). We highlight in the tables the effects for which interactions were significant at the .10 level. We used the same procedure to test for differences by relationship status (married or cohabiting) but found no significant differences in either the cross-sectional or fixed effects models.

Results

Results from cross-sectional OLS regressions using data from Wave 1 are presented in Table 2. These results reflect between-person differences in relationship satisfaction by their economic well-being, poverty status, and household arrangement, offering insight into the distribution of risk across couples in Germany, providing a comparison point to cross-sectional studies conducted in the United States. Coefficients that differed significantly by gender are highlighted in the table. In Models 1 and 3 income was unrelated to relationship satisfaction among both German men and women. Therefore, Hypothesis 1A, that higher household income would be associated with higher relationship satisfaction among German couples, was not supported. The association between poverty risk and relationship satisfaction was significant for men, but not women, in Models 2 and 4. Surprisingly,

poverty risk was positively associated with relationship satisfaction for men (b = 0.33, p < .05). This does not support Hypothesis 1B, that economic hardship would be associated with lower satisfaction. In all models, receiving social transfers was positively associated with our outcome variable for women, although an interaction between government transfers and gender was not significant. This finding supports Hypothesis 2, that transfers are positively associated with relationship satisfaction across German couples. In supplemental analyses, we added controls for youngest child's age. This did not change our substantive findings.

Next, we examined the association between the gendered division of paid labor and relationship satisfaction. The proportion of income earned by the male partner (Models 1 and 2) was unrelated to both men's and women's satisfaction, which does not lend support for Hypothesis 3A. Models 3 and 4 show that men living in breadwinner households reported significantly lower levels of satisfaction than those living in nonbreadwinner households, however (b = -0.28, p < .05, and b = -.25, p < .01). The relationship between living in a breadwinner household and relationship satisfaction was statistically insignificant for women. Although our results were gendered in nature, we did not anticipate men's negative response to breadwinner households in comparison to alternative household types. Our findings therefore do not support Hypotheses 3A and 3B.

Across all models, married respondents reported greater relationship satisfaction than cohabiters. Men with children expressed less satisfaction than those without children. School enrollment, respondent's age, partner's age, and relationship duration were unrelated to satisfaction. Women's educational attainment was positively associated with this outcome.

The results from our longitudinal analyses using fixed effects are displayed in Table 3. These models allowed us to examine whether changes in economic circumstances are associated with changes in relationship satisfaction. We found mixed support for our expectations regarding economic factors. Changes in household income were unrelated to changes in relationship satisfaction for both men and women in Models 1 and 3. Therefore, we did not find support for Hypothesis 1A. Models 2 and 4 showed partial support for Hypotheses 1B; falling below the poverty risk threshold was associated with a decrease in relationship satisfaction for women, and moving out of this at-risk category was associated with an increase in satisfaction (b = -0.38, p < .05). Poverty risk was unrelated to relationship satisfaction for men. This is a change from the OLS models, in which we found no association between poverty risk and satisfaction for women and the association between these factors was positive for men. This could suggest that, for women, experiencing a change in a household's level of economic security is associated with a change in relationship satisfaction, whereas being at risk of poverty in general is not associated with relationship satisfaction. We find no support for Hypothesis 2 because a change in social transfers had no relationship with reported satisfaction.

Next we examined the relationship between changes in men's breadwinner role in the household and relationship satisfaction. Our results in Model 1 suggest that, for men, an increase in their share of the household income was associated with a decrease in relationship satisfaction (b = -0.64, p < .10), whereas for women men's contribution to the household income was not a significant predictor of their satisfaction. Similarly, men's

reports of their relationship satisfaction decreased when the couple's time in the labor market moved toward a breadwinner household arrangement (b = -0.39, p < .05, in Model 3). These findings suggest a lack of support for Hypotheses 3A and 3B. We did not find that a deviation from the breadwinner model was associated with less satisfaction in Germany, or that women's satisfaction was more strongly associated with these gendered economic arrangements. In fact, we found the opposite. The degree to which a couple adheres to a male-breadwinner model, measured by using either relative income or a dummy variable indicating the household division of labor arrangement may be characterized as a male-breadwinner household, was negatively associated with relationship satisfaction for men. Supplemental analyses using alternative measures of breadwinning and thresholds for men's earnings relative to household income were consistent with our findings that changes in relationship satisfaction were negatively related to breadwinner status (results available on request). Furthermore, because we use a fixed effects model to estimate this relationship, we are confident that time-invariant factors were not responsible for our findings.

Unlike in the cross-sectional models, the findings from our fixed effects analyses in Table 3 did not show an association between children in the household on relationship satisfaction. This may indicate that an increase in the number of children is not associated with a decline in relationship quality in the short term. The differences between the OLS and the fixed effects models could also be interpreted as a selection effect (with individuals who are more likely to report lower levels of relationship satisfaction being more likely to have children). Table 3 also shows that, for every additional year of age, relationship satisfaction decreased (b = -0.22 to -0.27, p < .001). This may indicate a negative association between relationship duration and satisfaction.

Discussion

Researchers have long claimed that relationship quality may be linked to economic factors that couples face (Conger et al., 2010; White & Rogers, 2000). Economic and human capital offer resources for navigating relationships successfully, whereas economic hardship can create stress and unhappiness that spill over into couple's interactions. Yet prior work on this topic has been limited in key ways. First, most research has been conducted in the United States, where relatively high levels of inequality (DiPrete, 2002) and limited welfare support (McManus & DiPrete, 2000) expose couples to very different economic landscapes. It is possible that evidence of associations between economic factors and relationship quality are partly due to this inequality. In a context of greater state support for low-income families, associations between economic circumstances and relationship quality may be muted. Second, prior research has primarily adopted a cross-sectional approach that compares between-person differences in economic circumstances with between-person differences in relationship quality. It is also important to examine whether within-person changes in economic well-being and hardship are associated with changes in relationship quality.

In the current research we addressed both of these gaps, adding important evidence to the study of economic circumstances and relationship quality by examining the link between economic context and relationship satisfaction for German men and women. First, the cross-

sectional model allowed us to estimate the baseline, between-person association between economic factors and relationship satisfaction. Our findings suggest that financial resources are unrelated, or in some cases related in unexpected ways, to relationship satisfaction in Germany across couples. This differs from research conducted in the United States in which economic hardship, in particular, has been shown to be strongly and negatively associated with relationship quality (e.g., Conger et al., 2010; Hardie & Lucas, 2010, White & Rogers, 2000). This finding contributes to the larger literature on economic factors and family stability, suggesting that associations between economic factors and relationship quality may vary by economic climate. Thus, although household economic conditions are family-level factors that may be associated with family functioning, the larger societal context plays a role in whether and how they are linked.

Evidence from our longitudinal models also contributed to our understanding of how economic context matters for family functioning. Falling below the poverty threshold was associated with a decrease in relationship satisfaction for women, and moving out of poverty status was associated with an increase in relationship satisfaction for this group. This finding is similar to cross-sectional U.S.-based research indicating that economic hardship is more strongly associated with relationship quality than income (Hardie & Lucas 2010). This finding stands in contrast to our cross-sectional models, however, which did not reveal a negative association between poverty status and satisfaction for either women or men. In fact, we found a positive association between the two for men. These results suggest that, for German women, changes in economic well-being may be more strongly associated with perceptions of relationship quality than absolute levels of economic hardship.

Gender—both as a factor in responses to economic circumstances and as an organizing context for German household arrangements—was important in our analyses. Women and men responded differently to economic circumstances within the home. Falling into poverty was negatively related to women's relationship satisfaction in longitudinal models, but men's appraisal of their relationship did not change over time in response to changes in economic well-being. We were surprised to find that men's and women's relationship satisfaction was positively associated with poverty and receiving government transfers, respectively, in the cross-sectional models. Gendered economic arrangements also mattered, and mattered differently, for German men and women. Among men, adhering to the malebreadwinner model was associated with lower relationship satisfaction in both sets of analyses and for several alternative measures of male breadwinning. German men may feel "breadwinner pressure," and this pressure may be alleviated when their partner also become responsible for the household's economic situation. This finding was unexpected because German policies seem to encourage breadwinner households (DiPrete & McManus, 2000). Prior work also has suggested that men's breadwinning role is protective for German couples (Cooke, 2006; Ono, 1998) and that equality between German husbands and wives is associated with instability (Cooke, 2006). It may be that, over time, and in a new and more precarious economic climate, German men have come to feel additional economic pressure that may be relieved by a spouse's employment. More research is needed to understand the context under which German men respond to their wives' employment.

Future research is needed to better understand the relationship between economics and romantic relationship quality in Germany. Many studies conducted in the United States contain detailed measures of material hardship that the PAIRFAM data did not include. In the future, it would be ideal to have data from Germany that provide more detailed measures of the material hardship that couples may face. Future work that can more directly examine differences across nations would help clarify how context matters in the relationship between economics and relationship quality. Future analyses that can incorporate nationally representative longitudinal data from the United States would be particularly beneficial to help us understand the role context plays in this relationship. In addition, the two waves of data in this study were collected a year apart, and the age range of the sample is not representative of all German adults. Analyses that incorporate later waves of data could be particularly enlightening, because longer spells of low economic circumstances may have a differing association with relationship quality.

It is important to note that in this study we examined relationships that remained intact across waves. Examining patterns of union dissolution is beyond the scope of this article, but in future work we will examine the link among economic circumstances, relationship satisfaction, and separation and divorce for men and women in Germany. Panel attrition in our data set was comparable to or better than other major German panel studies (Suckow et al., 2010). Our analyses of survey attrition and sample loss due to relationship changes revealed that individuals who were excluded from the analytic sample due to nonparticipation in Wave 2, separation or divorce, and household disruption were generally less stable than the analytic sample. They tended to earn lower incomes, were younger and less well educated, and were less likely to be married, overall. This raises the issue of bias due to sample attrition. On the one hand, it is possible that our results provide a conservative estimate of the impact of economic circumstances on relationship satisfaction, because individuals who were likely to experience more economic strain were more likely to be excluded. In addition, sample attrition may influence the kinds of economic measures that appear most closely association with relationship satisfaction over time.

Families are shaped by the social and economic conditions that surround them, and therefore it is important to test our theories cross-nationally to identify situations in which they do and do not hold. Evidence from this study of German couples complicates our expectations about the relationship between economic well-being and hardship and romantic relationship quality. We found no evidence of a positive association between partner satisfaction and economic well-being across couples in a country that offers generous social welfare for families. Whether this is true in similar contexts remains to be seen, but it is an interesting comparison to settings like the United States. Within Germany, our findings also point to the importance of economic stability—that is, the absence of large fluctuations in income—that appear to be associated with changes in relationship satisfaction. Finally, our findings regarding differences in men's and women's responses to economic factors, gendered economic arrangements, and changes in both are surprising and deserve more attention. Despite a social context that supports the male-breadwinner model, German men appear to be less satisfied when shouldering the breadwinner role. Given prior research, this appears to be a recent shift and may signal social change that has not yet been accounted for in Germany's pro-family social policies. In sum, we advocate for more attention to both the

economic and larger social conditions that shape cohabiting and married couples' relationship quality, and we argue that both have a part to play in family stability.

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Table 1

Descriptive Statistics for Relationship Satisfaction, Economic Context, and Demographic Variables (n = 2,937)

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		Wave 1	e 1				Wave 2			W 1 4. W.	Ę
Variables	Women $(n = 1,752)$	= 1,752)	Men $(n = 1,185)$	1,185)	Women $(n = 1,752)$	= 1,752)	Men $(n = 1,185)$: 1,185)		wave 1 to wave 2 Change	Change
	M or %	as	M or /%	as	M or /%	as	M or %	as	Range	% Increase/changed	% Decrease
Relationship satisfaction	8.17	2.17	8.36*	2.11	7.95	2.18	8.08	2.14	0-10	21.25	37.18
Economic factors											
Household income ^a	1,528.20	767.98	1,573.57	796.85	1,588.32	835.10	1,703.52*	1,014.00	0-23,270	54.69	37.79
At risk of poverty b	15.28%		15.45%	0.36	13.53%		11.22%		0–1	4.94	7.64
Household receives state transfers $^{\mathcal{C}}$	25.29%		25.74%	0.44	22.89%		23.97%		0–1	11.07	13.21
Male partner's share of income	82.0	0.24	.09.0	0.28	0.76	0.25	0.61*	0.27	0–1	37.34	42.15
Male breadwinner household	%98.85		\$1.91%	0.50	58.42%		51.20%*		0–1	11.07	13.21
Time-varying controls											
Couple married d	74.32%		89.45%*	0.46	78.14%		73.84%*		0–1	4.05	
Child < 18 in household ^e	75.34%		66.17%*	0.47	78.65%		70.65%		0–1	4.09	0.31
Currently enrolled f	8.17%		7.44%	0.26	7.35%		5.23%*		0–1	1.85	3.23
Respondent's age	32.26	4.88	33.01*	4.68	33.27	4.89	34.05*	4.69	25–37	76.96	
Time-invariant controls											
Education in years	12.88	3.04	12.90	3.08	12.92	3.07	12.93	3.09	8–20	1.38	
Partner's age	35.65	6.44	31.11*	5.64	36.69	6.43	32.12*	5.65	18–59	96.56	
Duration of relationship in years	10.34	5.70	9.25*	5.34	11.34	5.71	10.25*	5.36	< 1–35	99.80	

Note: Asterisks indicate significant results of t tests comparing male and female respondents.

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 $[^]a$ For ease of interpretation, this table includes the full dollar value for household income; analytic models include the logged measures.

b = 0 not at risk, 1 = at risk.

 $^{^{}c}0 = \text{no transfers}, 1 = \text{transfers received}.$

 $d_0 =$ not married, 1 =married.

 $^{\theta}0 = \text{no child present}, 1 = \text{at least one child present}.$

 $f_0 = \text{not enrolled}, 1 = \text{enrolled}.$

Table 2

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Cross-Sectional Ordinary Least Squares Regression Models by Gender of Respondent, Wave 1 (N = 4,535)

		Model 1	el 1			Model 2	31.2			Model 3	13			Model 4	el 4	
Predictor	Women (<i>n</i> = 2,624)	t (n = 4)	Men $(n = 1,911)$	(116,	Women (n 2,624)	(n = ()	Men $(n = 1,911)$	(1116,	Women (<i>n</i> 2,624)	(<i>n</i> = (Men $(n = 1,911)$	1,911)	Women (<i>n</i> 2,624)	(n = 4)	Men $(n = 1,911)$	(116,1
	В	SE	В	SE	В	SE	В	SE	В	SE	В	SE	В	SE	В	SE
Logged HH income	0.04	0.09	-0.11	60.0					0.04	60.0	-0.10	60.0				
At risk of poverty					-0.07	0.13	0.33*	0.16					-0.05	0.13	0.32*	0.16
Household receives state transfers	0.24*	0.11	-0.00	0.13	0.24*	0.11	-0.04	0.13	0.28**	0.11	0.04	0.13	0.29**	0.11	-0.01	0.13
Male partner's share of income	0.16	0.22	-0.33	0.21	0.17	0.22	-0.27	0.22								
Male breadwinner									0.14	0.10	-0.28*	0.12	0.14	0.10	-0.25**	0.12
Couple married	0.22^{\ddagger}	0.12	0.42**	0.14	0.22^{\ddagger}	0.12	0.42***	0.14	0.21^{-7}	0.12	0.44***	0.14	0.21^{-7}	0.12	0.44**	0.14
Child in household	-0.24†	0.13	-0.44***	0.14	-0.24^{\dagger}	0.13	-0.47***	0.14	-0.28*	0.13	-0.35*	0.15	-0.28*	0.13	-0.39**	0.15
Enrolled in school	0.10	0.18	-0.18	0.21	60:0	0.18	-0.17	0.21	0.10	0.17	-0.14	0.20	60.0	0.17	-0.15	0.20
Age	-0.02	0.01	0.01	0.02	-0.02	0.01	0.01	0.02	-0.02	0.01	0.01	0.02	-0.02	0.01	0.01	0.02
Education in years	0.05**	0.02	0.01	0.02	0.05**	0.02	0.01	0.02	0.05**	0.02	0.01	0.02	0.05**	0.02	0.01	0.02
Duration of relationship	0.01	0.01	00.00	0.01	0.01	0.01	0.00	0.01	0.01	0.01	00.00	0.01	0.01	0.01	0.00	0.01
Partner's age	0.00	0.01	0.00	0.01	0.00	0.01	0.00	0.01	0.00	0.01	0.00	0.01	0.00	0.01	0.00	0.01
Constant	7.41***	0.70	8.85***	0.73	7.72***	0.40	7.98***	0.44	7.50***	0.68	8.72***	0.72	7.80***	0.37	7.907***	0.42

Note: Shading indicates a significant difference in coefficients by gender of respondent. HH = household.

 $^{\dagger}p<.10.$

* *p* < .05.

p < .001.

p < .01.

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Table 3

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Fixed Effects Models by Gender of Respondent (n = 2,937)

		Model 1	el 1			Model 2	el 2			Model 3	13			Model 4	a 4	
Predictor	Women ^{a} ($n = 1,752$)	(<i>n</i> =	$\operatorname{Men}^b(n=1)$	(n = 1,185)	Women ^a $(n = 1,752)$	(n = n)	Men ^b $(n = 1,185)$	1,185)	Women ^a $(n = 1,752)$	(<i>n</i> =	Men ^b $(n = 1,185)$	1,185)	Women ^a $(n = 1,752)$	(n = 0)	Men ^b $(n = 1,185)$	(185)
	В	SE	В	SE	В	SE	В	SE	В	SE	В	SE	В	SE	В	SE
Logged HH income	0.16	0.10	-0.13	0.17					0.16	0.10	-0.12	0.17				
At risk of poverty					-0.38*	0.18	-0.03	0.22					-0.37*	0.18	-0.06	0.22
Household receives state transfers	0.07	0.14	0.02	0.15	60.0	0.14	0.02	0.15	0.12	0.13	0.07	0.14	0.14	0.13	0.07	0.14
Male partner's share of income	0.37	0.35	-0.64^{\dagger}	0.35	0.35	0.35	-0.64^{\dagger}	0.36								
Male breadwinner									0.24	0.15	-0.39*	0.16	0.20	0.15	-0.40*	0.16
Couple married	0.41	0.33	0.25	0.34	0.41	0.33	0.25	0.34	0.39	0.33	0.29	0.34	0.39	0.33	0.29	0.34
Child in household	0.03	0.33	0.19	0.33	0.03	0.33	0.22	0.33	-0.03	0.34	0.33	0.34	-0.01	0.34	0.37	0.34
Enrolled in school	-0.45	0.28	0.03	0.32	-0.43	0.28	-0.01	0.33	-0.45	0.28	0.04	0.32	-0.43	0.28	0.05	0.32
Age	-0.22***	90.0	-0.25***	0.07	-0.22***	0.06	-0.26***	0.07	-0.22***	90.0	-0.26***	0.07	-0.22***	90.0	-0.27***	0.07
Constant	13.38***	2.13	17.52***	2.35	14.66***	2.00	16.89***	2.20	13.69***	2.05	17.59***	2.34	15.01***	1.94	17.07***	2.20

Note: Shading indicates a significant difference in coefficients by gender of respondent. HH = household.

aNumber of observations = 3,504.

b Number of observations = 2,370.

 t^{\dagger}_{p} < .10.

p < .05.

p < .001.

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