Earnings Equality and Relationship Stability for Same-Sex and Heterosexual Couples

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Abstract

Among family demographers and sociologists of gender and the family, it has long been debated whether equality in relationships or specialization of work and home duties better promotes relationship stability. This paper offers a unique perspective on the debate, demonstrating that the specialization model holds only in heterosexual relationships, and suggesting the effect of earnings equality is dependent upon gender norms in heterosexual relationships. When earning power is disentangled from gender by examining same-sex couples, results show that equality in earnings promotes stability. Using the new How Couples Meet and Stay Together (HCMST) dataset, this paper employs a discrete-time event history analysis model to assess the likelihood of breakup for both heterosexual and same-sex couples.

Introduction

Recent decades have witnessed sizeable shifts in demographic trends relating to family formation and dissolution. One such trend is the takeoff in the divorce rate, and in the dissolution of cohabiting unions. Another shift is the increased proportion of lesbian and gay couples and households. These trends have developed in concert with women's increased representation in the paid labor force, leading to challenges for dual-earning families – particularly in terms of balancing power and time in this egalitarian age. As social scientists have scrambled to make sense of each of these trends separately, they have rarely integrated the topics. How does the household division of labor and equality of earnings predict breakups of both same-sex and heterosexual couples? This paper strives to assess this research question, by examining couple breakup longitudinally.

Literature Review

An ample amount of scholarship has been devoted to explaining the processes leading to divorce or couple dissolution. In particular, scholars have focused on the relationship between heterosexual partners' relative earnings and satisfaction within a relationship or likelihood of breakup. This literature is closely related to the household division of labor, which serves as a measure of equality within a couple. The ongoing debate centers around whether an egalitarian relationship (in terms of earnings, decisions, housework, etc.) or a specialized relationship yields higher satisfaction rates within a couple.

Economist Gary Becker claims that marriages are stronger when specialization occurs within the family. In other words, the most stable situation is when one partner works for pay and the other remains at home. Under this arrangement, Becker claims that the husband and wife complement each other's duties, and thus have an interdependent relationship, leading to a lower

incidence of divorce (Becker 1981). This theory on specialization initially appears to be gender neutral. It suggests that heterosexual couples utilize a rational choice framework for making decisions about work and family. Because men, on average, earn more than women, the rational decision is for husbands to work outside the home, while wives work fewer hours, earn less, or remain at home. This stance has been controversial in the field of sociology: many scholars challenge this argument and have sought to further examine the mechanisms and relationships between earnings, hours worked, the household division of labor, and likelihood of relationship dissolution. These studies have primarily applied to heterosexual couples, which can mainly be attributed to the lack of available data on same-sex couples. Some studies have used convenience samples to make claims about the division of labor among same-sex couples; my study, however, will be the first to examine this issue at a nationally representative level.

Gender scholars have made a concerted effort to measure and document the extent to which the gender division of labor is maintained within married and cohabiting couples. Becker's rational choice perspective on family relationships has been challenged in recent decades, particularly because as women have been integrated into the labor market, it is more lucrative for both partners to work. Yet, the gender division of labor has persisted despite women's entry into the labor force. In her illuminating book, *The Second Shift,* Arlie Hochschild identifies how employed women tend to come home to a "second shift" of housework, childcare, and other caregiving tasks. In her review of national surveys, Hochschild found that full-time working women worked an additional fifteen hours longer each week than men in terms of housework and care work (1989: 259). Hochschild finds among her non-representative sample that when partners possess conflicting gender ideologies for housework, their marital tension is high and their relationship is highly likely to end in divorce (272).

Other scholars examine this area and the relationship between earnings and the division of labor. Some advocate for a bargaining or economic dependency argument, in which partners earning more are able to negotiate housework time (Ridgeway 2011). Julie Brines finds that as a wife approaches her husband's earning power, the difference in time spent on housework decreases (1994: 675). However, when a wife surpasses her husband in income, or as a husband becomes increasingly dependent on his wife's financial support, the husband's housework hours decrease (1994: 676). Mary Blair-Loy finds parallel results in her study of women financial executives. Though these women possess high earning power, they outdo their husbands in time spent on housework (2001: 706). Furthermore, the cultural demands of being a wife conflicts with the demands of their job on a regular basis, and many respondents struggle to negotiate these conflicting cultural schemas (705). The household is evidently a highly gendered arena, in which heterosexual partners struggle to organize labor.

Data limitations have prevented scholars from completing nationally representative studies of the division of labor among same-sex couples. In most surveys, the sample size of lesbian and gay relationships is too small to make substantial claims. The HCMST dataset is unique in its oversampling of same-sex couples, and I will be able to fill existing gap in the literature. Several studies have examined small samples of same-sex couples. Patterson finds that the division of labor among same-sex couples tends to be more equal, though Kennedy et al. argue for the continued relevance of traditional gender divisions, in which the partner earning more thinks of themselves as the "man" of the couple. Blumstein and Schwartz suggest that gay and lesbian couples tend to be more equal in earnings and decision power (1983: 459).

How do these processes relate to couple stability? Brines and Joyner further examine the Becker specialization theory for married and cohabiting couples, by examining the relationship

between a wife's employment and work hours and the likelihood of divorce or breakup. Using data from the Panel Study of Income Dynamics, in years 1976-1985, the authors claim that both conditions of equality (in earning power and hours worked), as well as specialization of work types (separating housework and external employment) can promote cohesion within a marriage by creating joint investments. They investigate which type of conditions, in terms of earnings, hours worked, and children, promote cohesion and thus reduce likelihood of divorce. When wives invest more in employment, through greater hours worked or increased income, they become more independent, and threaten the normative specialization of marital arrangement. Thus, the authors find that as the ratio of the wife's to the husband's earnings increases, or as the time spent on employment increases, the likelihood of divorce increases. Furthermore, couples with high combined earnings are less likely to divorce, and the number of children decreases the likelihood of divorce. These findings support the idea that when couples have marital arrangements that conflict with culturally normative gender schemas, the likelihood of experiencing divorce or breakup increases. This paper challenges the specialization schema as being gender-neutral, though it does not use recent data, and only examines heterosexual relationships.

Blumstein and Schwartz provide noteworthy scholarship on this subject in that they examine same sex couples in addition to heterosexual marriages and cohabiting unions. Their study employs a convenience sample of respondents interviewed during the 1970s, who they revisited 18 months after the first interview to determine which couples had broken up during this time. They find that lesbian couples have the highest breakup rate, but do not explicate this finding very thoroughly. In terms of the influence of income differentials, Blumstein & Schwartz claim "gay men's and lesbians' relationships can be disrupted at almost any tie when they begin

to quarrel about money management" (1983: 309). Furthermore, in terms of economic dependency, "lesbians hold up, as the ideal relationship, one where two strong women come together in total equality" (1983: 309). If this equality is not established, the resulting power imbalance can lead to breakup.

Evidently, scholarship in this arena yearns for a nationally representative, sizeable sample of same-sex couples and an investigation into the relationship between earnings, power, and couple stability. Furthermore, by comparing heterosexual and same-sex couples, we can determine if mechanisms relating earnings, the division of labor, and couple dissolution are themselves gendered processes. By removing differences in partners' gender and examining same-sex couples, we can disentangle power and gender, to understand whether egalitarian relationships fare better. My project will assess these questions.

Hypotheses

Two competing hypotheses arise from the previous literature.

H_1: The specialization model holds for both heterosexual couples and same-sex couples. More specifically, unequal earnings will promote relationship stability, no matter the gender of the higher earner, or the sexual orientation status of the couple.

H_2: In same-sex couples, equality of earnings will decrease the likelihood of breakup. This is because cultural schemas and gender norms about providing for a family do possess as much power for same-sex couples, as they do for heterosexual couples.

Data and Methods

The HCMST survey, managed by Michael Rosenfeld and Reuben Thomas, is a nationally representative survey of American adults. Among the 4,002 respondents, 3,009 were in a romantic relationship at the time of the first wave of the survey (2009). The survey oversamples

lesbian and gay respondents: among couples, 371 were in a self-identified same-sex relationship. Follow-up surveys were administered one and two years following the initial survey, so that couple dissolution rate could be studied. This survey uniquely provides a large sample size of same-sex couples, and the longitudinal design lends itself to my research question. A final benefit of the survey is that it is extremely recent: Wave I took place in 2009, Wave II in 2010, and Wave III was just released in 2011. Wave II has a follow-up response rate of 83% (N=2520) and Wave III has a response rate of 77% (N=1960); couples were dropped from analysis in Wave III if they had broken up in Wave II.

The HCMST survey asks questions on how the respondent originally met their partner. In addition, the survey includes questions about the demographic characteristics of each partner in the couple, the quality of their relationship, and, for those who broke up in Wave II or III, detailed information on the manner and cause of breakup.

This research question is suitable for an event history analysis framework, because we are interested in predicting an event (couple dissolution), and the duration to dissolution – in other words, we're interested in how variables influence the likelihood of dissolution. In an event history analysis (EHA) framework, it is necessary to carefully delineate the appropriate risk set: the group of respondents who are eligible to experience an event. In my analysis, I define the risk set to be all couples from the first wave of the survey that were included in at least one follow-up survey.

Models

This paper will provide two sets of analysis. The first will allow us to compare the role of earnings equality for same-sex and heterosexual couples. The second analysis will examine only heterosexual couples, to determine if the gender of the higher earner also has an effect. The

dependent variable models when a couple experiences a breakup or divorce. Thus, it is a binary variable (Y=0 or 1), and is assumed to follow a binomial distribution. The observation receives a 1 for this variable during the wave corresponding to a breakup, and for previous waves receives a 0. The independent variable of interest is which partner earns more, or if both partners have approximately equal earnings. This variable is obtained from responses to the survey question, "Between you and [partner_name], who earned more income in 2008?" Response choices were, "I earned more," "[Partner_name] earned more," or "We earned about the same." For the first analysis, the variable is a binary variable, coded as 0 if either partner earned more, and 1 if the partners earned about the same.[1]

In the first analysis, the next independent variable is a binary variable coded 0 for heterosexual couples, and coded 1 for same-sex couples. The primary research question rests on the results from the interaction of earnings equality with same-sex couple, and will determine if equal earnings in a relationship affects same sex couples in a process that is different from that of heterosexual couples.

In my analysis of heterosexual couples, the key independent variable measures the gender of the higher earner. This three category-variable consists of the traditional option, in which the male partner earns more, the egalitarian scenario in which both partners earn equal amounts, and the gender atypical case, where the female partner earns more.

I control for additional variables, including respondent demographic characteristics, qualities of the couple, additional indicators of power aside from earnings. The demographic variables include years of education, employment status, race, religion, political party affiliation,

[1] We do not have the actual earnings of each partner, just the household incomes. Thus, I could not assess the absolute difference in partners' earning power, and am limited to the respondents' perception of the relative earnings. Previous studies (i.e., Joyner & Brines 1994), have demonstrated that relative earnings are a significant predictor of marital dissolution, whereas absolute earnings measures are less likely to predict breakup.

and age. The variables applying to couples include age cohabitation, length of relationship, and, for heterosexual couples, whether the couple is married during the previous wave. Finally, I test whether other measures of power function in the same way as earnings (in)equality does. Thus, I have a measure of the age difference between partners and of the education difference between partners.[2]

[Insert Table 1 About Here.]

The data consist of 7203 couple-years. In other words, the data follow 3009 couples over three years, up to the point where they drop out of the study or experience a breakup. Among the couples, a total of 360 experienced a breakup over the observation window. The data is structured by spells – each couple contains multiple observations, to account for each year they were observed, and to allow for time-varying covariates. Table 1 gives descriptive statistics for each of the independent variables, from Wave I of the HCMST survey. Respondent employment status, cohabitation and marital status of previous wave, length of relationship, household income, and number of children are all time-varying covariates. The remaining independent variables do not vary across time.

Censoring is an issue to be aware of when using event history models. Right-censoring is not problematic, in that if a couple drops out of the study before the observation time ends, they are no longer included in the risk set. Similarly, some couples will not have experienced divorce within the time window, but the estimation methods account for this. Left-censoring can be problematic, in that we do not have data on couples before the first survey. To minimize biasing results, I include a duration variable in my model: the length of the relationship. Essentially, we want to be sure that the coefficients are not time-dependent, and if they are, they are properly

[2] Variable coding is included in the appendix.

specified in the model. We can imagine that relationship duration influences the likelihood of breakup, in that couples with longer relationships are less likely to breakup.[3] Thus, the bias to be aware of is in the form of attenuation bias: we do not have all couples from their first meeting. The survival curve is downwardly biased – most couples break up within the first several years, so our estimates may be biased toward 0, and provide a conservative test of the processes.

In all forms of event history analysis, the underlying dependent variable of interest is duration to an event. We conceptualize duration as a random variable T, which can take on values greater than 0. In our data, *t* is the realization of the random variable T, or the actual duration observed for a couple to experience the event of a breakup. From this information, we can generate several algebraically related functions: the cumulative probability function (cdf)=F(t), the probability density function *f(t)*, the survival function *s(t)*, and the hazard function *h(t)*. The cdf is generated direction from duration, and is of the following form: $F(t) = P(T \leq t)$. Intuitively, the cdf gives the cumulative probability that an event has occurred, up to duration *t*. The survival function, *s(t)* = 1-F(t), or $\int_t^{\infty} f(u)du$, where *f(t)* is the probability density function, or $\frac{dF(t)}{dt}$. Not given here, I have generated the Kaplan-Meier survival estimate across the three waves of observation.[4]

In EHA, however, we are less interested in who survives, or does not experience an event. Rather, we would like to predict who experiences an event – in this case, which couples get divorced or break up. Moreover, because couples experience breakup after different

[3] For the final version of this paper, I will conduct tests of time dependency for each variable, to ensure my model is correctly specified.

[4] The Kaplan-Meier formula estimates the survival rate based on this equation: $S = \prod_{t_j \leq t}[1 - \frac{d_j}{n_j}]$, where d_j is the number of people who experienced the event by time j, and n_j is the number of people in the risk set at time j.

durations, we are interested in the rate of event occurrence, and what variables have an effect on this rate. To measure this, we estimate a hazard function, which is defined as the marginal rate of event occurrence at a particular time. The hazard function takes the following form:

$h(t) = \lim_{\Delta t \to 0} \frac{(t \le P(t) < t + \Delta t \mid P(t) \ge t)}{\Delta t}$. We can derive the hazard function from the survival function and probability density function: $h(t) = \frac{f(t)}{s(t)} = \frac{d\log(s(t))}{d(t)}$.

Finally, a related function to the hazard function and survival function is the integrated hazard function. This is given by $H(t) = \int_0^t h(t) = -\log(s(t))$. We are interested in the integrated hazard rate because it helps to assess whether the hazard rate is time dependent. Since the underlying dependent variable is the hazard rate, we need to account for time dependence of the hazard rate in our models.

Choosing the appropriate event history model arises from managing the model assumptions about the hazard rate. We can decompose the hazard rate into two parts: the baseline hazard and the deterministic element. Thus, $h(t) = h_0(t)\exp(X\beta)$, where X represents a vector of covariates, and β is a vector of coefficients estimating the effect of X on the hazard rate. By taking the log of both sides, we obtain $\log(h(t)) = h_0(t) + X\beta$. We are unable to model the baseline hazard rate, $h_0(t)$, directly from the data, so EHA models make assumptions about this function.

The first option for event history analysis is the discrete-time model. This model assumes that *h(t)* is constant. Thus, unless duration is included as a covariate in the model, discrete-time EHA ignores the possible time-dependence of the hazard rate. Discrete-time EHA further assumes that the underlying process of events occur during discrete time intervals. Though the

true underlying process may be continuous, discrete-time models account for data that is measured in discrete intervals. In this framework, $P_{it}=P(T_i=t_i|T_i\geq t_i,X_i)$, which is the probability of a couple experiencing divorce at time t, given that they have survived up to the point t. Since $\log(h(t)) = \alpha(t) + X\beta$, we have $P_{it} = \frac{1}{1+\exp(-\alpha_t - X_{it}\beta)}$. This equation transforms to $\log(\frac{P_{it}}{1-P_{it}}) = \alpha_t + X_{it}\beta$. This is in familiar form of the log-odds of experiencing an event compared to not experiencing the event, for a particular couple at time t. Assuming the baseline hazard rate (alpha) is constant, we can absorb this into the coefficient estimates and estimate a constant, β_0, to represent the baseline hazard rate. Thus, the discrete-time model is equivalent to a logit regression predicting the rate of experiencing an event. This choice of model is appropriate, given the data structure and research question. The data is clearly discrete: each interview is conducted on an annual basis, so though the underlying time process for breakup may be continuous, the data are discrete. Furthermore, I am not theoretically interested in modeling the base hazard rate, which is the aim of other EHA models. I account for time dependency with the inclusion of the duration of relationship variable. Given these considerations, a discrete-time event history model is favored over a semi-parametric (e.g., Cox) or a parametric (e.g., log-logistic) model.[5]

[Insert Tables 2 & 3 About Here]

The above tables gives descriptive statistics on breakup rates from the HCMST survey, Waves I, II, and III. These descriptive statistics demonstrate that among heterosexual couples, those with the same earnings or in relationships in which the female partner earns more are more likely to break up than those in which the male earns more. Among same sex couples, those with

[5] I have estimated Cox semi-parametric models, and the model does not satisfy the test of proportionality. This result confirms my decision to use discrete-time EHA.

an inequality in earnings are more likely to break up than under equal earning conditions. These bivariate statistics lend preliminary support for the second hypothesis.

Results

Earnings Equality for Heterosexual and Same-Sex Couples

Table 4 presents results from nested discrete-time models, predicting breakup for both heterosexual and same-sex couples. Model 1 includes just the variables of interest: the dummy variable for same-sex couple and the variable assessing equality of earnings. Model 2 interacts these variables to assess whether the effect of earnings equality is different for same-sex couples, compared to heterosexual couples. Model 3 adds variables to account for respondent characteristics, Model 4 adds variables pertaining to the couple, and Model 5 adds additional variables measuring "power" within a relationship: age difference between partners and difference in years of education. The coefficients are given at the log-rate level, so exponentiation is required to interpret the effect on the rate of divorce. I use nested models to assess whether the inclusion of new variables improves the goodness of model fit compared to the previous model. From computing likelihood ratio tests, we find that each model significantly improves upon the previous model. Specifically, compared to the base model with no covariates, Model 1 yields a likelihood ratio statistic of 27.99 (df=2, p<.001). Model 2 improves over Model 1 (χ^2=19.71, df=1, p<.001); adding individual variables in Model 3 improves goodness of fit over Model 2 (χ^2=109.35, df=10, p<.001). Next, adding variables pertaining to the couple in Model 4 improves fit over the previous model (χ^2=392.44, df=4, p<.001). Finally, adding two additional measures of power in Model 5 does not improve model fit compared to Model 4 (χ^2 =0.82, df=2, p=.664). Unless otherwise specified, Model 4 will be used for subsequent interpretation of coefficients.

We find that, in Model 1, same-sex couples are significantly more likely to breakup, relative to heterosexual couples. Specifically, in this model being a same-sex couple increases the log-rate of breakup by 1.240, and equivalently, increases the rate of dissolution by a factor of 3.456 (=exp(1.240)). In Model 1 we also find that equal earnings increases the rate of divorce by a factor of 1.865. This model initially provides support for Becker's theory of specialization.

However, we find that the effect of earnings is different for same-sex couples, compared to heterosexual couples. In Model 2 I add the interaction term same-sex couple*equal earnings, and find that the resulting interaction is significant at the $p<.05$ level. We find that equality of earnings reduces the likelihood of breakup for same-sex couples, while it increases the likelihood of breakup for heterosexual couples. This result holds across subsequent models: though, at a baseline rate, same-sex couples are more likely to break up than heterosexual couples, equal earnings within same-sex couples promote relationship stability.

Several other variables significantly predict couple dissolution. We find that cohabitation (during the previous survey wave) significantly decreases the likelihood of breakup. Further, the likelihood of breakup decreases with longer relationships. These findings are not surprising, given previous literature on breakups. The relationship length variable is important, as it controls for duration and thus reduces bias from right censorship, as well as time dependency in the event history framework.

In the final model, Model 5, I add two other measures of power within a couple. The first is the age difference between partners, and the second is the difference in years of education. In Model 5, as described above, the inclusion of these variables does not improve upon model fit over the previous model. Furthermore, neither coefficient is significant. These results suggest that power differentials determined by earnings are more deterministic of breakup than other

measures of power within a couple.

The following figure gives the predicted probabilities of a couple experiencing a breakup, by the length of the relationship. We see that same-sex couples are less likely to breakup if they have equal earnings, whereas heterosexual couples are more likely to break up if the partners have equal earnings. This finding supports hypothesis $\mathbf{H_2}$, as described above.

[Insert Figure 1 About Here]

Earnings Equality Within Heterosexual Couples

To test the specialization argument further within heterosexual couples, Table 5 presents results from nested discrete-time models for heterosexual couples only. In this table, we assess whether the gender of the higher earner matters for breakup among heterosexual couples. Model 1 includes just the primary independent variable: the categorical measure of which partner earns more: male or female, or if both partners have equal earnings. Model 2 adds variables to account for respondent characteristics, Model 3 adds variables pertaining to the couple, and Model 4 adds the age difference and years of education difference measures between partners. Similar to the previous results, the coefficients are given at the log-rate level. By using nested models and computing likelihood ratio tests, we can assess which model yields the best fit for the data. Specifically, compared to the baseline model, Model 1 yields a likelihood ratio statistic of 23.32 (df=2, p<.001). Model 2 improves over Model 1 (χ^2=77.92, df=10, p<.001); adding individual variables in Model 3 improves goodness of fit over Model 2 (χ^2=409.28, df=6 p<.001). Finally, adding two additional measures of power in Model 4 does not improve model fit compared to Model 3 (χ^2=0.31, df=2, p=.855). Thus, we find that Model 3 fits the data best.

In Model 1, we find that relative to the male partner earning more, when a heterosexual couple has equal earnings or the female partner earns more, the couple is more likely to break up.

However, these results change slightly in subsequent models. We find that with the inclusion of respondent demographic characteristics, measures of the couple, and the additional power measures, the coefficient for female partners out-earning their male partners becomes insignificant. This means that there is no significant difference between female partners exceeding their male partners' earnings, relative to the "traditional" model of male partners out-earning their female partner. Equality in heterosexual relationships increases the likelihood of breakup, and this finding holds across all models. These findings, in conjunction with the previous findings above, support the specialization model *for heterosexual couples only*.

Discussion and Conclusion

There are several possible explanations for the finding that the gender of the higher earner does not cause a difference in relationship stability. The first explanation is that the specialization model, as given by Becker, in fact is not gender-dependent. Yet, with the previous results for same-sex couples in which gender is removed as a confounding variable, this explanation is unsatisfactory. An alternative explanation is that the timing of the survey (2009), at the height of the recession, led to a sizeable number of unemployed men in the survey. Thus, women out-earning their male partner could indicate that their partner is not working. This possibility cannot be tested using these data, as the survey only asks for the respondent's employment status. However, the female partner earning more is negatively correlated with household income, indicating that perhaps the other partner is more likely to be unemployed. Other possible explanations will be explored in future versions of the paper.

There are several limitations to this study. The sample size of same-sex couples (N=371), though among the largest sample in a nationally representative survey, is still smaller than might be ideal. The sample is too small to have separate models for same-sex couples and heterosexual

couples, which would allow for a global interaction of the same-sex variable with other variables. This could allow for an assessment of simultaneous processes leading to breakup, and the variation by same-sex couple status. A further limitation is the short time frame of the survey data. With only three years to follow couples, we do not have the opportunity to witness all breakups that will occur. As future waves of the HCMST survey take place, this limitation will be greatly reduced.

The results of this study indicate that specialization and equality of earnings has a different effect on relationship stability for same-sex couples, relative to heterosexual couples. This implies that the specialization theory of couple stability is intimately tied to gender roles and ideals of heterosexual relationships. When gender is removed from the equation, by examining same-sex couples, egalitarian relationships are shown to last longer. These results hold with the inclusion of individual and couple variables, as well as with other measures of power within couples.

Tables and Figures

Table 1. Descriptive statistics of dependent and independent variables.

	Mean (Standard Deviation)		
	All Couples	Heterosexual Couples	Same Sex Couples
Breakup (DV)	0.137	0.121	0.219
Equal earnings (=1 if earnings are equal)	0.124	0.121	0.140
Same sex couple (=1)	0.153	---	---
Respondent years of education	13.906 (2.521)	13.613 (2.435)	15.534 (2.366)
Employment status (=1 if not working)	0.330	0.347	0.236
Respondent race			
White	0.749	0.744	0.776
Black	0.072	0.076	0.052
Hispanic	0.108	0.109	0.099
Other	0.071	0.071	0.072
Respondent religion			
Christian	0.826	0.830	0.801
Non-Christian	0.055	0.053	0.070
Not religious	0.119	0.117	0.129
Respondent political party			
Republican	0.405	0.458	0.110
Democrat	0.572	0.515	0.886
Other	0.023	0.027	0.005
Respondent age	46.161 (15.697)	45.864 (16.258)	48.806 (11.796)
Cohabiting (=1)	0.797	0.800	0.778
Length of relationship	17.438 (15.294)	18.304 (15.878)	12.649 (10.319)
Household income	70192.53 (44695.94)	66994.06 (42706.62)	87935.32 (50957.89)
Number of children	0.489 (0.921)	0.558 (0.966)	0.110 (0.466)
Age difference between partners	4.696 (5.385)	4.353 (5.129)	6.591 (6.301)
Education difference between partners	1.686 (1.924)	1.645 (1.917)	1.915 (1.950)
Number of Observations	2632	2230	402

Source: HCMST Wave I.

Table 2. Frequencies (Percentages) of earnings levels, for heterosexual and same sex couples.

	Heterosexual Couples	Same Sex Couples
Same Earnings	267 (12.09%)	56 (13.97%)
Male Earned More*	1438 (65.10%)	----
Female Earned More*	504 (22.82%)	----
One Partner Earned More[1]	----	345 (86.03%)
Total	2209	401

*These values apply only to heterosexual couples.
[1]This value is for same sex couples only.

Table 3. Frequency and conditional proportion of breakups by earnings levels, for heterosexual and same sex couples.

	Heterosexual Couples	Same Sex Couples
Same Earnings	56 (20.97%)	5 (8.92%)
Male Earned More*	131 (9.81%)	----
Female Earned More*	72 (14.29%)	----
One Partner Earned More[1]	----	83 (24.06%)
Total	269 (12.06% of all heterosexual couples)	88 (21.9% of all same sex couples)

*These values apply only to heterosexual couples.
[1]This value is for same sex couples only.

Table 4. Discrete-time event history models predicting breakup for heterosexual & same-sex couples, in log-odds.

	Model 1	Model 2	Model 3	Model 4	Model 5
Same sex couple (=1)	1.240***	1.404***	1.258***	1.096***	1.035***
	(0.265)	(0.278)	(0.276)	(0.311)	(0.312)
Equal earnings (=1 if earnings are	0.623***	0.670***	0.639***	0.408*	0.418*
equal, =0 if unequal)	(0.187)	(0.194)	(0.203)	(0.203)	(0.184)
*Same sex couple*Equal earnings*		-1.496*	-1.234^	-1.611*	-1.573*
		(0.682)	(0.700)	(0.724)	(0.726)
Respondent years of education			-0.011	-0.039	-0.041
			(0.029)	(0.035)	(0.035)
Respondent employment status			0.304^	0.260	0.231
(=1 if not working)			(0.176)	(0.187)	(0.188)
Respondent race (ref=White)					
Black			0.473*	0.211	0.212
			(0.225)	(0.243)	(0.244)
Hispanic			0.002	0.134	0.147
			(0.234)	(0.261)	(0.267)
Other			0.342	0.200	0.191
			(0.361)	(0.367)	(0.380)
Respondent religion (ref=Christian)					
Non-Christian			0.306	0.327	0.356
			(0.301)	(0.309)	(0.309)
Not Religious			-0.249	-0.301	-0.271
			(0.268)	(0.280)	(0.281)
Respondent political party					
(ref=Republican)					
Democrat			0.348*	0.155	0.160
			(0.169)	(0.182)	(0.182)
Other			0.086	-0.277	-0.518
			(0.428)	(0.465)	(0.510)
Respondent age			-0.033***	-0.005	-0.004
			(0.006)	(0.007)	(0.007)
Cohabiting				-1.721***	-1.724***
				(0.217)	(0.219)
Length of relationship				-0.056***	-0.056***
				(0.014)	(0.014)
Household income				-0.000	-0.000
				(0.000)	(0.000)
Number of children				-0.048	-0.056
				(0.089)	(0.090)
Age difference between partners					-0.005
					(0.016)
Education difference between					0.009
partners					(0.044)
Constant	-3.238	-3.247	-2.061	-0.866	-0.850
Model chi-square	34.09	33.83	92.93	356.9	362.5
Pseudo R2	0.012	0.025	0.051	0.205	0.215
N (couple-years)	4122	4122	4110	3939	3939

Source: HCMST, Waves 1, 2, and 3 (2008-2011).
Note: Standard errors in parentheses; *** p<0.001, ** p<0.01, * p<0.05, ^ p<.10.

Table 5. Discrete-time event history models predicting breakup for heterosexual couples, in log-odds.

	Model 1	Model 2	Model 3	Model 4
Earnings (ref= male partner earns more)				
Equal earnings	0.791***	0.748***	0.453*	0.473*
	(0.196)	(0.205)	(0.226)	(0.226)
Woman partner earns more	0.390*	0.340	-0.156	-0.169
	(0.186)	(0.195)	(0.212)	(0.212)
Respondent years of education		-0.011	0.002	-0.001
		(0.030)	(0.038)	(0.038)
Respondent employment status		0.203	0.110	0.124
(=1 if not working)		(0.189)	(0.206)	(0.205)
Respondent race (ref=White)				
Black		0.435	0.183	0.179
		(0.230)	(0.268)	(0.268)
Hispanic		0.003	0.215	0.234
		(0.245)	(0.282)	(0.289)
Other		0.266	0.270	0.292
		(0.384)	(0.402)	(0.403)
Respondent religion (ref=Christian)				
Non-Christian		0.356	0.356	0.395
		(0.309)	(0.310)	(0.306)
Not Religious		-0.180	-0.125	-0.097
		(0.270)	(0.276)	(0.276)
Respondent political party (ref=Republican)				
Democrat		0.373*	-0.035	-0.027
		(0.174)	(0.191)	(0.192)
Other		-0.154	-0.533	-0.715
		(0.461)	(0.527)	(0.557)
Respondent age		-0.033***	-0.005	-0.004
		(0.006)	(0.007)	(0.008)
Cohabiting			-0.916***	-0.924***
			(0.231)	(0.230)
Married			-1.711***	-1.732***
			(0.305)	(0.305)
Length of relationship			-0.027	-0.027
			(0.015)	(0.015)
Household income			0.000	0.000
			(0.000)	(0.000)
Number of children			0.023	0.017
			(0.082)	(0.082)
Age difference between partners				-0.012
				(0.016)
Education difference between partners				0.018
				(0.048)
Constant	-3.328	-2.120	-1.517	1.562
Model chi-square	17.06	79.73	337.0	350.9
Pseudo R2	0.012	0.047	0.249	0.251
N (couple-years)	4122	4122	4110	3939

Source: HCMST, Waves 1, 2, and 3 (2008-2011).
Note: Standard errors in parentheses; *** p<0.001, ** p<0.01, * p<0.05.

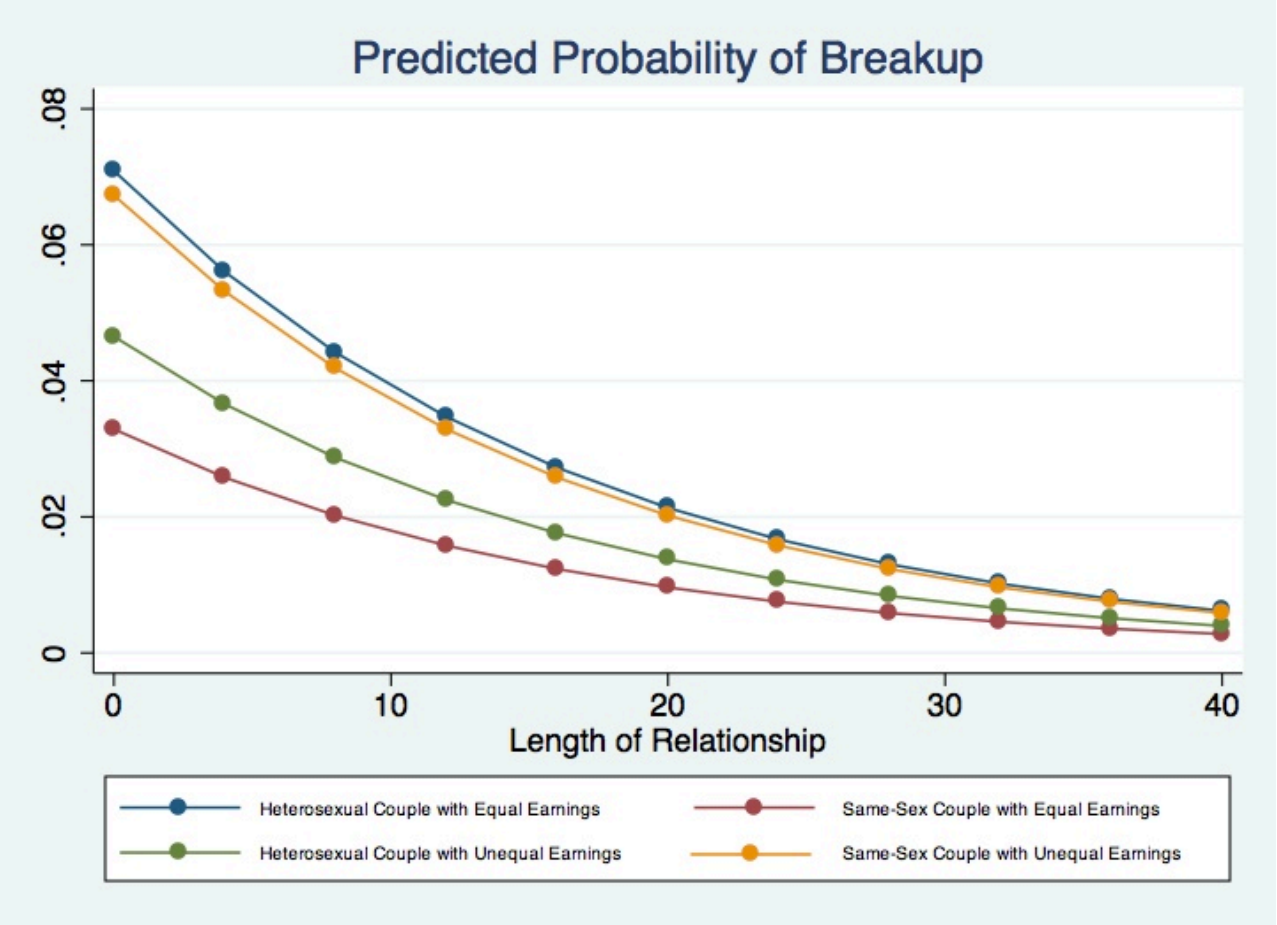

Figure 1. Predicted probability of breakup, by relationship length and equality of earnings, for same-sex and heterosexual couples. Probabilities derived from Table 4, Model 4. All non-specified variables held at mean.

Appendix: Coding of Variables

Dependent variable:

Breakup

The dependent variable was coded as dichotomous. Breakup=1 if the couple experienced a breakup during the current wave of the survey. Breakup=0 if the couple remained together. If the couple was not interviewed during a particular wave of the survey, they are dropped from analysis. Couples experiencing breakup in Wave II of the survey were not re-interviewed in Wave III.

Independent variables:

Equal earnings

This variable is constructed from the respondent's answer to the question "Between you and [partner_name], who earned more income in 2008?" Response choices were, "I earned more," "[Partner_name] earned more," or "We earned about the same." For the first analysis, the variable is a binary variable, coded as 0 if the respondent or their partner earned more, and 1 if the respondent answered "we earned about the same."

For the second analysis of heterosexual couples, the equal earnings variable is coded depending on the sex of the respondent and the sex of the partner. For instance, if the respondent is female and answers "my partner earned more," then this entry is coded as "male partner earned more." We end up with three categories for heterosexual couples: 1. Equal earnings; 2. Male partner earned more; 3. Female partner earned more.

Same sex couple

This variable is dichotomous, coded as 1 if the respondent is in a same-sex relationship, and coded as 0 if the respondent is in a heterosexual relationship. Values for this variable come from the survey questions, "Is [partner_name] the same gender as you?" And "Are you yourself gay, lesbian, or bisexual?"

Respondent years of education

This variable is constructed based on the following coding scheme:

Previous Category	Constructed Value	Previous Category	Constructed Value
None or preschool	0	12^{th} grade, no diploma	12
Grades 1, 2, 3, or 4	2.5	High school diploma or equivalent	12
Grades 5 or 6	5.5	Some college, no degree	13
Grades 7 or 8	7.5	Associate's Degree	14
Grade 9	9	Bachelor's Degree	16
Grade 10	10	Master's Degree	17
Grade 11	11	Doctoral Degree	20

Employment status

This is a dichotomous variable. Employment status =0 if the respondent is working (as a paid employee or self-employed) at the time of the interview. Employment status =1 if the respondent is retired, not working (on layoff), not working (looking for work), not working (disabled), or not

working (other reason).

Race
This four-category variable is constructed from the question, "which race do you most identify as?" The options included non-Hispanic white, non-Hispanic black, non-Hispanic American Indian, non-Hispanic Asian or Pacific Islander, non-Hispanic other, or Hispanic. I grouped NH-American Indian, NH-Asian or Pacific Islander, and NH-other into one "other" category. The remaining three categories were kept unchanged.

Religion
Respondents were asked, "What is your religion?" Responses were coded as follows:
Christian: Baptist, Protestant, Catholic, Mormon, Pentecostal, Eastern Orthodox, other Christian
Non-Christian: Jewish, Muslim, Hindu, Buddhist, Other non-Christian
No Religion: None.

Political Party
Political party is derived from the respondents' self-identified political party. Options given were Republican, Democrat, Independent, and Other. I combined the independent and other categories.

Age
A time-varying covariate, coded as the respondent's age at the time of the survey.

Age difference between partners
The age difference between partners is coded as the absolute value of the respondent's age – the partner's age.

Education difference between partners
Respondent and partners' years of education were coded as described above in the "Respondent years of education" variable. The absolute value of the difference in these numbers serves as the value for this variable.

Married or Domestic Partnership
Respondents were asked, "Are you married?" This variable =1 if couple is married. Additionally, respondents were asked, "Do you and [Partner_name] have a Domestic Partnership or Civil Union?" My variable =1 if responses were yes to either of these. The variable =0 if the couple is unmarried and does not have a domestic partnership nor a civil union.

If the couple reports, in Wave III, that they are currently married, this implies that they did not experience a breakup during Wave III. Thus, this variable is lagged by one wave. For Wave I and II, the variable is the marital/domestic partnership status as given in Wave I. For Wave III, the variable is the marital/domestic partnership status as given in Wave II.

Length of Relationship
This variable is pre-constructed in the HCMST dataset. It is the relationship duration, in years, based on the respondent's age, the question "how old were you when your romantic relationship

with [partner_name] began," and the question "how long have you been in a romantic relationship with [partner_name]?"

Household income
Respondents were asked to choose their household income from given ranges. The options given were:
less than $5,000
$5,000 to $7,499
$7,500 to $9,999
$10,000 to $12,499
$12,500 to $14,999
$15,000 to $19,999
$20,000 to $24,999
$25,000 to $29,999
$30,000 to $34,999
$35,000 to $39,999
$40,000 to $49,999
$50,000 to $59,999
$60,000 to $74,999
$75,000 to $84,999
$85,000 to $99,999
$100,000 to $124,999
$125,000 to $149,999
$150,000 to $174,999
$175,000 or more

This variable was recoded as the median value in the "bucket." For example, "less than $5000" is coded as $2500. The top-coded value is coded as $200,000.

Number of children
The survey asked respondents about the number of children in the household ages younger than 2, 2-5, 6-12, and 13-17. The variable is the sum of these responses.

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