

**QUALITY TIME: THE IMPACT OF CUSTODY ARRANGEMENTS ON FATHER'S
TIME USE**

by

Sano Nagai

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Department of Economics
University of Virginia
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Advisor: Leora Friedberg

ABSTRACT

This paper evaluates the time married fathers spend with their own household children as a function of on the average custody arrangements awarded in their state. Do fathers who live in states where they expect to gain “more custody” spend more time with their children as an investment ex-ante divorce, as they can remain a part of the child’s life and see the returns to their investment? Using education as a proxy for divorce risk, I examine the differences in how much time educated and non-educated fathers within the same state spend with their children, and determine if this differs across states given that the average custody arrangements awarded vary significantly – some states only offer about 20% of time to the father, while others award equal parenting or 50% for both spouses. I use data from the American Time Use Survey as well as CustodyXChange to test the hypothesis. Ultimately, I find that there is no significant effect of the child custody laws on time use before divorce. However, as equal parenting laws gain popularity, it is necessary to continue research on their long-term effects.

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I. INTRODUCTION

In the aftermath of the surge of divorce rates in the 1970s, there have been a plethora of studies on the effects of divorce. However, this paper addresses the void in divorce literature concerning child custody laws. Further, how do family laws including child custody affect the behavior of parents within the family *ex ante* divorce? This paper addresses this topic from the perspective of fathers and their investment in their children.

While traditionally, mothers have been stereotyped as the primary caregiver, there is evidence that fathers are increasing their presence in the household and decision making of their children (Parker and Livingston 2018). Within married households in the United States, *both* spouses are investing more in the quality of children (Sayer et. al. 2004), and both monetary and physical (time) investments have increased over time (Guryan et. al.).

However, while parents invest time and money in their children, there is uncertainty of whether or not their marriage will last. With a divorce also comes a negotiation of child custody, which is an arduous legal battle partly over what can be classified as the ‘returns to investment’ in the child during the marriage. As the returns on education and human capital have increased over time, it is clear that investing in a child has great benefits. These returns can include the child’s support of the parent after they have grown either financially or through eldercare, the parent’s utility gained from the child’s success, as well as utility from the children’s love and affection. Given that the returns can be quite high, it is logical to assume that a parent who values the child seeks to have custody in the case of divorce.

After reviewing a few state statutes I have found that currently, most state statutes consider the following in determining a custody arrangement: the relationship of the child with the parent, the ability of the parent to provide adequate food, clothing, and medical care, the

ability of the parent to meet the child's present and future developmental needs, and the quality of the child's current adjustment to their surroundings (housing, school, community) and the potential effect of any change (Figure 1; Vermont state law). The emphasis on the child's relationship with the parent as well as their ability to continue communicating with and providing the child with "love, affection, and guidance" creates an incentive for parents to invest in their child in their marriage in order to be considered for custody in the case of divorce.

While the laws themselves offer similar guidelines across the states, the realization of these statutes varies in terms of the actual awarded custody arrangements. Some states award on average equal joint custody defined as a 50-50 split between the mother and father, but others are less favorable towards the father, granting on average close to only 20% of custody to the father (Figure 2). For the purposes of this paper, I use the average custody arrangements awarded to be an estimate for what fathers in marriage can expect about how much custody they would gain in the case of divorce.

When examining whether or not these state differences in average custody arrangements would change the time use of fathers, it is logical to assume that an individual who is less concerned about their marriage or not at risk of divorce will be less affected. In order to account for this, I use education level as a proxy for divorce risk – there is evidence that both males and females (conditional on having been married) have higher divorce rates at higher education levels. The most pronounced effect is seen in the cutoff of whether or not the individual has an education level of at least a bachelor's degree.

Given the above variation between states in the average awarded custody arrangements as well as the variation in divorce risk by education level, I aim to analyze what the effects of the variation of custody arrangements are. Through interacting education and custody, I first

examine the difference in how much time is spent with children between fathers who are more educated and less educated, and then second, whether or not this difference varies across states.

I use data from the American Time Use Survey, which is administered by the Bureau of Labor Statistics and the U.S. Census Bureau, containing time use data (in minutes) of respondents regarding their activities, as well as CustodyXChange, which contains information on the average child custody time that fathers are awarded in each state. With the above, I test the hypothesis: Do fathers who live in states where they expect to gain “more custody” as defined at various cutoff points spend more time with their children as an investment ex-ante divorce, as they can remain a part of the child’s life and see the returns to their investment?

The findings are not statistically significant, and I am unable to reject the null hypothesis that the custody arrangements interacted with education will not change the time fathers spend with own household children. The results confirm that educated fathers spend more time with their children on average, when considering the total amount of time that they spend with their child, but there is no difference across states with differing custody arrangements. This result is robust when accounting for multiple cutoff points for education levels, as well as exploring custody as a binary variable (having a cutoff of “more” vs. “less” custody). Further, the results confirm that fathers spend more time with their children when they have more children, and when their children are younger.

II. BACKGROUND

Divorce in the U.S.

As the returns on education and human capital have increased over time, it is clear that investing in a child has great benefits. If we assume that the child’s well-being enters the utility

function of the parent, we can conclude that a parent benefits from their child's performance in the future, which is itself a function that includes the parents' investment in the child.

Economists have long considered children as an investment for parents, and there is evidence that both monetary and physical (time) investments have increased over time (Guryan et. al.).

However, another trend in the past few decades includes the rise of divorce in the 1970s. One of the possible explanations for this trend is the introduction of unilateral divorce laws beginning during this time. While states historically required mutual consent divorce in the absence of fault, many abandoned this requirement to favor one spouse's desire to divorce (unilateral divorce). This wave of reform to family law increased the divorce rate permanently (Friedberg 1998). While the trend flattened out in the mid 1980s to early 1990s, divorce remains common in the United States, and along with it many studies on the effects of divorce. There is evidence that couples and their children are impacted negatively in terms of well-being by divorce (Amato 2000). In addition, divorce has negative welfare effects on the child in terms of development (Kim 2011) and mental health (Cherlin et. al. 1998). This may be because upon divorce, a child who was previously in a home with both parents will have to adjust to a custody schedule where their time may be split between their parents (joint custody) or only one (sole custody). When looking at child custody in terms of investments, the parents of the child must win custody of the child in order to gain from the returns to their investment, so to speak.

Child custody over time

Child custody can be divided into two components: physical and legal custody. Physical custody refers to the home that the child will reside in after the divorce. If a mother has primary physical custody, and the father has visitation time, then the child will primarily live at their

mother's home, but the father may be involved in the child's upbringing as a part of the time spent together. In contrast, legal custody refers to the legal decision-making power of a parent. These decisions can include those about the child's education and health care. The difference between the two is negligible for the purposes of this paper. I assume that the returns that the father will gain from his time invested in the child does not depend on the formality of physical or legal custody, and depends on the amount of time they are able to spend with the child after divorce. In other words, the relationship between the father and child (the "return") is dependent on the physical time they spend with their child (which can be in the form of either visitation time or physical custody).

Historically, child custody laws, as a part of family laws, have been decided by states and therefore there exists some variation in the statutes. From the 1870s, the "Tender Years Doctrine" dominated nationally as a presumption in favor of the mother having sole custody of a child in the case of divorce. However, as divorce became more common and there was increasing evidence that presence of both parents is beneficial for the child (Brown 2010; Riber 2015), a wave of reforms pushed for more equal parenting. In the 1970s, joint custody became the standard across states, moving away from a clear preference towards the mother only (Figure 3; Rohde 2016). State courts now consider a variety of factors including those mentioned earlier (relationship with children, ability to provide for well-being, etc.) in order to determine a custody schedule – where one parent could have primary custody, or both could have equal custody - that is in "the best interest of the child." The Uniform Child Custody Jurisdiction and Enforcement Act of 1997 also created restrictions and requirements for statutes to be similar in considering joint custody, with the purpose of making it easier to enforce custody arrangements nationally (for example, in the event that one of the parents moved residences into another state).

Education as a divorce risk

In examining child custody laws which apply only ex post divorce to couples who *do* get divorced, it is necessary to separate the effects of these laws on couples who are *more likely* to get divorced ex ante as opposed to those couples for which the laws may have no effect. The reasoning is that couples who are at a higher risk of divorce may inform themselves more about child custody laws or be in the presence of other couples that have experienced divorce, thus having some knowledge of the ‘status quo’ in terms of child custody in their surroundings. In order to separate couples who are more likely to be divorced than others, we will take advantage of the evidence that couples who are more educated are less likely to get divorced (Figure 4; Härkönen and Dronkers 2006; Boertien and Härkönen 2014; Cheng 2016). According to the Bureau of Labor Statistics and the National Longitudinal Survey of Youth 1979 (Figure 5), at age 46, conditional on having been married, women with at least a bachelor’s degree are 13.7% less likely to have ever been divorced compared to their counterparts with a high school diploma - this differential is 25.3% for men. While the amount of time that educated couples spend with their children can differ systematically from less educated couples, having a greater share of more educated individuals (or vice versa) is assumed to be negligible in terms of impact on custody laws. This allows us to use education as an instrument in examining how custody arrangements by state can affect different couples within a state.

III. THEORY

Children in the utility function of parents

When considering the decision making of parents, it is helpful to model their choices formally. I will employ the Rasul (2006) approach of modeling two decisions that couples make within marriage: how much to invest in child quality, and how to allocate child custody in the case of divorce. Rasul takes a novel approach by examining what the best child custody arrangement would be to maximize the child's welfare, and argues for the benefits of choosing such a custody arrangement prior to divorce (i.e. in marriage). While realistically, most couples negotiate over and determine custody only in the event of divorce, it is helpful to examine the Rasul model in terms of household decision making.

Child quality is defined as a household public good (neither spouse can exclude the other, and is non-rival in that child quality is not limited). Rasul makes the assumption that both parents have independent valuations of the child quality, but the share of the good (the child's time, for example, or the outcome of the child as affecting the parent) is affected by custody. Therefore, the custody arrangements influence the investment within marriage. Below are the models:

$$\text{(Equation 1)} \quad u_i^m = v_i + x_i + \theta_i u(q)$$

The utility of an individual i within marriage depends on both the value of the marriage to them (v) and the value of the child (x), as well as the utility they gain from the quality of the child (q) being greater, as characterized by how much they value child quality (θ). This then changes in divorce:

$$\text{(Equation 2)} \quad u_i^d = y_i + \theta_i u(q, \lambda) - pq_i - \frac{1}{2}c$$

Now, the value of marriage (v) is gone, and the budget constraint dependent on income (y) and the cost of investing in the child (pq) is introduced such that $y_i - pq_i = x_i - \frac{1}{2}c$. The cost of the divorce (c) is presumed to be split equally by both spouses, and the utility gained from the quality of the child now depends not only on the parameter θ which indicates the

individual's value of quality, but also on the share of custody they receive (λ) which determines the utility they are able to extract in the first place. λ is representative of the time that the individual can spend with their child after divorce, which affects how much of the return on investment that the individual can gain.

Rasul's model concludes that if valuations of child quality are similar between the spouses, then the share of custody for each should be closer to equal, with the higher-valuation spouse gaining the majority custodial share. I extend this result to examine how individuals choose to invest in their children during marriage, given that they do value their child and the child quality at least as much as the other spouse, and that custody is negotiable ex post (in divorce). This is helpful in thinking about why parents would choose to invest more or less in their children when they know what the allocation of child custody is on average in their state.

There are further theories explaining why parents may invest more time in their children, given the risk of divorce. They do not formally model what the economic decision-making process may be, but discuss the different approaches that may be taken. Most notable are the monitoring and bonding theories (Brinig and Buckley, 1998) which emerged in the context of joint-custody. Monitoring theory predicts that parents will invest more in children if they have a greater chance to have custody after divorce, because they have an incentive to see the outcome of their investments. In addition, bonding theory predicts more investment in the likelihood of gaining custody due to the incentive to create a bond with the child while in marriage, because the (emotional) bond is less likely to be severed (when considering sole and joint custody). I will consider both theories as explanations as to why fathers in states with more generous custody arrangements may choose to invest more in their children, in terms of time spent with them, ex ante.

IV. DATA

ATUS Data

In order to determine the time use of the father, this paper examines survey responses of the American Time Use Survey (ATUS). The ATUS is administered by the Bureau of Labor Statistics and the U.S. Census Bureau, and began in 2003. Individuals are randomly selected from households which have completed up to their final month of interviews for the Current Population Survey (CPS). Respondents are interviewed about the time spent on the previous day, including where they were and whom they were with. This includes delineation between market and non-market time use, namely hours of work and leisure, or care for family members (elderly, children, etc.). The data set includes demographic information such as sex, race, age, educational attainment, income, marital status, and the presence of children in the household (both own and non-own). Specifically, this paper examines aggregated data from 2003-2017. There have been no significant policy changes directly regarding child custody or divorce within this time frame, allowing us to choose this time frame as suitable for analysis.

For the purposes of analysis, I merged the Respondent file, Roster file, and CPS files. The Respondent file includes information on aggregated time use data for the one household representative that was the respondent – for example, how much time (in minutes) was spent providing secondary childcare for a household child under 13 years of age. The Roster file includes the age, sex, and relationship to the respondent of every household member recorded. The CPS file provides further information such as education level, marital status, race, and income, which are necessary as control variables in the regression model. The three files are able to be linked by the ID assigned to each respondent.

From the above data, this paper utilizes a subset of male respondents who are married with children, or a sample of 28,344 observations. Further, families who have one or both of the spouses being in the armed forces were excluded due to their time use with their families differing from civilians (who make up more of the population). Respondents reporting ages above the third quartile of age 46 were excluded as well, as older fathers may have differing household circumstances than the average population. Therefore, older fathers may have different time use patterns in their daily lives, which include their time spent with their children. This reduces the sample size to 18,526. Finally, families with more than four children were excluded, as the average American family has two children (under the age of 18). Families with more children are likely to have different time use patterns, as more children could lead to more time spent with the children due to the greater supply of childcare necessary. Another subgroup of the population that was excluded is respondents who reported having a disability regarding eyesight, hearing, physical mobility, and memory/mental. These individuals were excluded from the sample because disabilities are likely to be correlated with different time use patterns than individuals without disabilities, including how much childcare and what kind can be provided by the respondent. This further shrank the sample, as disability information was collected in the ATUS-CPS only after 2008 (HRYEAR4=2008), leading to a time range of 2008 to 2017. The final sample consists of non-disabled men aged 18 to 46 who have between one and three own children in their household under 18, resulting in a sample size of 8,900 respondents.

As expected in a sample of the U.S. population, the race statistics (black is defined as anyone that reports they are black and any other race) show that the sample is predominantly white. Further, the breakdown of education levels indicates that most of the sample has completed at least some college, which is consistent with trends of educational attainment

between 2008 and 2017 (Census Bureau). The age of the respondents is categorized later in the following way: 20 and under, 21-30, 31-40, 41-46. This is in order to examine effects by age level rather than by a continuum, with the concern that the father's age may affect time use nonlinearly.

SUMMARY STATISTICS FOR SAMPLE

<i>Age</i>	
Mean	37.26
Median	38.0
 <i>Race (number of respondents)</i>	
White	7697
Black	450
Other	753
 <i>Education (highest level reported, number of respondents)</i>	
Less than high school	618
High school	1873
Some college (including associate's degree)	2241
Bachelor's degree	2528
Above bachelor (masters, professional school, doctoral)	1640
 <i>Number of children (in the household)</i>	
Mean	1.88
Median	2.0
 <i>Age of youngest child (in the household)</i>	
Mean	5.17
Median	4.0
 Observations	 8900

The outcome variable of interest is the amount of non-work related time that is spent with an own household child under the age of 18. This examined with a more specific break down of two variables: total time spent with an own household child (TRTOHHCHILD) and time spent

providing secondary childcare to an own household child under the age of 13 (TRTOHH). The sample population shows that the mean amount of time spent (in total with an own household child) is about 336.7 minutes, or roughly 5.6 hours. However, the median is 275.0 minutes (4.6 hours) which indicates that the distribution is skewed with outliers at the higher end of the responses. In fact, the maximum was 1364.0 minutes (22.7 hours). The mean for secondary childcare specifically, is 308.8 minutes (5 hours), with a median of 230.0 minutes (3.8 hours). Again, the distribution is skewed towards the higher end, with a maximum of 1170.0 minutes, or 19.5 hours. In order to normalize the distribution of the outcome variables, I took the natural log of both the total time spent with an own household child, as well as the time spent providing secondary childcare to an own household child. While this required the 0.0 minutes responses to be transformed to be one minute, I find this one minute change to be negligible in analyzing the sensitivity of father's time use in response to custody.

Information on State Custody Laws

To examine the state variation in custody arrangements awarded, this paper uses data from CustodyXChange. CustodyXChange is a for-profit software designed for custody scheduling of divorced couples. The software computes a time schedule for parents based upon their needs and provides services such as creating calendars calculating percentages of time spent in either spouses' care. Their software was used in their 2018 study compiling a state by state comparison of the average custody time awarded to non-custodial fathers upon divorce, by percentage (with 100% meaning sole custody for the father). Although the data was collected in 2018, I assume that the information is valid and constant for the years included in this study (2008 to 2017). "Non-custodial father" refers to a father who does not have primary physical

custody. The data is unclear as to whether or not they have a portion of legal custody. For the purposes of this paper, the difference is negligible: the time a father is able to spend with their child (regardless of whether or not they have primary physical custody) is what is being considered in terms of their investment decisions. If a father knows that they will spend time with the child after divorce and influence them for later returns, they may work harder to increase a bond while in marriage.

To obtain the most standard schedules across states, CustodyXChange examined either the most populous county in each state, or a county confirmed to have a schedule that is used for multiple counties. The data relies on professional legal opinions (including bar associations, family law attorneys, county courts, etc.) on what is common as well as published standards, and does not account for individual cases. Therefore, there is a concern that this data on the actual awards reflects decisions of how much time that fathers invest in their families prior to divorce, which is then incorporated into the judges' decisions of custody awards. The study assumes that parents have only one child between the ages of 6 and 11, as children younger than three are rarely under 50/50 custody, and children in their mid-teens have their preferences accounted for in court. Further, the study assumes that the parents are able to reasonably commute from one another, and do not have extenuating conditions that could otherwise prohibit an equal split (such as a criminal history). The data reflects a range from 21.8% to 50%, suggesting that the state of residence significantly impacts the amount of time the father will spend with their child, as well as their decision making in their child's life after divorce.

I will explore what the cutoff percentage of time that the father is awarded to spend with their child after divorce is in terms of how it affects their decisions prior to divorce: Is the possibility of equal custody (50%) what matters most? Or is it the median cutoff of 0.31 (31%)?

V. EMPIRICAL METHODS

Using a difference in difference approach, I examine how (1) fathers spend time with their children conditional on them being at risk of divorce (represented by the education variable, *edu*), and how (2) this gap (if any) differs conditional on the fathers knowing they could gain more after divorce (represented by the generosity of custody variable, *custodygen*).

Given the above, I estimate the following regression for an individual father *i* living in state *s*:

$$Y_{i,e,s,t} = \beta_0 + \beta_1 edu_{e,i,t} + \beta_2 custodygen_s + \beta_3 (edu_{e,i,t} * custodygen_s) + \delta X_{i,e,s,t} + \eta Z_{s,t} + \theta year_t + \varepsilon_{i,e,s,t}$$

Y is the time a father spends with their child in a day, measured in minutes. This is examined in terms of primary and secondary childcare, and a total of the two. Education groups represented in the *edu* variable account for the risk of divorce for the father. The generosity of the state's average custody arrangements is represented by the *custodygen* variable, which I will explore as both a continuum (percentages up to 50%), and different cutoffs as binary variables (above or below median, 50% or below). This is in order to account for the factors which may be contributing to the differences in the average custody arrangements reflected in the CustodyXChange data (such as considerations of the father not wanting to battle for custody, or for certain social norms being observed by state, etc.) These are potential confounders in the regression because social norms that differ by state, which may include how fathers spend their time, can systematically affect the custody arrangements that are awarded. By exploiting education differences across the respondents within states, I hope to minimize those effects.

For the above regression, when the cutoff is 50%, $custodygen = 1$ for the “generous” states which are states that have father’s custody at 50%, and $custodygen = 0$ for states with percentages lower than 50%. The coefficient of interest is β_3 , the interaction effect of education (examined both at the granular level ranging from less than high school to graduate degrees, as well as a binary cutoff of bachelor’s degrees and above) and the average custody arrangement awarded by state ($edu_{e,i,t} * custodygen_s$). I hypothesize that this will be positive: fathers who are at risk of divorce and are also more likely to gain custody after divorce will spend more time with their child while in marriage, in order to create a bond for the greater returns that are more likely in the future.

X includes individual level variables to control for factors that may affect the time use of the father. The father’s age could affect time use, as individuals who are at an age where their career may be more demanding may spend less time at home with their family and more time at work. In addition, the number of children in the household and the age of the youngest child affect how much time the father spends with his children – in household where there are more children, one of the spouses may spend more of their time being a primary caretaker while the other works, and similarly households with younger children may have the same division of childcare. I examine a cutoff of fathers who have children under and including the age of three, as these children require more supervision and therefore could lead to more time spent with parents. Similarly, whether or not the father is employed also changes their time spent outside of the home/family. However, because employment and family income is correlated with education and could also signify parenting qualities (for example, fathers who have high incomes or are working may spend less or more time with their children regardless of whether or not they had the high income/job), I examine the sensitivity of the outcome variable to these individual

variables by including or excluding them. I also include state level dummy variables to account for state fixed effects, as well as year (time) effects.

Because there is a concern of regional effects upon reviewing the average custody arrangements awarded in neighboring states, I try including fixed effects for geographic regions of the respondent’s residence as defined by the ATUS as a control variable.

Table: Regions as defined by the ATUS

Region	States
Northeast	CT, MA, ME, NH, NJ, NY, PA, RI, and VT
Midwest	IA, IL, IN, KS, MI, MN, MO, ND, NE, OH, SD, and WI
South	AL, AR, DC, DE, FL, GA, KY, LA, MD, MS, NC, OK, SC, TN, TX, VA, and WV
West	AK, AZ, CA, CO, HI, ID, MT, NM, NV, OR, UT, WA, and WY

A key identification assumption to be made is that education level of an individual is not correlated with the custody awarded in the state of residence. However, a question of concern is whether or not states with a greater share of educated couples (couples at a higher risk of divorce) have custody arrangements that are systematically updated. In other words, does having a greater share of more educated fathers in relation to less educated fathers cause a different investment of time in children and therefore a difference in what custody schedules are awarded?

VI. RESULTS

Education as a confounder?

In order to first address the above concern of whether or not custody arrangements are systematically related to the share of more educated vs. less educated fathers, I grouped together states with similar balances or shares of the education level: As seen in the table below, states with similar shares of more educated fathers (bachelors and above) relative to less educated

(some college and below) have varying corresponding average custody arrangements (color blocked for grouping). For example, states with education ratios of 0.83, 0.84, and 0.85 show variance in custody ranging from 0.27 to 0.5. This indicates that the confounding effects of education is of less concern.

Table: average custody arrangements and share of respondents by state who reported education levels above a bachelor's degree relative to respondents with education levels below that cutoff.

State	Share of educated (bachelor's degree and higher) relative to less educated (less than a bachelor's degree)	Custody (father)
West Virginia	0.32	0.50
Nevada	0.43	0.50
New Mexico	0.47	0.50
Idaho	0.50	0.24
Wyoming	0.50	0.29
Arkansas	0.51	0.28
Mississippi	0.59	0.23
Rhode Island	0.59	0.24
Oklahoma	0.61	0.22
South Carolina	0.64	0.28
Iowa	0.65	0.28
Indiana	0.65	0.29
Texas	0.69	0.33
Missouri	0.69	0.50
Louisiana	0.70	0.25
Kentucky	0.70	0.50
Maine	0.72	0.50
Ohio	0.73	0.24
Tennessee	0.74	0.22
Oregon	0.74	0.29
Wisconsin	0.75	0.50
Utah	0.76	0.26

Alabama	0.78	0.34
Florida	0.78	0.50
Arizona	0.79	0.50
Michigan	0.83	0.27
California	0.84	0.33
Delaware	0.84	0.50
Hawaii	0.85	0.31
Alaska	0.85	0.50
Nebraska	0.86	0.33
Georgia	0.93	0.24
Minnesota	0.97	0.50
Washington	0.98	0.24
Illinois	1.00	0.23
Vermont	1.00	0.50
Pennsylvania	1.05	0.29
Montana	1.07	0.26
North Carolina	1.13	0.28
North Dakota	1.14	0.50
New Hampshire	1.15	0.50
Colorado	1.17	0.50
New York	1.18	0.30
Virginia	1.18	0.50
Maryland	1.34	0.26
New Jersey	1.36	0.50
South Dakota	1.40	0.24
Kansas	1.40	0.26
Connecticut	1.7	0.50
Massachusetts	1.81	0.50

Regression results

The regression results demonstrate that there are no significant effects of the interaction of custody examined at the 50% cutoff level and education levels (of bachelor's degree and above) on the total time that fathers spent with their own household children (Model 1). This result is robust even when accounting for more granular education levels of less than high school, high school, some college, bachelors, and above bachelors – interacted with the linear custody variable (Model 2). Further, there were no significant effects found when I instead use as the dependent variable time spent providing secondary childcare for an own household child. The interaction of the binary cutoffs “more educated” (as defined by above a bachelor's degree) and “more custody” (as defined by 50% custody time for the father) resulted in a coefficient of magnitude 0.08 for total time spent, and 0.39 for time spent providing secondary childcare (Model 3). This indicates that, for fathers with at least a bachelor's degree living in states with a 50% custody allocation, they spend 8% more time in total with their own household children, and 39% more time providing secondary childcare for their own household children relative to fathers who are not living in states with a 50% custody allocation. This is consistent with the hypothesis but is not significant.

Similarly, when examining the five levels of education interacted with the continuum of custody arrangements, the results show an increase from 0.35 for *high school*custody* to 0.90 for *bachelor's*custody* but then drops to 0.80 for *above bachelor's*custody* (Model 2) relative to the omitted category of *less than high school*custody*. (For Model 4 examining secondary childcare time, the same trend is seen from 0.61 to 1.09, with a drop to 0.86 for above bachelor's). While these magnitudes are not significant, it is consistent with the hypothesis that more educated fathers may spend more time with their children in marriage in states with an average of more

custody time awarded to the father post-divorce, as the jump from high school to some college when interacted with custody shows an increase more than twice as large in magnitude.

The most sensitive variables were the dummy variables for “more education” as defined by a bachelor’s degree or higher, and whether or not the household’s youngest child was three or younger. The quantitative variables for number of children in the household and the age of the youngest child also remained significant throughout all analyses.

Additionally, the binary race variable for whether or not the respondent was black was also significant when considering total time spent with state effects, but this significance was eliminated when considering secondary childcare as an outcome.

REGRESSION TABLE 1

<i>Predictors</i>	Log(Total time)		Log(Time spent providing secondary childcare)	
	<i>Model 1</i>	<i>Model 2</i>	<i>Model 3</i>	<i>Model 4</i>
(Intercept)	4.14** (p<0.001)	8.28 (p=0.002)	9.14** (p=0.011)	9.15 (p=0.012)
High school		-0.17 (p=0.562)		-0.06 (p=0.874)
Some college		-0.26 (p=0.374)		-0.02 (p=0.959)
Bachelor’s degree		-0.11 (p=0.692)		0.17 (p=0.661)
Above bachelor’s degree		0.01 (p=0.987)		0.29 (p=0.478)
Custody		-12.22 (p=0.120)		-17.08 (p=0.112)
High school * Custody		0.35 (p=0.668)		0.61 (p=0.590)
Some college * Custody		0.85 (p=0.297)		0.72 (p=0.514)
Bachelor’s * Custody		0.90 (p=0.262)		1.09 (p=0.321)
Above bachelor’s * Custody		0.80 (p=0.335)		0.86 (p=0.451)
Bachelor’s degree and above	0.21** (p<0.001)		0.26 (p=0.128)	

50% custody	0.11 (p=0.571)		-16.72 (p=0.118)	
Bachelor's degree and above *	0.08 (p=0.329)		0.39 (p=0.407)	
50% custody	-0.36** (p<0.001)	-0.36** (p<0.001)	-0.09 (p=0.405)	-0.10 (p=0.365)
Black	0.02 (p=0.786)	0.01 (0.928)	0.14 (p=0.114)	0.13 (p=0.143)
Other	0.32 (p=0.32)	0.31 (0.548)	-0.12 (p=0.861)	-0.16 (p=0.814)
Age 21-30	0.36 (p=0.480)	0.34 (0.506)	-0.23 (p=0.747)	-0.28 (p=0.693)
Age 31-40	0.22 (p=0.662)	0.20 (0.693)	-0.78 (p=0.267)	-0.83 (p=0.236)
Age 41-46	0.21** (p<0.001)	0.21** (p<0.001)	0.50** (p<0.001)	0.50** (p<0.001)
Number of children	0.33** (p<0.001)	0.32** (p<0.001)	0.36** (p<0.001)	0.35** (p<0.001)
Youngest child 3 and younger				
State fixed effects				
Year fixed effects				
Observations	8900	8900		
R ² / adjusted R ²	0.036 / 0.029	0.037 / 0.029	0.058 / 0.051	0.059 / 0.051

The custody levels examined both at the “equal parenting” level of 0.5 and at the median level did not significantly affect the outcome. When the cutoff was the median level interacted with the binary education cutoff of bachelor’s degree or higher, the coefficient was slightly positive with a magnitude of 0.03 with a p level of 0.693 when considering total time spent, and a magnitude of 0.5 and p level of 0.595 for secondary childcare. In addition, when examining states at the regional level as defined by the ATUS the coefficient of the interaction variable was still unaffected (with any cut off of education and custody).

VII. CONCLUSION

The failure to reject the null hypothesis concludes that within this sample, the interaction effects of education and the average custody arrangement awarded in the state of the respondent

are negligible on the time that a father spends with an own household child while married. This finding could be explained in that fathers may not be aware of the custody arrangements in their state, and therefore do not change their behavior dependent on the probability that they will have more or less custody in the case of divorce. Further, if a father does not know what the average custody arrangements are in their state relative to other states, they may not believe that there is potential to “fight for more” or affect the custody arrangement by changing their behavior during marriage. While there are many ways to interpret why fathers do not change their time use patterns conditional on how much custody they expect to gain after divorce, Perhaps the return on investment is not what parents are thinking about when they are at risk of divorce, and the model of the parent’s investment should be revised.

As divorce remains a reality for many in the United States, it is important to measure the effects of laws governing the family even after separation. Parents within marriages are spending more time with their children, but a nationwide push for making equal custody the default or at least encourage the 50% split (Rosenblum, 2018) may be crucial for fathers to be able to spend time with their children after divorce. The long-term effects of the shift in child custody incorporating more equal parenting present an important area in future research.

FIGURES

Figure 1: Vermont statute on determining child custody based on “best interest of the child”

12/11/2010
VERMONT GENERAL ASSEMBLY

VERMONT LAWS

The Vermont Statutes Online

Title 15 : Domestic Relations

Chapter 011 : Annulment And Divorce

Subchapter 003A : Child Custody And Support

(Cite as: 15 V.S.A. § 665)

§ 665. Rights and responsibilities order; best interests of the child

(a) In an action under this chapter, the court shall make an order concerning parental rights and responsibilities of any minor child of the parties. The court may order parental rights and responsibilities to be divided or shared between the parents on such terms and conditions as serve the best interests of the child. When the parents cannot agree to divide or share parental rights and responsibilities, the court shall award parental rights and responsibilities primarily or solely to one parent.

(b) In making an order under this section, the court shall be guided by the best interests of the child and shall consider at least the following factors:

(1) the relationship of the child with each parent and the ability and disposition of each parent to provide the child with love, affection, and guidance;

(2) the ability and disposition of each parent to assure that the child receives adequate food, clothing, medical care, other material needs, and a safe environment;

(3) the ability and disposition of each parent to meet the child's present and future developmental needs;

(4) the quality of the child's adjustment to the child's present housing, school, and community and the potential effect of any change;

(5) the ability and disposition of each parent to foster a positive relationship and frequent and continuing contact with the other parent, including physical contact, except where contact will result in harm to the child or to a parent;

(6) the quality of the child's relationship with the primary care provider, if appropriate given the child's age and development;

(7) the relationship of the child with any other person who may significantly affect the child;

(8) the ability and disposition of the parents to communicate, cooperate with each other, and make joint decisions concerning the children where parental rights and responsibilities are to be shared or divided; and

(9) evidence of abuse, as defined in section 1101 of this title, and the impact of the abuse on the child and on the relationship between the child and the abusing parent.

Figure 2: Percentage of custody awarded to a father by state, on average (CustodyXChange)

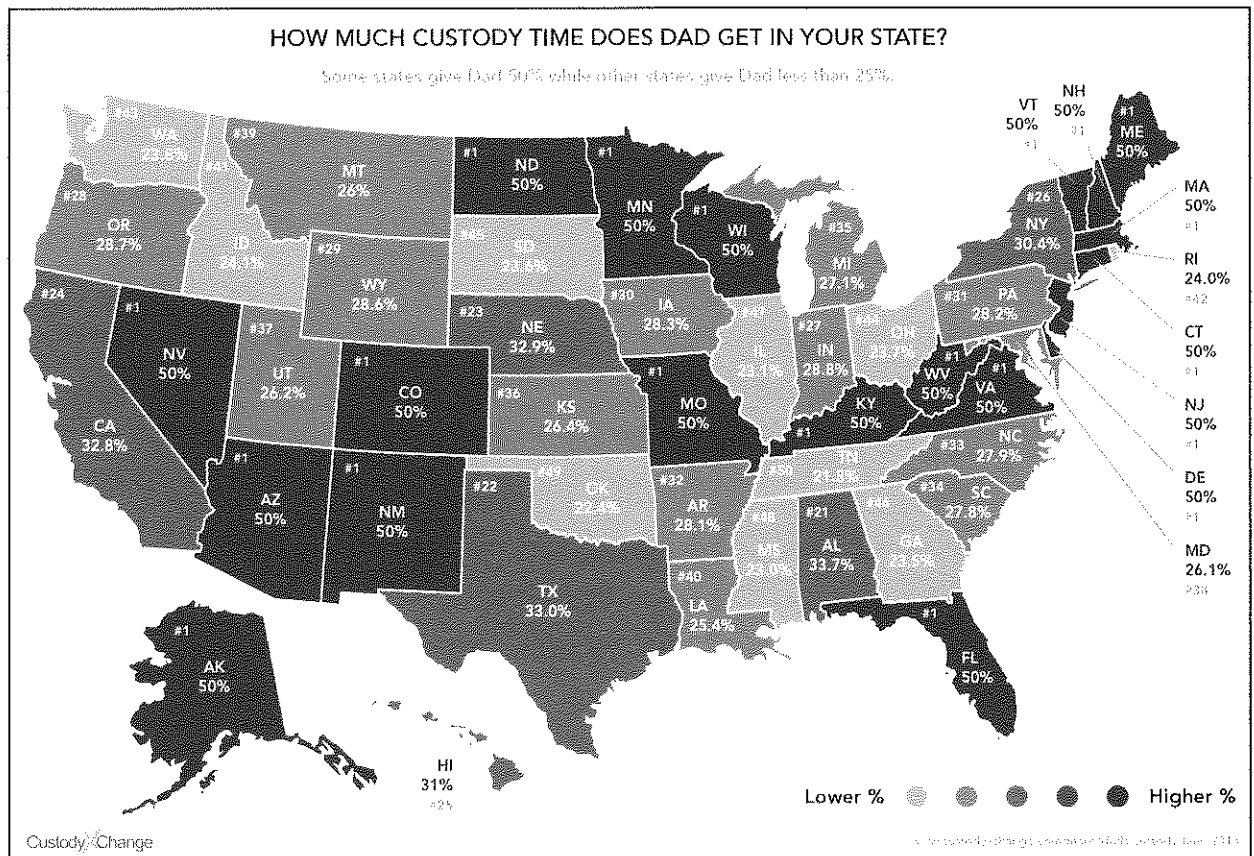


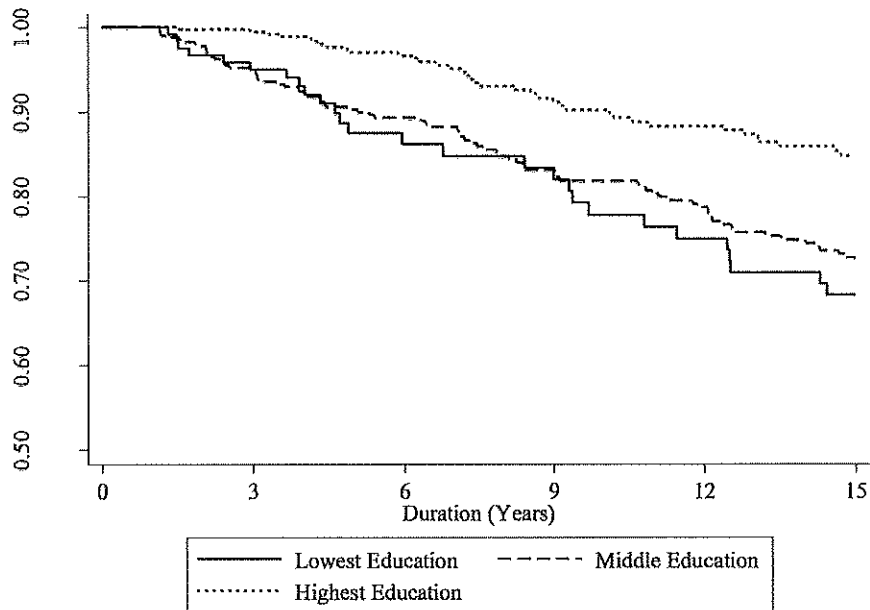
Figure 3: Custody and Divorce Regulation by State (Rohde 2016)

State	No-Fault Divorce Laws	Joint Custody Laws	State	No-Fault Divorce Laws	Joint Custody Laws
Alabama	1971	1997	Montana	1975	1981
Alaska	1935	1982	Nebraska	1972	1983
Arizona	1973	1991	Nevada	1973	1981
Arkansas	-	2003	New Hampshire	1971	1974
California	1970	1979	New Jersey	-	1981
Colorado	1971	1983	New Mexico	1973	1982
Connecticut	1973	1981	New York	-	1981
Delaware	-	1981	North Carolina	-	1979
District of Columbia	-	1996	North Dakota	1971	1993
Florida	1971	1979	Ohio	-	1981
Georgia	1973	1990	Oklahoma	1953	1990
Hawaii	1973	1980	Oregon	1973	1987
Idaho	1971	1982	Pennsylvania	-	1981
Illinois	-	1986	Rhode Island	1976	1992
Indiana	1973	1973	South Carolina	-	1996
Iowa	1970	1977	South Dakota	1985	1989
Kansas	1969	1979	Tennessee	-	1986
Kentucky	1972	1979	Texas	1974	1987
Louisiana	-	1981	Utah	-	1988
Maine	1973	1981	Vermont	-	1992
Maryland	-	1984	Virginia	-	1987
Massachusetts	1975	1983	Washington	1973	-
Michigan	1972	1981	West Virginia	-	-
Minnesota	1974	1981	Wisconsin	-	1979
Mississippi	-	1983	Wyoming	1977	1993
Missouri	-	1983			

Sources and Notes: Coding of the no-fault laws comes from Mechoulan (2006). Coding of the joint custody laws comes from Halla (2009), who updates the legislative details in Brinig and Buckley (1998).

Figure 4: Wife's Education and Divorce: Survival Curves

Conclusion that educated women have more stable marriages. The curves predict that after 15 years of marriage 32% of the low educated women had divorced, compared to 13% of those with high education.



SOURCE: Authors' calculations using the British Household Panel Survey (BHPS), 1996-2009.

NOTE: 1,887 marriages, and 9,130 person-years.

Figure 5: Marriage outcomes by age 46 by gender and educational attainment (NLSY 79)

Characteristic	Less than high school diploma	High school graduate, no college	Some college or associate's degree	Bachelor's degree or higher
Men				
Percent ever married	77.5	84.2	84.3	88.0
Percent ever divorced	44.4	41.2	39.5	20.9
Among those ever married, percent ever divorced	57.2	49.0	46.9	23.7
Among those ever married				
Average age at first marriage	24.3	24.8	25.5	27.2
Percent still in first marriage	41.4	50.0	52.0	75.1
Percent of first marriages ending in divorce	56.6	48.7	46.3	23.7
Among those who divorced				
Average duration of marriage (in years)	9.4	8.7	8.5	9.5

Women				
Percent ever married	86.2	90.3	89.6	89.9
Percent ever divorced	52.3	44.5	44.7	32.0
Among those ever married, percent ever divorced	60.6	49.3	49.9	35.6
Among those ever married				
Average age at first marriage	20.9	22.3	23.2	25.9
Percent still in first marriage	33.3	47.1	47.4	63.3
Percent of first marriages ending in divorce	59.9	47.6	49.3	35.4

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