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The Importance of Motherhood and Fertility Intentions among U.S. Women

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Abstract

Fertility intentions are associated with achieved fertility; therefore, understanding the factors associated with fertility intentions is important. Considerable research has examined factors associated with fertility intentions, but no one has explored the importance of motherhood to women. Guided by life course and identity theories, we use the National Survey of Fertility Barriers, a data set collected from a random sample of U.S. women aged 25–45 in 2004 through 2007, to assess the relationship between importance of motherhood and fertility intentions. Adding importance of motherhood to a model including other variables associated with fertility intentions increases the variance explained by 6.4 percent. Importance of a motherhood identity mediates the association of fertility intentions with such demographic and social correlates of fertility intentions as gender attitudes, valuing leisure, valuing career, religiosity, and family profertility messages. It is therefore helpful to explicitly include the importance of the motherhood identity in models of fertility intentions.

Keywords: fertility intentions, motherhood, identity, path model, attitudes

Introduction

In American society, the attainment of parenthood is central to many people's identities and, among parents, is usually their most central identity (Katz-Wise, Priess, and Hyde 2010). Few Americans want to or expect to be childless (Abma and Martinez 2006; Thornton and Young-DeMarco 2001). Most American women value motherhood highly (McQuillan et al. 2008), and many mothers consider having a child to be the most important marker in their transition to adulthood (Arnett 1998). Variations in the salience and importance of motherhood have been called upon to explain differences in the acceptance of the motherhood role (Nuttbrock and Freudeger 1991), spousal jealousy (Ellestad and Stets 1998), and maternal gatekeeping (Gaunt 2008), but we are not aware of any studies that examine the relationship be-

tween importance of motherhood and fertility intentions. It is valuable to understand attitudes associated with fertility intentions because fertility intentions are an important predictor of fertility behavior (Barber 2001; Morgan and Rackin 2010), particularly in societies like the United States where contraception is usually accessible and reliable (Hayford and Morgan 2008).

Our goal is to contribute to research seeking to understand differences in fertility intentions among American women. Life course theory and empirical evidence suggest that social cues such as getting married, number of children, or reaching a certain age should be associated with higher fertility intentions. Attitudes and value indicators, such as gender attitudes (Barber 2001) and religiosity (Hayford and Morgan 2008), are also associated with fertility intentions. Identity theory suggests that variations in embracing central identities—such as being a mother—should be related to fertility intentions as well (Stryker and Serpe 1994; Thoits 1991). We assess whether the identity measure “subjective importance of motherhood” is also associated with differences in fertility intentions among women after controlling for other common value measures. Using the population-based National Survey of Fertility Barriers (NSFB), a survey of U.S. women ages 25–45, we estimate a model of fertility intentions using life course, resource, and attitudinal variables suggested by current theories of fertility intentions. We measure fertility intentions with the question, “Do you intend to have a baby,” with a follow-up question asking how sure respondents are about their intentions. Guided by identity theory, we then extend the model by incorporating importance of motherhood—a measure of identity centrality—as a mediator between life course, resource, and attitudinal measures and fertility intentions. We assess the contributions of the importance of motherhood to a model of fertility intentions with all of the other independent variables included.

Literature Review

Fertility Intentions and Fertility Rates

In many countries, birthrates are declining to below replacement levels (Billari and Kohler 2004; Boling 2008), due in part due to more women postponing first births (Morgan and Hagewen 2005) and increasing rates of childlessness (Rowland 2007). In the United States, most women continue to desire at least two children (Hagewen and Morgan 2005), but there is considerable variation among women’s fertility intentions and ideals. More women than in the past desire no children or one child (Rowland 2007) at the same time that a fairly substantial proportion continues to desire three or more children (Hagewen and Morgan 2005).

Questions about fertility intentions are common in demographic surveys. Although fertility intentions do not provide consistent predictions of achieved fertility at either the individual or aggregate level (Quesnel-Vallee and Morgan 2003), intentions are significantly and consistently related to the odds of giving birth (Barber 2001; Schoen et al. 1999). In particular, women who say they do not expect to have a(nother) child are often accurate about their future fertility (Toulemon and Testa 2005). Although inaccuracies in predicting fertility outcomes from fertility intentions have led to questions about the utility of fertility intentions (Bongaarts 2001; Miller and Pasta 1995), the lack of a perfect correspondence does not mean that fertility intentions cannot be useful. Rather, the absence of perfect correspondence provides insights into various constraints on meeting fertility intentions as well as potential problems with the measurement of the intentions construct itself (Voas 2003).

Intentions of any sort require individuals to weigh and assess competing options and make a choice (Carmichael and Whittaker 2007). The choice of how many children to have is both highly dependent on situational and life course events and trajectories and constrained by biological limitations (Chandra et al. 2005), structural barriers (Sassler, Miller, and Favinger 2009),

and social norms (Booth 2010). Age, parity, partner preferences, employment status, and religiosity are all associated with fertility intentions (Hakim 2003; Hayford and Morgan 2008; Peristera and Kostaki 2007). Yet questions still remain about why some women have higher fertility intentions than other women.

Life Course Theory and Fertility Intentions

Life course theory (Elder, Johnson, and Crosnoe 2003; Macmillan and Copher 2005) provides a useful framework for explaining variation in fertility intentions. The emphasis on how life paths are constructed within the constraints and opportunities of both historical and biographical time leads to the development of models that include contextual, individual, and social factors affecting important life choices. Life course theory suggests that cultural schemas and social norms define appropriate behavior and thus influence life paths within the constraints of social structural contexts. American women have children, at least in part, because of normative social expectations that are triggered by social cues such as marriage, age, completing education, or buying a house (McMahon 1995). In the United States, social norms concerning the ideal number of children generally converge on two children. Most people view large families as undesirable, but childlessness and one-child families are also viewed as less than ideal (Hagewen and Morgan 2005; Thornton and Young-DeMarco 2001). There is general agreement that fertility intentions are often shaped in the context of couple relationships (Becker 1999; DeRose, Doodoo, and Patil 2002; Doodoo 1998; Miller, Severy, and Pasta 2004; Thomson 1997). David Voas (2003) proposes that, when partners disagree about fertility expectations, couples will have the number of children closest to the number set by community norms. Women who experience ambivalence about having children may also experience pressure from mothers and mothers-in-law to have children (McMahon 1995).

Fertility intentions often change with each child, leading some demographers to assert that fertility intentions are a “moving target” (Hayford 2009; Quesnel-Vallee and Morgan 2003). A quarter of women in the National Survey of Families and Households changed intentions between time 1 and time 2 (White and McQuillan 2006). These changes reflect differences in age-graded experiences. Younger women are more influenced by normative expectations and general preferences, while older women are more influenced by practical considerations and constraints of children (Hagewen and Morgan 2005). Fertility intentions also depend upon parity. The current trend toward delayed childbearing suggests the need to assess whether the effect of age on intentions differs by parity. In addition to age and parity, we look at relationship status, relationship satisfaction, and the presence of stepchildren as measures of triggers to intend to have or avoid having children (Myers 1997; Stewart 2002).

Attitudes, Values, and Fertility Intentions

Several studies show that attitudes and values are associated with fertility intentions. For example, higher religiosity is associated with higher fertility intentions (Hayford and Morgan 2008; Pearce 2002) and lower acceptance of childlessness (Koropecj-Cox and Pendell 2007a). Gender attitudes and seeing children as a source of social ties are also associated with fertility intentions (Kaufman 2000; Schoen et al. 1997). Women with more traditional gender attitudes have higher fertility intentions and earlier births than women with less traditional gender attitudes (Barber 2000). In addition, women with less traditional gender attitudes are more accepting of childlessness (Bulcroft and Teachman 2004; Koropecj-Cox and Pendell 2007b). These findings suggest that values should be associated with fertility expectations over and above the impact of life course norms and situational contingencies.

The idea that women who place a high value on leisure or career success should have lower fertility intentions is implied in some (e.g., Bongaarts 2001) and explicit in other (e.g., Bachrach and Morgan 2011) theories of fertility. Preference theory (Hakim 2003) and other ideology-based theories (Lesthaeghe and van de Kaa 1986) are quite explicit in stressing the importance of values for fertility intentions. Catherine Hakim (2003) suggests that, of the three groups of women she identifies (work-focused, home-focused, or combined focus), the work-focused should have the lowest fertility intentions. In the next section, we describe why it is valuable to explicitly measure importance of motherhood and to include this concept as a mediating factor in models of fertility intentions.

Identity Centrality and Fertility Intentions

Our goal here is to add a focus on identity to the more structural (i.e., life course) and cultural (i.e., values) approaches often used in studies of fertility intentions. Identity theorists conceptualize identities as internalized expectations connected to social roles (Stryker 1980). Identities are assumed to be structured hierarchically in terms of their relevance to self, expressed in terms of salience and centrality. The term salience refers to the readiness to act out an identity in a particular situation, and “centrality” refers to the importance of an identity in relation to other identities. It is theoretically useful to think of identity as a filter that influences the relevance of social expectations for individual experience (Stryker 1980). Just as stressors that are more identity-relevant are strongly associated with distress (Burke 1991; Thoits 1991), the identity-relevance of motherhood should filter the influence of life course messages and values on fertility intentions. Identity theory suggests that more salient and more central identities should guide intentions more than less salient and less central identities (Stryker 1980). We conceptualize importance of motherhood as a measure of centrality. Both salience and centrality have been predictors of role behavior in prior research (Stryker and Serpe 1994). If fundamental values about fertility are an important contributor to fertility intentions, then importance of motherhood should play a key role in explaining variation in fertility intentions.

It might appear at first glance that considering motherhood important would naturally result in higher fertility intentions, but this is not necessarily the case. First, some women who place high importance on motherhood may actually want fewer children (e.g., only one or two) to be able to provide intensive mothering (Hays 1996; Laree 2003). Second, it is unclear whether valuing motherhood or identifying with motherhood is actually associated with intending children; it could be that more practical situational factors (e.g., marital status, level of education, parity, age) or other values (e.g. valuing leisure, valuing career, religiosity) could explain fertility intentions independently of variability in the importance of motherhood. Finally, it is unclear whether factors that contribute to variation in fertility intentions are directly associated with fertility intentions or are indirectly associated through importance of motherhood. The question of whether and how variations in the importance of motherhood are associated with fertility intentions thus requires empirical investigation.

The importance of motherhood scale was developed by Julia McQuillan et al. (2008). The importance of motherhood varies considerably among American women. In an analysis of factors that predict variations in importance of motherhood, McQuillan et al. found that importance of motherhood varied little by such indicators of social class as education and economic hardship. They examined correlates of the importance of motherhood but did not examine the possible implications of these differences for fertility intentions. In this article, we examine data from a sample of U.S. women to answer two research questions:

Research Question 1: Does importance of motherhood contribute to the explained variance in fertility intentions after other variables commonly used to explain fertility intentions are controlled?

Research Question 2: Does importance of motherhood identity mediate the associations between life course measures (e.g., parity, relationship status), resource measures (e.g., education, income), and attitudes/values measures (e.g., religiosity, valuing career), on the one hand, and fertility intentions, on the other?

Life course theory implies that structural factors such as relationship status, parity, and age should directly influence fertility intentions. We expect that these same factors should influence the subjective measure of importance of motherhood implied by identity theory, which should, in turn, influence fertility intentions.

Data and Method

Sample

The NSFB is a national, population-based, random-digit-dialing (RDD) telephone survey designed to assess social and health factors related to reproductive choices and fertility among U.S. women (Johnson et al. 2009). The response rate for the participants answering the screening questions using the American Association of Public Opinion response rate number 4 calculation is 53 percent, typical for contemporary RDD surveys (McCarty et al. 2006). Scott Keener et al. (2006) demonstrate that surveys with modest response rates can still have minimal bias. Indeed the NSFB is similar to Current Population Survey data with regard to such demographic characteristics as education and race/ethnicity.

The full sample includes completed interviews with 4,794 women aged 25 to 45 in the United States collected between September 2004 and January 2007. There is an oversample of women from racial/ethnic minority groups, women who have experienced infertility, and women who are at higher risk for experiencing infertility; we therefore weight the sample to provide proportional representation.

The survey used a “planned missing” design to efficiently incorporate all necessary measures and minimize respondent burden. To execute this design, the interview software was programed to randomly select two-thirds of the items for each scale to give to each person. Because the scales were highly reliable and the data were missing completely at random, there was very little loss of information (Allison 2002). We used Full Information Maximum Likelihood (FIML) in Plus (Methuen and Methuen 2007) to handle the missing data because it is one of the best methods for handling data that is missing completely at random (Johnson and Young 2011). The analytic sample includes all women for whom we had full information on the exogenous variables.

Concepts and Measures

Fertility intentions. The dependent variable for this study is based on two questions that are combined to create an ordinal measure of fertility intentions. Respondents were asked, “Do you intend to have a baby?” and “Of course, sometimes things do not work out exactly as we intend them to, or something makes us change our minds. In your case, how sure are you that you will/ will not have a child?” Responses were coded so that low scores indicate “very sure do not intend” (-2) to high scores of “very sure do intend” (+2). Women who said they “don’t know” their intentions, who said they cannot have children, or who said they would let God or nature decide are coded 0 (the center of the scale). These questions are similar to those used in the National Survey of Families and Households; we recoded the response categories so that a positive score indicates intending and a negative score indicates not intending to have a baby.

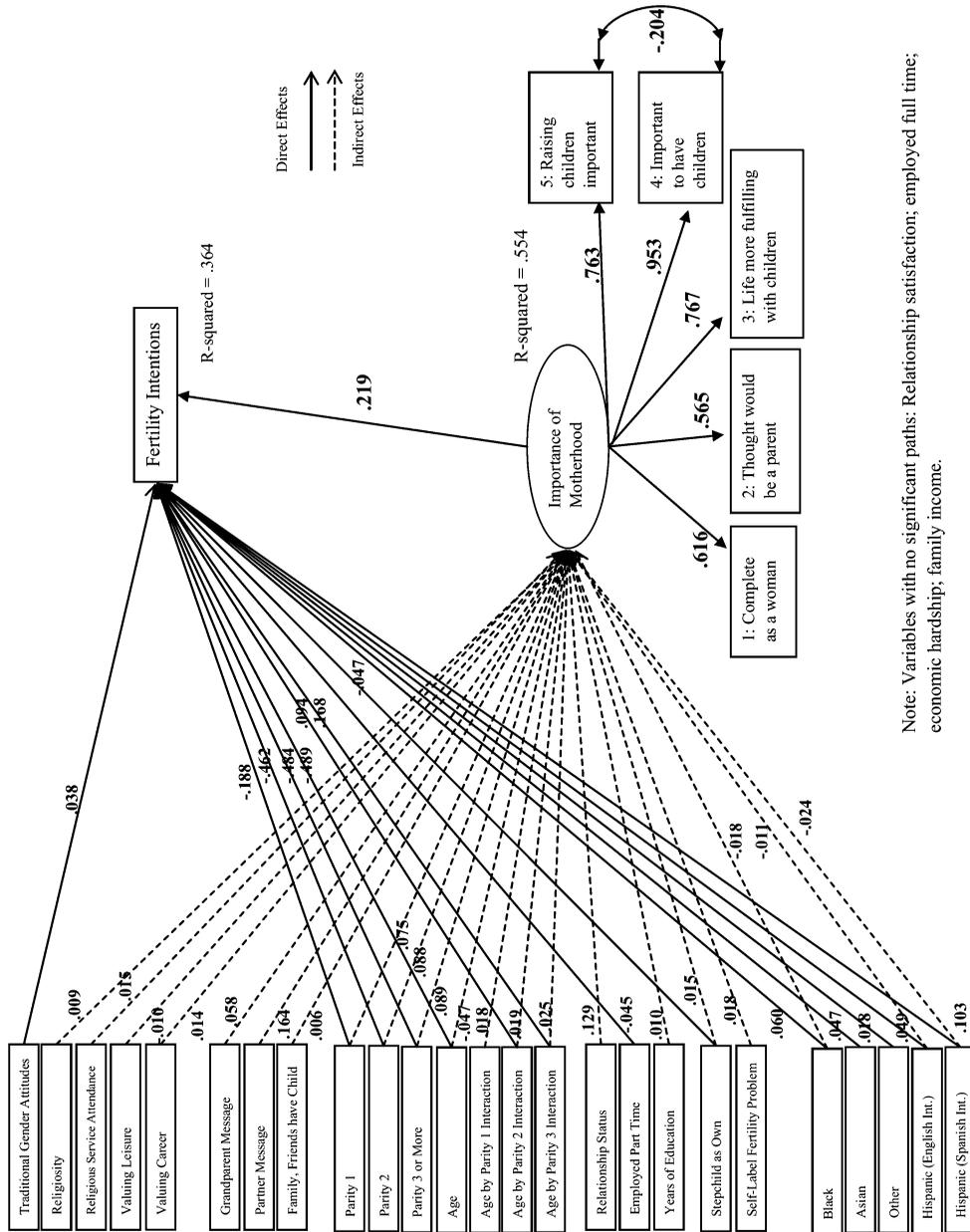
Importance of motherhood. "Importance of motherhood" was treated as a latent variable measured by five questions. Four items have Likert-type scales (strongly agree to strongly disagree): (1) "Having children is important to my feeling complete as a woman," (2) "I always thought I would be a parent," (3) "I think my life will be or is more fulfilling with children," and (4) "It is important for me to have children." The response categories for the fifth (5) "How important is each of the following in your life . . . raising children?" range from not very important to very important. The loadings range from .578 to .966, and the Cranach's alpha coefficient ($\alpha = .79$) indicates high internal consistency. Figure 1 shows the factor loadings for each item.

Other values. We include several subjective measures of values. *Traditional gender attitudes* are measured by a two-item index created by averaging responses to the following Likert scale items: "It is much better for everyone if the man earns the main living and the woman takes care of the home and family" and "If a husband and a wife both work full-time they should share household tasks equally." Responses were scored so that higher scores correspond to less egalitarian attitudes. *Religious service attendance* was assessed by the following question: "How often do you attend religious services?" This item was then mean-centered based on the entire sample. *Religiosity* was measured by the standardized average of responses to the following three questions: (1) "About how often do you pray?" (2) "How close do you feel to God most of the time?" and (3) "In general, how much would you say our religious beliefs influence your daily life?" Measures of potential competition for parenthood include *valuing career* ("How important is being successful in your line of work?") and *valuing leisure* ("How important is having leisure to enjoy your own interests?"). These items were coded from not at all important (1) to very important (4).

Life course measures. We measure parity with dummy variables for women with one child (*parity 1*), two children (*parity 2*), or three or more children (*parity 3+*) compared with women with no children (*parity 0*). We combined women with three or more children into one category because there were not enough women in each of the higher order parity groups to create separate interaction terms for each number of children. *Relationship Status* is a dichotomous variable assessing whether or not a respondent was in a union (married or cohabiting), based on responses to a question about marital status and, for the unmarried, whether the respondent is currently living with a partner. Preliminary statistical tests indicated no significant differences in fertility intentions between those who identified as "married" versus those who identified as "cohabiting."

Relationship satisfaction. We assessed relationship satisfaction by averaging responses to the following questions: (1) "Taking all things together, how would you describe your relationship? Would you say that it is very happy, pretty happy, or not too happy?" (2) "Have you ever thought your relationship might be in trouble? Do you feel this way now?" and (3) "Have you and your partner discussed the possibility of ending your relationship any time in the last three years?" Because these items were measured on different scales, we coded the yes/no responses with the same values as the anchors for the four value responses (1 and 4) before creating the scale. This variable was then mean-centered. The alpha reliability (.57) is close to the minimally acceptable level of .60. *Age* is mean-centered and measured in years. Those employed over 35 hours a week were coded *employed full-time* and those working less than 35 hours a week were coded *employed part-time*, both groups are compared with the unemployed. In addition, we included interaction terms for age by parity 1 and age by parity 2 to permit testing for interaction effects between age and parity.

Socioeconomic status. *Years of education* is mean-centered. Responses to three questions are combined into a scale to measure *economic hardship*: (1) "During the last 12 months, how often did it happen that you had trouble paying bills?" (2) "During the last 12 months, how of-



Note: Variables with no significant paths: Relationship satisfaction; employed full time; economic hardship; family income.

Figure 1. Structural equation model of fertility intentions.

ten did it happen that you did not have enough money to buy food, clothes, or other things your household needed?" and (3) "During the last 12 months, how often did it happen that you did not have enough money to pay for medical care?" This is a unidimensional scale with high reliability ($\alpha = .82$). We measured *family income* in dollars and logged it to reduce skew. This variable was constructed based on responses to a question about which category of income best described the family's total income, and the dollar value of the midpoints of the categories were used in the scale.

Social expectations. Variables measuring the degree to which a respondent reports receiving messages in favor of having a child include (1) *grandparent message*, which measures the degree of agreement to the statement, "It is important to my parents that I have children"; (2) *partner message*, measured by the statement, "It is important to my partner that we have children"; and (3) *family, friends child*, measured by the statement, "Thinking about your friends and family, would you say all of them, most of them, some of them, or none of them have children?" These variables were coded so that higher scores indicated more social expectation to have children.

Options and barriers. Women who said that their spouse or partner had a child from a prior relationship were asked: "Do you think of this child or these children as if they were your own?" Those who responded that this was completely or somewhat true were coded *stepchild as own*. In addition, *self-labeling as a person with a fertility problem* was measured by affirmative responses to either of the following questions: "Do you think of yourself as someone who has, has had or might have trouble getting pregnant?" or "Do you think of yourself as someone who has or has had fertility problems?"

Race/ethnicity. We assessed race/ethnicity by creating five indicator variables: Black, Asian, Other, Hispanic with English interview, and Hispanic with Spanish interview. These respondents are compared with non-Hispanic white respondents. Because participants could select more than one racial/ethnic category, we used a decision rule to categorize participants. If women selected Hispanic and another category, they were categorized as Hispanic.

Analytical Strategy

To describe the sample and assess differences in the independent variables by fertility intentions, we estimated bivariate correlations and descriptive statistics (minimum, maximum, mean, and standard deviation) (see Table 1 for a subset and Appendix A online for all of the variables). Next, we developed a Structural Equation Model (SEM) to test for direct and indirect effects¹ on fertility intentions through importance of motherhood. The model and results are presented in Table 2 and Figure 1. Because the dependent variable is an ordinal measure, we used the WLSMV estimator in Mplus (Muthen and Muthen 2007), yielding probit coefficients, rather than logits. Sensitivity analyses demonstrate that the model assumptions required for probit analyses of an ordinal dependent variable.

Results

Means, Standard Deviations, and Proportions

Table 1 provides bivariate correlations and descriptive statistics for a subset of the variables; a similar table with the full set of variables is available in the Online Appendix A. Measured on a scale from -2 to +2, the mean for fertility intentions is -0.58, indicating that on average, women are not intending to have (more) children. The standard deviation is larger than the

Table 1. Descriptive Statistics and Bivariate Correlations among a Subset of Central Variables.

Variables in the Model	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1 Fertility intentions	1															
2 Importance of motherhood	.09**	1														
3 Traditional gender	-.02	.13**	1													
4 Religiosity	-.05**	.18**	.21**	1												
5 Valuing leisure	.03*	-.13**	-.12**	-.04**	1											
6 Partner message	.12**	.39**	.08**	.03	.02	1										
7 Family, friends children	-.14**	.16**	.12**	.17**	-.07**	.04**	1									
8 Parity	0.28**	-.48**	-.15**	-.20**	.19**	-.12**	-.27**	1								
9 Parity	1.16**	.12**	-.05**	.01	.01	.03	-.01	-.30**	1							
10 Parity 2	-.20**	.19**	.04**	.06**	-.05**	.05**	.11**	-.38**	-.33**	1						
11 Parity 3 or more	-.23**	.18**	.16**	.14**	-.14**	.05**	.18**	-.33**	-.29**	-.36**	1					
12 Age	-.48**	-.02	.04**	.10**	.02	-.10**	.13**	-.13**	-.08**	.07**	.13**	1				
13 Relationship status	-.03*	.21**	.07**	.01	-.06**	.19**	.09**	-.23**	.01	.15**	.07**	.02	1			
14 Years of education	.14**	-.06**	-.24	-.13	.07**	.07**	-.24**	.24**	.08**	-.07**	-.25**	-.01	.00	1		
15 Family income	.00	.08**	-.14	-.10	.05**	.15**	-.10**	.05**	.03*	.05**	-.13**	.14**	.36**	.46**	1	
16 Stepchild as own	-.07**	.05**	.01	.08	.02	-.02	.09**	-.07**	.00	.02	.05**	.07**	.23**	-.11**	-.01	1
Minimum	-2	1	1	-3	1	0	0	0	0	0	0	25	0	0	1	0
Maximum	2	4	4	1	4	4	5	1	1	1	1	52	1	22	12	1
M	-0.58	3.30	1.88	0.00	3.23	2.90	4.03	0.26	0.21	0.29	0.24	35.28	0.73	14.64	8.28	0.12
SD	1.36	0.60	0.55	0.76	0.83	0.88	0.82	0.44	0.41	0.45	0.43	5.99	0.44	2.90	2.96	0.33

U.S. Women ages 25–45 (N = 4,357), National Survey of Fertility Barriers.
 *p < .05 (two-tailed). **p < .01 (two-tailed).

Table 2. Standardized Direct, Indirect, and Total Effects of Values, Social Expectations, Life course, Socioeconomic Status, Options, Barriers, and Race/Ethnicity through the Importance of Motherhood Identity ($N = 4,370$).

Variables in the Model	Direct	SE	Indirect	SE	Total	SE
Values						
Traditional gender attitudes	.038	.042*	.004	.009	.042	.042*
Religiosity	.003	.011	.009	.002*	.012	.010
Religious service attendance	.017	.031	.015	.007***	.033	.031
Valuing leisure	-.008	.028	-.010	.006**	-.019	.028
Valuing career	.013	.027	.014	.007***	.027	.027
Social expectations						
Grandparent message	-.023	.027	.058	.011***	.034	.026*
Partner messages	.060	.039	.164	.017***	.223	.034***
Family, friends have child	-.018	.026	.006	.006*	-.012	.026
Life course measures						
Parity 1	-.188	.069***	.075	.031***	-.113	.063***
Parity 2	-.462	.074***	.088	.032***	-.374	.068***
Parity 3 or more	-.484	.082***	.089	.033***	-.396	.075***
Age (mean-centered)	-.489	.006***	-.047	.002***	-.535	.006***
Age by Parity 1 interaction	.013	.009	.018	.002***	.031	.009
Age by Parity2 interaction	.094	.010***	.019	.002***	.113	.011***
Age by Parity 3 interaction	.168	.010***	.025	.003***	.193	.011***
Relationship status	-.025	.130	.129	.049***	-.154	.118***
Relationship satisfaction	-.027	.054	.003	.011	-.024	.054
Employed full-time	-.014	.054	-.006	.012	-.019	.054
Employed part-time	-.045	.070*	.002	.015	-.043	.069*
Socioeconomic status						
Years of education	.018	.008	.010	.002*	.028	.008
Economic hardship	-.012	.013	-.002	.003	-.014	.013
Family income (logged)	-.023	.052	.007	.012	-.015	.052
Barriers and options						
Stepchild as own	-.047	.069**	.015	.016***	-.032	.067
Self-label fertility problem	.019	.045	.018	.012***	.038	.045*
Race/ethnicity						
Black	.060	.060***	-.018	.014***	.041	.059**
Asian	.047	.127*	.002	.032	.049	.124*
Other	.018	.136*	-.002	.035	.016	.142
Hispanic (English interview)	.049	.064***	-.011	.015**	.039	.063**
Hispanic (Spanish interview)	.103	.110***	-.024	.029***	.079	.103**
Model fit statistics						
Chi-square	519.557		CFI	0.937		
Degrees of freedom	124		TLI	0.904		
p value	.000		RMSEA	.027		

Continuous variables are mean-centered.

* $p < .05$. ** $p < .01$. *** $p < .001$ (two-tailed).

mean ($SD = 1.36$), indicating a wide range of responses. A frequency of the fertility intentions variable (not shown in the table) shows that about half (47 percent) of the women do not intend children (those in the "probably no" and the "very sure no" categories), about 27 percent do intend children (those in the "probably yes" and "very sure yes" categories), and the re-

mainder are currently unsure about their fertility intentions (26 percent). Because the women in the sample are more than halfway through their reproductive years (M age = 35), and because over half already have one or two children, it is not surprising that the majority of the women are unsure or are not intending to have (more) children. Consistent with general pronatalist sentiments in the United States, average importance of motherhood scores are well above the midpoint. Average traditional gender attitudes are slightly lower than the midpoint of the scale, indicating less traditional attitudes. Average religiosity scores are at the center of the scale (0 because the scores are standardized). Most of the women in the sample are in a relationship. The average score on the measure of importance of leisure is higher than the midpoint of the scale. All of the variables measuring perceived expectations from others to have children have means indicating high expectations to have children.

A small group of women have stepchildren that they consider to be like their own. The average level of education is a little over two years of college, and the standard deviation is almost three years.

In the full table (Online Appendix A), there are 435 bivariate correlations. Most of those correlations are statistically significant (60 percent). All of the independent variables are associated with multiple other variables. The vast majority of the independent variables have significant bivariate associations with fertility intentions and importance of motherhood. Examining the bivariate correlations with fertility intentions demonstrates the shortcomings of examining unadjusted associations because intentions depend upon parity and age. The largest bivariate associations are between parity and education and fertility intentions. There are more large associations with importance of motherhood than with fertility intentions, probably because these associations are less dependent upon other characteristics. All bivariate associations are in the expected directions. We therefore focus on the adjusted direct, indirect, and total associations in the full model depicted in Figure 1.

Direct and Indirect Associations with Fertility Intentions

We next assess the full model of fertility intentions with particular focus on the importance of motherhood identity as a mediator of values, social expectations, life course measures, socioeconomic status, barriers and options, and race/ethnicity. The results from the model are presented in Table 2 and Figure 1 with the fully standardized (StdYX) coefficients. The model yielded reasonable fit indices ($\chi^2 = 519.56$, $df = 124$, $p = .000$; comparative fit index [CFI] = .94; Tucker-Lewis Index [TLI] = .90; root mean square error of approximation [RMSEA] = .03) (Muthen and Muthen 2007). This model explains more than half of the variance in importance of motherhood identity ($R^2 = .554$) and a substantial portion of the variance in fertility intentions ($R^2 = .364$). To provide a simple assessment of the contribution of the latent importance of motherhood identity measure to the model of fertility intentions, we ran the same model without this variable and the R -square was 6.4 percent lower. The difference in model fit was statistically significant. Therefore, importance of motherhood adds information to the model above than provided by the model without this measure. We can conclude that importance of motherhood identity does not simply capture what the other measures in the model contribute, but instead it provides a unique addition to explaining differences in fertility intentions between women.

As illustrated in Figure 1, there are many direct associations between variables in the model and fertility intentions, yet many of the associations are also mediated by the importance of motherhood, and some associations are fully mediated by the importance of motherhood. Thus, the importance of motherhood plays an important role in at least partially mediating the relationships between other variables and fertility intentions.

There is a substantial positive association between importance of motherhood and fertility intentions, controlling for other variables in the model. This association indicates that higher

levels of importance of motherhood are associated with higher fertility intentions. We next examine how the other independent variables are associated with fertility intentions. In addition to the total effects, we assess direct effects and indirect effects through the importance of motherhood. Only one of the values and social expectations measures has a direct association with fertility intentions; higher traditional gender attitudes are associated with higher fertility intentions. All of the other values and social expectations measures have indirect associations with fertility intentions through importance of motherhood. Religiosity, religious service attendance, valuing career success, valuing leisure, messages to have a baby from parents and partners, and more family or friends with children are all associated with higher fertility intentions through importance of motherhood.

As expected, based on prior work on life course characteristics and fertility intentions, the total associations between higher parity and fertility intentions are significant and negative; fertility intentions decline with each additional child. Significant age by parity interactions suggest that that increasing age is associated with lower fertility intentions among all women but that the relationship between age and fertility intentions becomes weaker with each additional child. The positive direct and indirect interaction effects of age and parity on intentions suggests that importance of motherhood acts to dampen the negative association between having children and fertility intentions. Contrary to expectations based on the life course perspective, the indicator for "in a relationship" is not directly associated with fertility intentions. There is, however, an indirect association through importance of motherhood, suggesting that being in a relationship is associated with higher importance of motherhood, which is, in turn, associated with higher fertility intentions.

There are no associations between relationship satisfaction or full-time employment status and fertility intentions, but women who are employed part-time have lower fertility intentions. Of the three measures designed to capture socioeconomic status, only education has a significant positive indirect association with fertility intentions.

Women with stepchildren that they consider to be like their own children have lower fertility intentions, but the path through importance of motherhood is positive. The total effect of having a stepchild that one considers as her own is significant and negative. Only the indirect and total associations between self-labeling as having a fertility problem and fertility intentions are significant. Compared with non-Hispanic white women, black women, "other" women, and Hispanic women have higher fertility intentions. For black and Hispanic women, however, the indirect paths through importance of motherhood lower the total effects. These patterns suggest that importance of motherhood identity filters the association between race/ethnicity and intentions for these groups compared with white women.

Conclusion

Why do women vary in fertility intentions? Recent demographic theorizing and studies have emphasized the powerful effects of the two-child norm in the United States, economic fears, perceived partner desires, and values such as gender attitudes and religiosity. Most research on fertility intentions assumes that most American women highly value motherhood and will intend children if the circumstances are right (e.g., in a relationship, completed education, sufficient economic resources). Little research has examined the role of importance of motherhood identity in fertility intentions among women in the United States. To address this gap, we estimated the direct association and the role of importance of motherhood identity as a mediator between values, social expectations, life course variables, and demographic measures with fertility intentions.

We provide several unique contributions that advance understanding of variations in fertility intentions among U.S. women. Values, social expectations, and the importance of motherhood are all associated with fertility intentions. Theoretically, these findings support integrat-

ing identity theory with demographic frameworks to better understand variations in fertility intentions. Based on the finding that many variables have only indirect effects through importance of motherhood, we conclude that the meaning of social statuses for fertility intentions is at least partially realized through how important motherhood is to women. Indeed, most of the values and social expectations variables are associated with fertility intentions through importance of motherhood. The effects of relationship status, age, parity, and most of the age by parity interactions on intentions were mediated by the importance of motherhood. The same was true of the barriers and options measures and of some race/ethnicity measures.

An examination of the relationship between race/ethnicity and fertility intentions reveals intriguing patterns. Black and Hispanic women have higher fertility intentions than non-Hispanic white women. Interestingly, the effect size for Hispanic women who completed the interview in English is much smaller than for Hispanic women who completed the interview in Spanish. Research on the history of stratified reproduction suggests that the meanings of motherhood and fertility patterns should differ between racial/ethnic subgroups in the United States (Roberts 1997). The coefficients for black and Hispanic women are negative with regard to importance of motherhood but positive with regard to fertility intentions. This finding is consistent with higher childbearing among black and Hispanic women than white women but raises questions about why fertility rates are higher. If higher fertility rates among black and Hispanic women are not the result of greater importance of motherhood, we need to search for another reason. This is a topic that requires further exploration.

The use of cross-sectional data limits our ability to understand the dynamic relationship between importance of motherhood and fertility intentions. We use the language of "effects" common in structural equation modeling, but we have been careful to avoid making unwarranted causal claims. We do not know at this point whether increased importance of motherhood yields higher fertility intentions or whether lowering intentions causes women to reassess their attitudes concerning the importance of motherhood. Future studies should use longitudinal data to allow for the assessment of causality in the relationship between importance of motherhood and fertility intentions. It is possible that importance of motherhood may increase following the decision to have a child, but we cannot determine causality using cross-sectional data.

An additional limitation is that our measure of importance of motherhood may not be an ideal measure of identity centrality. Asking women about their attitudes concerning the importance of motherhood is not the same as asking them the extent to which motherhood is important to their self-definitions. Unfortunately, the NSFBS does not include measures designed to directly test hypotheses derived from identity theory. A third limitation is that the NSFBS measure of fertility intentions does not specify a particular time frame in which the respondent expects to realize those intentions. These results must therefore be interpreted with caution, as the use of a different measure of fertility intentions might have yielded different results.

The direct effect of the importance of motherhood on intentions is substantial. It is smaller only than the direct effects of each additional child. Adding the importance of motherhood to the model increased the variance explained in fertility intentions by 6.2 percent. In addition, there are more indirect effects of independent variables through the importance of motherhood than there are direct effects to fertility intentions. Therefore, it is valuable to consider women's subjective importance of motherhood identity for understanding why some women have lower or higher fertility intentions. Our work also demonstrates the value of combining identity theory with life course, resources, values, and other demographic theories of fertility. Understanding that variation in the importance of motherhood between women has consequences for fertility intentions should help to increase understanding of emerging patterns of delayed and forgone fertility (e.g., White and McQuillan 2006). The patterns revealed in the path analyses indicate that studies of fertility trends should measure, rather than simply assume, the importance of motherhood.

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Note

1. Variables in the model but with no significant paths: relationship satisfaction, employed full-time, economic hardship, family income.

References

- Abma, Joyce C. and Gladys M. Martinez. 2006. "Childlessness among Older Women in the United States: Trends and Profiles." *Journal of Marriage and Family* 68(4):1045–60.
- Allison, Paul. D. 2002. *Missing Data*. Thousand Oaks, CA: Sage.
- Arnett, Jeffrey Jensen. 1998. "Learning to Stand Alone: The Contemporary American Transition to Adulthood and Cultural and Historical Context." *Human Development* 41(5–6):295–315.
- Bachrach, Christine A. and S. Philip Morgan. 2011. "Further Reflections on the Theory of Planned Behaviour and Fertility Research." *Vienna Yearbook of Population Research* 9:71–74.
- Barber, Jennifer S. 2000. "Intergenerational Influences on the Entry into Parenthood: Mother's Preference for Family and Nonfamily Behavior." *Social Forces* 79(1):319–48.
- Barber, Jennifer S. 2001. "Ideational Influences on the Transition to Parenthood: Attitudes toward Childbearing and Competing Alternatives." *Social Psychology Quarterly* 64(2):101–27.
- Becker, Stan. 1999. "Measuring Unmet Need: Wives, Husbands, or Couples?" *International Family Planning Perspectives* 25(4):172–80.
- Billari, Francisco C. and Hans-Peter Kohler. 2004. "Patterns of Low and Lowest-Low Fertility in Europe." *Population Studies* 58(2):161–76.
- Boling, Patricia. 2008. "Demography, Culture and Policy: Understanding Japan's Low Fertility." *Population and Development Review* 34(2):307–26.
- Bongaarts, John. 2001. "Fertility and Reproductive Preferences in Post-transitional Societies." *Population and Development Review* 27(Suppl.):260–81.
- Booth, Heather. 2010. "Ethnic Differentials in the Timing of Family Formation." *Demographic Research* 23(7):153–90.
- Bulcroft, Richard and Jay Teachman. 2004. "Ambiguous Constructions: Development of a Childless or Childfree Life Course." Pp. 216–35 in *Handbook of Contemporary Families: Considering the Past, Contemplating the Future*, edited by Marilyn Coleman and Lawrence H. Ganong. Sage Publications. Thousand Oaks, CA.
- Burke, Peter J. 1991. "Identity Processes and Social Stress." *American Sociological Review* 56(6):836–49.
- Carmichael, Gordon A. and Andrea Whittaker. 2007. "Choice and Circumstance: Qualitative Insights into Contemporary Childlessness in Australia." *European Journal of Population/Revue Europeene De Demographie* 23(2):111–43.
- Chandra, Anjani, Gladys Martinez, William D. Mosher, Joyce C. Abma, and Jo Jones. 2005. "Fertility, Family Planning, and Reproductive Health of U.S. Women: Data from the 2002 National Survey of Family Growth." *Vital Health Statistics* 23, National Center for Health Statistics. Atlanta, GA.
- DeRose, Laurie, F. Nii-Amoo Doodoo, and Vrushali Patil. 2002. "Fertility Desires and Perceptions of Power in Reproductive Conflict in Ghana." *Gender & Society* 16(1):53–73.
- Doodoo, F. Nii-Amoo. 1998. "Men Matter: Additive and Interactive Gendered Preferences and Reproductive Behavior in Kenya." *Demography* 35(2):229–42.
- Elder, Glen H., Jr., Monica Kirkpatrick Johnson, and Robert Crosnoe. 2003. "The Emergence and Development of Life Course Theory." Pp. 3–19 in *Handbook of the Life Course*, edited by Jeylan T. Mortimer and Michael J. Shanahan. New York: Plenum.
- Ellestad, June and Jane E. Stets. 1998. "Jealousy and Parenting: Predicting Emotions from Identity Theory." *Sociological Perspectives* 41(3):639–68.

- Gaunt, Ruth. 2008. "Maternal Gatekeeping: Antecedents and Consequences." *Journal of Family Issues* 29(3):373-95.
- Hagewen, Kellie J. and S. Philip Morgan. 2005. "Intended and Ideal Family Size in the United States, 1970-2002" *Population and Development Review* 31(3):507-27.
- Hakim, Catherine. 2003. "A New Approach to Explaining Fertility Patterns: Preference Theory." *Population and Development Review* 29(2):349-74.
- Hayford, Sarah R. 2009. "The Evolution of Fertility Expectations over the Life Course." *Demography* 46(4):765-83.
- Hayford, Sarah R. and S. Philip Morgan. 2008. "Religiosity and Fertility in the United States: The Role of Fertility Intentions." *Social Forces* 86(3):1163-88.
- Hays, Sharon. 1996. *The Cultural Contradictions of Motherhood*. New Haven, CT: Yale University Press.
- Johnson, David R., Julia McQuillan, Mary Casey Jacob, Arthur L. Greil, Naomi Lacy, and Laurie K. Scheuble. 2009. "National Survey of Fertility Barriers Methodology Report." Retrieved September, 2010 (<http://sodapop.pop.psu.edu/data-collections/nsfb/dnd>).
- Johnson, David R. and Rebekah Young. 2011. "Toward Best Practices in Analyzing Datasets with Missing Data: Comparisons and Recommendations." *Journal of Marriage and Family* 73(5):926-45.
- Katz-Wise, Sabra L., Heather A. Priess, and Janet S. Hyde. 2010. "Gender-Role Attitudes and Behavior across the Transition to Parenthood." *Developmental Psychology* 46(1):8-28.
- Kaufman, Gayle. 2000. "Do Gender Role Attitudes Matter? Family Formation and Dissolution among Traditional and Egalitarian Men and Women." *Journal of Family Issues* 21(1):128-44.
- Keeter, Scott, Courtney Kennedy, Michael Dimock, Jonathan Best, and Peyton Craighill. 2006. "Gauging the Impact of Growing Non-response on Estimates from a National RDD Telephone Survey." *Public Opinion Quarterly* 70(5):759-79.
- Koropecykj-Cox, Tanya and Gretchen Pendell. 2007a. "Attitudes about Childlessness in the United States: Correlates of Positive, Neutral, and Negative Responses." *Journal of Family Issues* 28(8):1054-82.
- Koropecykj-Cox, Tanya and Gretchen Pendell. 2007b. "The Gender Gap in Attitudes about Childlessness in the United States." *Journal of Marriage and Family* 69(4):899-915.
- Lareau, Annette. 2003. *Unequal Childhoods*. Berkeley, CA: University of California Press.
- Lesthaeghe, Ron and Dirk J. van de Kaa. 1986. "Twee Demografische Transitities? [Two Demographic Transitions?]." Pp. 9-24 in *Bevolking: Groei en Krimp* [Population: Growth and Decline], edited by Dirk J. van de Kaa and Ron Lesthaeghe. Deventer, The Netherlands: Van Loghum Slaterus.
- Macmillan, Ross and Ronda Copher. 2005. "Families in the Life Course: Interdependency of Roles, Role Configurations, and Pathways." *Journal of Marriage and Family* 67(4):858-79.
- McCarty, Christopher, Mark House, Jeffery Harman, and Scott Richards. 2006. "Effort in Phone Survey Response Rates: The Effects of Vendor and Client-Controlled Factors." *Field Methods* 18(2):172-88.
- McMahon, Martha. 1995. *Engendering Motherhood: Identity and Self-transformation in Women's Lives*. New York: Guildford Press.
- McQuillan, Julia, Arthur L. Greil, Karina M. Shreffler, and Veronica Tichenor. 2008. "The Importance of Motherhood among Women in the Contemporary United States." *Gender & Society* 22(4):477-96.
- Miller, Warren B. and David Pasta. 1995. "Behavioral Intentions: Which Ones Predict Fertility Behavior in Married Couples?" *Journal of Applied Social Psychology* 25(6):530-55.
- Miller, Warren B., Lawrence J. Severy, and David J. Pasta. 2004. "A Framework for Modeling Fertility Motivation in Couples." *Population Studies* 58(2):193-205.
- Morgan, S. Philip and Kellie Hagewen. 2005. "Is Very Low Fertility Inevitable in America? Insights and Forecasts from an Integrative Model of Fertility." Pp. 3-28 in *The New Population Problem: Why Families in Developed Countries Are Shrinking and What It Means*, edited by Alan Booth and Ann C. Crouter. Mahwah, NJ: Lawrence Erlbaum.
- Morgan, S. Philip and Heather Rackin. 2010. "The Correspondence between Fertility Intentions and Behavior in the United States." *Population and Development Review* 36(1):91-118.
- Muthén, Linda K. and Bengt O. Muthén. 2007. *Mplus User's Guide (5th ed.)*. Los Angeles.

- Myers, Scott M. 1997. "Marital Uncertainty and Childbearing." *Social Forces* 75(4):1271-89.
- Nuttbrock, Larry and Patricia Freudeger. 1991. "Identity Salience and Motherhood: A Test of Stryker's Theory." *Social Psychological Quarterly* 54(2):146-57.
- Pearce, Lisa D. 2002. "The Influence of Early Life Course Religious Exposure on Young Adults' Dispositions toward Childbearing." *Journal for the Scientific Study of Religion* 41(2):325-40.
- Peristera, Paraskevi and Anastasia Kostaki. 2007. "Modeling Fertility in Modern Populations." *Demographic Research* 16(6):141-94.
- Quesnel-Vallee, Amelie and S. Philip Morgan. 2003. "Missing the Target? Correspondence of Fertility Intentions and Behavior in the US." *Population Research and Policy Review* 22(5-6):497-525.
- Roberts, Dorothy. 1997. *Killing the Black Body: Race, Reproduction, and the Meaning of Liberty*. New York: Random House.
- Rowland, Donald T. 2007. "Historical Trends in Childlessness." *Journal of Family Issues* 23(10):1311-37.
- Sassler, Sharon, Amanda Miller, and Sarah Favinger. 2009. "Planned Parenthood? Fertility Intentions and Experiences among Cohabiting Couples." *Journal of Family Issues* 30(2):206-32.
- Schoen, Robert, Nan Marie Astone, Young J. Kim, Constance A. Nathanson, and Jason M. Fields. 1999. "Do Fertility Intentions Affect Fertility Behavior?" *Journal of Marriage and Family* 61(3):790-99.
- Schoen, Robert, Young J. Kim, Constance A. Nathanson, Jason M. Fields, and Nan Marie Astone. 1997. "Why Do Americans Want Children?" *Population and Development Review* 23(2):333-58.
- Stewart, Susan. 2002. "The Effect of Stepchildren on Childbearing Intentions and Births." *Demography* 39:181-97.
- Stryker, Sheldon. 1980. *Symbolic Interactionism: A Social Structural Version*. Menlo Park, CA: Benjamin.
- Stryker, Sheldon and Richard T. Serpe. 1994. "Identity Salience and Psychological Centrality: Equivalent, Overlapping, or Complementary Concepts?" *Social Psychological Quarterly* 57(1):16-35.
- Thoits, Peggy. 1991. "On Merging Identity Theory and Stress Research." *Social Psychology Quarterly* 54(2):301-12.
- Thomson, Elizabeth. 1997. "Couple Childbearing Desires, Intentions, and Births." *Demography* 34(1):343-54.
- Thornton, Arland and Linda Young-DeMarco. 2001. "Four Decades of Trends in Attitudes toward Family Issues in the United States: The 1960s through the 1990s." *Journal of Marriage and Family* 63(4):1009-37.
- Toulemon, Laurent and Maria Rita Testa. 2005. "Fertility Intentions and Actual Fertility: A Complex Relationship." *Population & Societies* 415:1-4.
- Voas, David. 2003. "Conflicting Preferences: A Reason Fertility Tends to be Too High or Too Low." *Population and Development Review* 29(4):627-46.
- White, Lynn and Julia McQuillan. 2006. "No Longer Intending: The Relationship between Relinquished Fertility Intentions and Distress." *Journal of Marriage and Family* 68(2):478-90.

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