



## Do Fertility Intentions Affect Fertility Behavior?

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## Do Fertility Intentions Affect Fertility Behavior?

*We examine the relationship between fertility intentions and fertility behavior using a sample of 2,812 non-Hispanic Whites interviewed twice by the National Survey of Families and Households. Time 1 fertility intentions are strong and persistent predictors of fertility, even after controlling for background and life course variables. The effect is greater when the intentions are held with greater certainty. In contrast, the expected timing of births has a much more modest and short-term effect. Only marital status has an effect with a magnitude that is comparable with that of fertility intentions. Fertility intentions do not mediate the effects of other variables but do contribute additional predictive power. The substantive importance of intentions emphasizes the salience of individual motivations and argues for a redirection of fertility research toward studies of the interactions between the individual and society.*

Understanding what underlies fertility behavior is one of the central questions in demography, and there is a sizeable literature on the determinants of fertility. Important variables include structural factors such as race and ethnicity and social class,

economic factors such as income, and individual characteristics such as age, marital status, and parity. In particular, it is well established that individual intentions about future fertility are significant predictors of future behavior (Bumpass, 1987; Rindfuss, Morgan, & Swicegood, 1988; Thomson, 1997; Westoff & Ryder, 1977). What is not clear is whether fertility intentions add to what is known from other established predictor variables or whether intentions simply mediate their effects.

The difference is important. If fertility intentions only mediate other variables, then they add little to our understanding of behavior. However, if intentions contain significant additional information, then they need to be included in fertility analyses. Omitting a significant predictor is known to be a source of bias in estimating the effects of other predictors. Substantively, fertility intentions reflect the salience of individual agency and purposive human behavior, theoretically crucial elements that are easily lost in aggregate demographic studies. The more new information contained in fertility intentions, the more the determinants of those fertility intentions become legitimate objects of study, opening new and potentially promising lines of inquiry.

A widely held view is that fertility intentions are transient period phenomena whose principal value is to reflect the level of "unintended" fertility (Brown & Eisenberg, 1995; Westoff & Ryder, 1977) or the process of couple decision making (Miller & Pasta, 1995; Thomson, 1997; Thomson, McDonald, & Bumpass, 1990). Intentions are frequently seen as simply mediating the effects of other variables. Of particular importance in this re-

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gard is the study, *First Births in America*, by Rindfuss et al. (1988). The authors of that landmark work found that the same factors that predict fertility behavior predict fertility intentions. After examining a tabulation of the percentage of men and women having a first birth by timing intention, Rindfuss and colleagues argued that timing intentions play the primary mediating role between background and adult role variables and the transition to parenthood. Although that finding has been seen as a demonstration of the mediating role of intentions, mediation was, in fact, only inferred. Rindfuss and colleagues did not present an analysis that showed how the effects of other variables changed when intentions were added as a predictor. Moreover, an analysis by Trent and Crowder (1997) failed to find that birth intentions exerted a significant mediating effect, though their study was limited to nonmarital births.

Here, we examine the question of mediation using a more recent data set. We look at births of all orders and recognize the effects of marital status. Going beyond past research, we use fertility intentions and timing expectations as predictor variables in regression equations where subsequent fertility behavior is the outcome. By doing so, we directly measure the mediating effect of intentions. We also overcome other limitations of previous studies by looking prospectively, by incorporating the certainty of intentions, timing expectations, and the intentions of spouses, by using multivariate techniques, and by considering how time-varying school enrollment, employment, and marital status affect the realization of expressed intentions.

#### A CONCEPTUAL CONTEXT

The idea that fertility intentions mediate between background variables and behavior is consistent with the role played by intentions in social-psychological models of behavior, such as the theory of reasoned action elaborated by Ajzen and Fishbein (1980). (For an extended review of these models, see Becker, 1990.) In Ajzen and Fishbein's theory, an intention to perform a behavior is accounted for by a combination of attitudes about an action (i.e., the person's beliefs that the behavior will lead to certain outcomes and his or her evaluation of those outcomes) and perceptions of likely responses to that action (i.e., the person's beliefs about whether others think she or he should or should not undertake the behavior, weighted by the person's desire to comply with those wishes).

In early versions of this theory, which became known as the Fishbein model, the relationship between intentions and subsequent behavior was treated as relatively unproblematic. However, later research (e.g., Jaccard & Davidson, 1976) indicated that the relationship was more complex. Ajzen's Theory of Planned Behavior redefines intention as "intention to try" and performance as "attempt to perform" (Ajzen, 1985, pp. 29–30). In addition, Ajzen introduces a number of intervening variables between intention and behavior, including the strength of the performance attempt and the degree of control that the individual has over that behavior. Control encompasses both internal and external constraints. For example, fecundity exemplifies an internal constraint on fertility, and the existence of an agreeable partner represents an external constraint. Other researchers (McClelland, 1983; Miller & Pasta, 1995; Mullen, Hersey, & Iverson, 1987) have called attention to the importance of time as an intervening variable. The more time that has elapsed between the measurement of intentions and the behavior, the less predictive intentions are.

The life course perspective with its emphasis on the sequence, timing, and ordering of roles that individuals occupy as they age, how those roles interact, and how past roles influence future roles (cf. Elder, 1985; Hogan, 1978; Modell, Furstenberg, & Hershberg, 1976) provides a useful underlying structure. Significant life course events—the formation and dissolution of sexual relationships and entries into and exits from both education and employment—are among the external constraints over which individuals have limited control. Those events are likely to have profound effects on the translation of fertility intentions into actual behavior, but they have received little systematic attention from investigators interested in fertility decision making (e.g., Beckman, 1978; McClelland, 1983; Miller & Pasta, 1995; Thomson, 1997). Miller and Pasta present what is probably the most carefully theorized model of the relationship between fertility intentions and fertility behavior. They suggest three categories of variables that mediate between fertility intentions and the behavior of married couples: spouse's intentions (i.e., agreement or disagreement between spouses), life cycle factors (age, marital duration, parity, gender and age of previous children), and reproduction-related changes (unplanned pregnancy, marital dissolution). Thomson, in an analysis of couples, treats spousal agreement and disagreement as a central variable as well. Thomson and Brandreth

(1995) also stress the importance of the certainty of intentions. None of those studies considered educational or employment-related events as mediating variables.

We expect that fertility intentions signal future fertility. We hypothesize that the intended behavior is more likely to ensue when intentions are held with greater certainty, are shared by one's spouse, and when subsequent life course events (regarding marital status, school enrollment, and employment status) do not provide unexpected opportunities or challenges. We examine whether timing expectations influence the timing of future births and whether those timing expectations mediate the effects of background and control variables. The idea that undergirds our analysis is that knowledge of individual fertility intentions adds significant new information not contained in other predictor variables.

#### DATA AND METHODS

The data come from the National Survey of Families and Households (NSFH). The initial interviews of a national probability sample of 13,008 households were conducted during 1987–1988 (Time 1). Follow-up interviews of 10,008 primary respondents took place during 1992–1994 (Time 2). Our study sample ( $n = 2,812$ ) consists of non-Hispanic White respondents who provided the necessary information at both Time 1 and Time 2, who were aged 16–39 years, and were neither sterile nor pregnant at the initial interview. The study sample was restricted to non-Hispanic Whites because there were too few Blacks, Hispanics, or members of other groups to analyze separately. Because the NSFH was not representative of the population with respect to persons younger than age 19, the influence of fertility intentions at earlier ages cannot be examined. Age 40 was taken as a reasonable maximum age. However, males younger than 40 were excluded from the study sample if at Time 1 they had a partner older than age 40. Because of concerns about biasing the intentions variable, persons sterilized or living with a sterilized partner at Time 1 were excluded. The sample represents 83% of the 3,386 respondents eligible at Time 1.

The study variables are listed and described in Table 1. The outcome variable is whether, during the month of observation, the respondent had a conception that resulted in a live birth or whether the respondent formally adopted a child. The month of conception is taken to be 9 months before the month of birth and is used because we want to ex-

amine the respondent's circumstances at the time the birth was conceived. (The 40 adoptions occurring between Time 1 and Time 2 are treated as conceptions.) Respondents are censored at the time of conception of their first birth after the initial interview, the date of adoption, or after 60 months (5 years) of observation. (In 268 cases, there were fewer than 69 months of observation before the second interview. In those instances, observation was censored by the second interview.) Because the Time 1 sample excludes pregnant respondents or respondents with pregnant partners, the births observed occur from 10 to 69 months after the initial interview.

Most of the background variables are familiar, and their specification, straightforward. The six-category intention variable reflects the respondent's answer to two questions. The first is: "Do you intend to have (a/nother) child sometime?" The second question asks: "How sure are you" about having (or not having) a birth or another birth? Response categories are "very sure," "moderately sure," and "not sure." For married persons, the spouse's relative fertility intention has three categories—higher than partner, same as partner, and lower than partner. The comparison is based on a three-category intention classification: yes (very sure or moderately sure), not sure (either yes or no), and no (very sure or moderately sure). Thus if the respondent indicates "yes, not sure" and the spouse indicates "yes, moderately sure," then the spouse's intention is considered to be relatively higher.

Our timing variable is based on two consecutive questions: "Is there a particular time when you plan to have your (first/next) child?" and "how many years from now do you expect that to be?" We distinguish between those who expect a child relatively soon (i.e., within 4 years) and those who do not (i.e., those who expect a child after 4 or more years or who do not have a planned time). We share the view of Rindfuss and colleagues (1988) that in this context "don't know" means "not soon." We also relate timing expectations to the month of observation, and we distinguish between conceptions within 30 months of the initial interview and those occurring 30 or more months after Time 1. We believe that expecting a birth "soon" is likely to have a greater effect in earlier months of observation than in later months.

Parity is divided into four categories: zero, one, two, and three or more children. After examining the distribution in the study sample, we divided duration since last birth into three cate-

TABLE 1. PRINCIPAL STUDY VARIABLES

Name and Description	Category	Percentage Distribution
<b>Variables constant over time</b>		
1. Conception leading to a live birth (dependent outcome)	No conception*	64.0
	Conception	36.0
2. Fertility intention	Intend yes—very sure	27.9
	Intend yes—moderately sure	25.2
	Intend yes—not sure	13.8
	Intend no—not sure	5.7
	Intend no—moderately sure	13.7
	Intend no—very sure*	13.8
3. Spouse's relative fertility intention ( $n = 1,447$ )	Higher	14.9
	Same*	76.7
	Lower	8.4
4. Respondent's education at Time 1	0–11 years	7.8
	12 years or General Equivalency Diploma*	36.1
	Some college	29.4
	College graduate	26.7
5. Respondent's mother's education	0–11 years	23.7
	12 years or General Equivalency Diploma*	47.8
	Some college	28.5
6. Respondent's income plus partner's income (if any)	Under \$30,000	56.4
	\$30,000–49,999 and missing*	31.3
	At least \$50,000	12.3
<b>Time-varying covariates</b>		
1. Parity and duration since last birth	At parity 0**	52.2
	Parity 1, duration less than 3 years	4.2
	Parity 1, duration 3–6 years	6.2
	Parity 1, duration 6 or more years	10.7
	Parity 2, duration less than 3 years	3.4
	Parity 2, duration 3–6 years	5.8
	Parity 2, duration 6 or more years	9.6
	Parity 3+, duration less than 3 years	1.4
	Parity 3+, duration 3–6 years	2.8
	Parity 3+, duration 6 or more years	3.7
2. Current marital status for those married at Time 1 ( $n = 60,804$ )	Married**	91.9
	Unmarried	8.1
3. Current marital status for those unmarried at Time 1 ( $n = 71,776$ )	Married	15.5
	Unmarried**	84.5
4. Current age of respondent	Less than 25 years	15.7
	25–29 years**	27.2
	30 years and over	57.2
5. School enrollment status	Not in school full-time**	94.9
	Full-time school in current month	5.1
6. Months since last full-time employment	Currently working in full-time (and missing)**	66.6
	1–11 months	5.5
	12 months or more	27.9

\*Indicates reference group for variables constant over time,  $n = 2,812$  persons.

\*\*Indicates reference group for time-varying covariates,  $n = 132,580$  person-months.

gories (fewer than 3 years, 3–6 years, and 6 or more years). We expect longer durations to be associated with fewer births because of increases in infecundity, the greater disruptions to parents associated with a longer birth interval, and the presence of substantially older children (cf. Hogan & Astone, 1986).

The study uses person-months of observation as its unit of analysis and employs time-varying

variables to reflect significant changes in marital, school, and labor-force circumstances. The variables reflecting the respondent's age and duration since last birth vary over time. The marital status variables have categories that reflect both marital status at Time 1 and the respondent's marital status in the month of observation. School status reflects whether the respondent was enrolled as a full-time student during the month of observation.

TABLE 2. PERCENTAGE HAVING A BIRTH BY INTENTION AT INITIAL INTERVIEW, PARITY, AND GENDER

Group	Fertility Intention and Degree of Certainty						Total
	Yes			No			
	Very Sure	Moderately Sure	Not Sure	Not Sure	Moderately Sure	Very Sure	
Females							
Parity 0							
Percentage having a birth (n)	55.2 (239)	37.2 (180)	23.1 (91)	23.1 (26)	11.1 (54)	6.7 (60)	36.1 (650)
Parity 1							
Percentage having a birth (n)	74.0 (150)	64.3 (98)	39.3 (61)	38.9 (18)	25.9 (58)	10.7 (56)	51.0 (441)
Parity 2+							
Percentage having a birth (n)	78.0 (41)	57.1 (63)	31.6 (38)	18.4 (38)	20.0 (125)	10.6 (142)	28.8 (447)
All parities							
Percentage having a birth (n)	64.0 (430)	48.7 (341)	30.0 (190)	24.4 (82)	19.4 (237)	9.7 (258)	38.2 (1,538)
Males							
Parity 0							
Percentage having a birth (n)	50.6 (251)	30.7 (267)	20.5 (117)	20.7 (29)	19.1 (47)	7.9 (38)	33.4 (749)
Parity 1							
Percentage having a birth (n)	73.7 (76)	70.2 (57)	27.3 (22)	40.0 (15)	26.9 (26)	10.3 (29)	52.0 (225)
Parity 2+							
Percentage having a birth (n)	59.3 (27)	54.5 (44)	42.1 (19)	27.6 (29)	13.5 (74)	17.5 (63)	29.8 (256)
All parities							
Percentage having a birth (n)	56.2 (354)	39.7 (368)	24.1 (158)	27.4 (73)	17.7 (147)	13.1 (130)	44.4 (1,230)
Grand total							
Percentage having a birth (n)	60.5 (784)	44.0 (709)	27.3 (348)	25.8 (155)	18.8 (384)	10.8 (388)	37.3 (2,768)

Note: Data are for non-Hispanic Whites, NSFH, 1987–1988 and 1992–1994. Figures in parentheses represent the total number in the indicated category. Total  $n = 2,812$ , including 44 cases in which certainty was not stated.

Labor-force attachment is measured by two dummy variables indicating the number of months since the respondent last held full-time employment.

Our primary analytical technique is pooled logistic regression, where, in a given month, the log odds of having a conception that leads to a live birth or of adopting a child is regressed linearly on a set of covariates. In each analysis, all relevant months of observation are included. Although the total number of person-months of observation from our 2,812-person sample is large ( $n = 132,580$ ), the standard errors of the regression coefficients, and hence their levels of significance, are still estimated appropriately (Abbott, 1985; D'Agostino et al., 1990). This approach allows us to effectively use all of the data, incorporate multiple time-varying covariates, and examine the changing fertility risk of individuals over the period that we are studying.

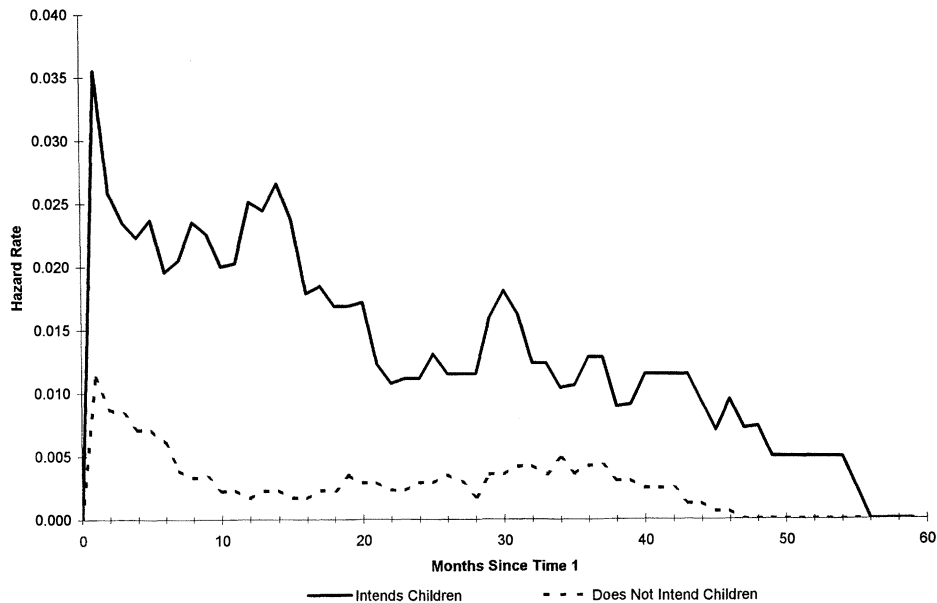
Both the life course perspective and empirical work on the determinants of fertility intentions indicate the need to stratify the analyses by gender and

by marital status. Accordingly, we first estimate separate models for men and women who are married and who are unmarried. We sought to further separate the unmarried into those who were cohabiting and those who were not, but the study sample has too few cohabitators to support such analyses. For both theoretical (cf. Rindfuss & VandenHeuvel, 1990) and empirical reasons, cohabitators are combined with single persons. We then examined the four resulting models to see if they could be combined over either gender or marital status.

## RESULTS AND DISCUSSION

Table 2 shows the proportion having a birth from a conception that occurred within 5 years of the Time 1 interview by intention and degree of certainty for each of our gender-parity groups. There is a strong relationship between intentions and the percentage having a birth. For all gender-parity groups, that percentage declines almost monotonically

FIGURE 1. BIRTH HAZARD FOR MARRIED WHITE FEMALES OF PARITY 2 AT TIME 1



cally as intention changes from “very sure, yes” to “very sure, no.” As noted by others (Rindfuss et al, 1988; Westoff & Ryder, 1977), intentions are more predictive of not having a birth in the interval than of having a birth. Overall, only 11% of those who are “very sure, no” have a birth, and 40% of those who are “very sure, yes” do not have a birth. Marital status at Time 1 is important. Although not shown separately in the table, persons married at Time 1 are more likely than those unmarried to realize their intention to have a child. However, the intention not to have a child appears to lead to similar outcomes for both married and unmarried persons. Gender differences are typically modest, and parity variations generally are greater among the unmarried. Not only is there a strong bivariate association between the nature and certainty of intentions and later fertility, but the extremes of the distribution provide a strong basis for predicting individual behavior.

Because our theoretical review indicated that the predictive strength of intentions for childbearing would decline over time, we examined the pattern of monthly birth hazard rates by duration since Time 1. Figure 1 shows monthly birth hazards by intention (yes or no) for married White women of Parity 2 or more, which is typical of the pattern found. The likelihood of a birth is always substantially greater for those who intend to have a birth. The effect of intentions on fertility behavior

is remarkably persistent, though the effects do show some decay over time.

Tables 3 and 4 show how the relationship between fertility intentions and behavior holds up in a multivariate context for three gender and marital-status groups. For married persons, the models for men and women were similar, and we were able to combine them by adding only one interaction term. Three models are shown for each group: one with only the intentions variables, one without the intentions variables, and one including both sets of predictor variables. All of the models provide a significant fit to the data. The baseline odds, always significant at the .001 level, estimate the monthly likelihood that a person who is in the reference group for every variable has a conception leading to a live birth.

Fertility intentions and their certainty are strongly associated with the probability of having a birth. For all three groups, the impact of intentions declines monotonically or roughly so when intentions vary from “very sure, yes” to “very sure, no” (the reference group). Comparing the intentions only model with the full model, we see that the effect of intentions is not greatly mediated by other variables. For married persons, fertility intentions and their certainty predict fertility behavior better than all other variables in the model combined.

For those married at Time 1, adding spouse's intentions significantly improves the fit of the

TABLE 3. POOLED LOGISTIC REGRESSION RESULTS SHOWING  
MONTHLY ODDS RATIOS<sup>a</sup> OF HAVING A BIRTH FOR PERSONS MARRIED AT TIME 1

Variable	All Persons		
	Intentions Only	Without Intentions	Full Model
Respondent's fertility intentions			
Yes, very sure	10.35***	—	7.24***
Yes, moderately sure	7.56***	—	5.37***
Yes, not sure	2.89***	—	2.16**
No, not sure	2.20**	—	1.84*
No, moderately sure	1.96**	—	1.75*
No, very sure	1	—	1
Spouse's relative intentions			
Higher	2.06***	—	1.90***
Same	1	—	1
Lower	.72**	—	.77*
Expected timing of next birth and month of observation			
Birth expected within 4 years and month of observation less than 30 months since Time 1	1.69***	—	1.41***
Birth not expected within 4 years, month of observation 30 or more months since Time 1, or both	1	—	1
Current month marital status			
Married	—	1	1
Unmarried	—	.38***	.38***
Current age			
Younger than 25 years	—	1.47***	1.28*
25–29	—	1	1
30+	—	.68***	.91
Parity and duration since last birth			
Parity 0	—	1	1
Parity 1, less than 3 years	—	1.64***	1.32*
Parity 1, 3–6 years	—	1.69***	1.63***
Parity 1, 6+ years	—	.59**	.82
Parity 2, less than 3 years	—	.93	1.29†
Parity 2, 3–6 years	—	.60**	.99
Parity 2, 6+ years	—	.13***	.30***
Parity 3, less than 3 years	—	1.44	2.19**
Parity 3, 3–6 years	—	.25***	.46*
Parity 3, 6+ years	—	.28***	.58
Full-time school enrollment			
Yes	—	.75	.71
No	—	1	1
Full time employment			
Employed full time	—	1	1
Not for 1–11 months	—	1.44*	1.33†
Not for 12+ months	—	1.07	1.08
Respondent's educational level			
Less than high school	—	1.11	1.13
High school	—	1	1
Some college	—	1.00	.93
College graduate	—	1.25*	1.06
Respondent's mother education			
Less than high school	—	.93	1.00
High school	—	1	1
Some college	—	1.15	1.11
Respondent and partner income			
Under \$30,000	—	.81*	.78**
\$30,000–\$49,999	—	1	1
\$50,000+	—	.90	.83†

Table 3 continues on next page.



TABLE 3. POOLED LOGISTIC REGRESSION RESULTS SHOWING  
MONTHLY ODDS RATIOS<sup>a</sup> OF HAVING A BIRTH FOR PERSONS MARRIED AT TIME 1—CONTINUED

Variable	All Persons		
	Intentions Only	Without Intentions	Full Model
Gender of respondent			
Female	—	1	1
Male	—	1.18 <sup>†</sup>	1.10
Gender male, Parity 3+, duration since last birth less than 3 years	—	.25*	.30 <sup>†</sup>
Constant	.0020***	.0148***	.0029***
$\chi^2$	475.41***	378.34***	598.31***
<i>df</i>	8	24	32
<i>n</i> (months)	60,804	60,804	60,804

Note: Data are for non-Hispanic Whites, NSFH, 1987–1988 and 1992–1994.

<sup>a</sup>Exponentiated logistic regression coefficient.

<sup>†</sup> $p < .10$ . \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

TABLE 4. POOLED LOGISTIC REGRESSION RESULTS SHOWING  
MONTHLY ODDS RATIOS<sup>a</sup> OF HAVING A BIRTH FOR PERSONS UNMARRIED AT TIME 1

Variable	Women			Men		
	Intentions Only	Without Intentions	Full Model	Intentions Only	Without Intentions	Full Model
Respondent's fertility intentions						
Yes, very sure	4.39***	—	3.30**	4.48**	—	4.36**
Yes, moderately sure	4.06***	—	3.81***	3.11*	—	4.14**
Yes, not sure	2.70**	—	3.10**	1.88	—	2.46
No, not sure	2.23 <sup>†</sup>	—	2.21	3.05 <sup>†</sup>	—	4.59*
No, moderately sure	1.40	—	1.47	1.45	—	1.32
No, very sure	1	—	1	1	—	1
Expected timing of next birth and month of observation						
Birth expected within 4 years, and month of observation less than 30 months since Time 1	2.18***	—	2.32***	1.38	—	1.03
Birth not expected within 4 years, month of observation 30 or more months since Time 1, or both	1	—	1	1	—	1
Current month marital status						
Married	—	6.22***	5.93***	—	10.64***	10.38***
Unmarried	—	1	1	—	1	1
Current age						
Younger than 25	—	1.34	1.31	—	1.70*	1.67*
25–29	—	1	1	—	1	1
30+	—	.59**	.73	—	1.06	1.28
Parity and duration since last birth						
Parity 0	—	1	1	—	1	1
Parity 1, less than 3 years	—	1.60	1.49	—	.54	.51
Parity 1, 3–6 years	—	1.57 <sup>†</sup>	1.71*	—	2.68**	2.82*
Parity 1, 6+ years	—	.87	1.07	—	.76	1.06
Parity 2, less than 3 years	—	1.91	2.24	—	<sup>b</sup>	<sup>b</sup>
Parity 2, 3–6 years	—	1.89 <sup>†</sup>	2.83**	—	<sup>b</sup>	<sup>b</sup>
Parity 2, 6+ years	—	.79	1.15	—	.52	.82
Parity 3, less than 3 years	—	<sup>b</sup>	<sup>b</sup>	—	1.22	1.51
Parity 3, 3–6 years	—	1.73	1.80	—	1.63	2.30
Parity 3, 6+ years	—	3.18**	4.65**	—	.27	.33

Table 4 continues on next page.

TABLE 4. POOLED LOGISTIC REGRESSION RESULTS SHOWING  
MONTHLY ODDS RATIOS<sup>a</sup> OF HAVING A BIRTH FOR PERSONS UNMARRIED AT TIME 1—CONTINUED

Variable	Women			Men		
	Intentions Only	Without Intentions	Full Model	Intentions Only	Without Intentions	Full Model
Full-time school enrollment						
Yes	—	1.03	1.11	—	<sup>b</sup>	<sup>b</sup>
No	—	1	1	—	1	1
Full-time employment						
Employed full time	—	1	1	—	1	1
Not for 1–11 months	—	.96	1.01	—	.56	.58
Not for 12+ months	—	.83	.90	—	1.06	1.08
Respondent's educational level						
Less than high school	—	1.77*	1.48 <sup>†</sup>	—	1.86*	1.71*
High school	—	1	1	—	1	1
Some college	—	.65*	.56*	—	.45***	.40***
College graduate	—	.51*	.50*	—	.53*	.49**
Respondent's mother's education						
Less than high school	—	1.09	1.12	—	.81	.78
High school	—	1	1	—	1	1
Some college	—	.90	.89	—	.86	.87
Respondent and partner income						
Under \$30,000	—	.82	.82	—	.67*	.70 <sup>†</sup>
\$30,000–\$49,999	—	1	1	—	1	1
\$50,000+	—	.79	.72	—	.73	.70
Constant	.0017***	.0045***	.0014***	.0015***	.0033***	.0009***
$\chi^2$	63.06***	214.40***	254.54***	27.56***	241.16***	262.43***
<i>df</i>	6	21	27	6	19	25
<i>n</i> (months)	36,990	36,832	36,832	34,786	32,038	32,038

Note: Data are for non-Hispanic Whites, NSFH, 1987–1988 and 1992–1994.

<sup>a</sup>Exponentiated logistic regression coefficient. <sup>b</sup>Unable to estimate effect.

<sup>†</sup> $p < .10$ . \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

model. Higher spouse intentions increase the probability of a birth; lower spouse intentions decrease it. The pattern is the same for men and women. Our findings parallel those of Thomson (1997), which also suggested that husbands and wives have relatively equal influence in the resolution of disagreements over childbearing.

For married persons and for unmarried women, we find a significant timing effect. Those who indicate that they expect a birth within 4 years are significantly more likely to have a conception leading to a live birth in the first 29 months after the initial interview. We find no other timing effects.

Our results depart from those of Rindfuss and colleagues (1988) in two significant ways. First, we find that the certainty of intentions, rather than timing expectations, has the greatest impact on fertility. Second, we find only a modest mediating role for either variable. Most of our coefficients do not change appreciably when other variables are added to the model. Fertility intentions and expectations are not the avenue through which background and life-cycle variables influence fertility. Instead, as the chi-square values indicate, knowledge of fertility intentions and expectations

brings new information to bear that is not contained in other sociodemographic variables.

The effect of marital status is strong in all models. Those married at Time 1 who are not married in a given month have a much lower probability of having a birth in that month. Conversely, those unmarried at Time 1 who are married in a given month have a many times higher birth probability than those remaining unmarried. Marital status is the only variable whose effects rival those of fertility intentions.

#### SUMMARY AND CONCLUSIONS

This study relates the fertility intentions expressed by 2,812 non-Hispanic Whites during the first wave of the NSFH to their fertility behavior over the next 5 years. Separate analyses are done for single men, single women, and married persons, controlling for background and life course variables.

Intentions to have or not have a child or another child and the certainty of those intentions for future childbearing are strongly and consistently related to future fertility behavior. The intentions of male respondents have magnitudes and

levels of significance similar to those of female respondents. Among married persons, the intentions of both partners influence the probability of a birth, and there is little evidence of a gender difference in this effect. Expectations about the timing of fertility are significant only in the short term.

Marital status is by far the most important life course variable. Birth probabilities are significantly affected by a change in marital status, and intentions are less predictive for those unmarried at Time 1. We suspect that the intentions expressed by unmarried persons are often implicitly contingent on marriage and are less predictive because they are made without knowing a partner's preferences. Even for the unmarried, fertility intentions add substantial new information to models of fertility behavior. Their effect persists over time, and they account for variability unexplained by other demographic variables.

The results show that fertility is purposive behavior that is based on intentions, integrated into the life course, and modified when unexpected developments occur. The fertility intentions variable does not mediate the effects of other variables. It brings substantial new information to bear. For a better understanding of what sustains fertility in developed societies, more research is needed on both intentions and their determinants (e.g., Schoen, Kim, Nathanson, Fields, & Astone, 1997). Recognizing the predictive power of fertility intentions would encourage a healthy redirection of fertility research toward the dynamic interaction between the individual and society.

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