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Religious Factors in High School Completion

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ABSTRACT

The far-reaching consequences of failing to complete secondary schooling are well known. The central questions addressed in this study are: Does religion make a difference in the likelihood of successfully completing the transition to high-school graduation? If so, how large are the influences? Based on a human capital framework, the paper develops hypotheses about the effects of two dimensions of religion during childhood-- affiliation and participation-- and tests them with data on non-Hispanic white, African-American, and Hispanic respondents from the 1995 National Survey of Family Growth. The results are generally consistent with the hypotheses, revealing sizeable differentials in high-school graduation rates by affiliation and participation. The results also uncover pronounced differences by race/ ethnicity.

Religious Factors in High School Completion

The far-reaching consequences of dropping out of high school are widely known: work careers characterized by low wages, high unemployment, and few opportunities for further training; unstable marital unions; and overall bleak prospects for economic well being. Obstacles to the completion of secondary schooling include a range of often interrelated factors, including academic difficulties, the emotional turbulence that sometimes accompanies adolescence, substance use, pregnancy, violence in the neighborhood, poor schools, and dysfunctional homes. The central questions addressed in the present paper are: Does religion make a difference in the likelihood of successfully completing the transition to high-school graduation? If so, how large are the differences?

Among the various dimensions of religion, *religiosity* is especially important, encompassing such aspects as commitment to the religion, the strength of religious beliefs, and participation in religious activities individually or as part of a congregation. Several studies have found beneficial influences of religiosity on educational outcomes. Freeman (1986) finds a positive effect of churchgoing on school attendance in a sample of inner-city black youth. Regnerus (2000) finds that participation in religious activities is related to better test scores and heightened educational expectations among tenth-grade public school students. In the most comprehensive study to date, Muller and Ellison (2001) report positive effects of various measures of religious involvement on the students' locus of control, educational expectations, time spent on homework, advanced mathematics credits earned, and the probability of obtaining a high school diploma.

None of the studies cited above, however, has considered possible differences in the effects of religious involvement on schooling outcomes by *religious affiliation*, another important dimension of religion. This is a significant omission, as systematic differences in educational attainment by

religious affiliation have been documented in a related body of literature. A study based on data on men and women reveals that mainline Protestants and Catholics are at the center of the educational distribution; the mean years of schooling is about one year lower for conservative Protestants, and about two years higher for Jews (Lehrer 1999); the same patterns have been confirmed with more recent data on women only (Lehrer 2005). Other research supports the finding that the level of schooling is relatively high for Jews (Chiswick 1983, l988) and relatively low for conservative Protestants (Darnell and Sherkat 1997; Sherkat and Darnell 1999; Glass 1999). There is also some evidence of relatively low attainment for the unaffiliated (Glass 1999; Lehrer 2005) and for Mormon women (Keysar and Kosmin 1995; Lehrer 2005). The focus of all these studies has been on years of schooling completed, and at present it is not known whether schooling differentials by religious affiliation can be discerned already at the early stage of graduation from high school.

The present study employs data from a large-scale national survey addressed to women, the 1995 National Survey of Family Growth (NSFG), to advance in two main ways our understanding of how religious factors influence the likelihood of high school completion. First, the implicit assumption in previous studies, which have generally focused on either affiliation or participation, is that higher levels of religiosity merely make any differences by affiliation more pronounced-- an assumption that does not necessarily hold (Lehrer 2004a, 2004b). This paper examines the role of both dimensions of religion.

Second, recent ethnographic research suggests that the beneficial effects of religious involvement for adolescents may be especially salient for minority youth (Williams and Warner 2001; Warner 2002). In part because of sample size limitations, previous quantitative studies have either lumped all racial/ ethnic groups together, with dummy variables for race and ethnicity that do not allow for interactive effects with affiliation or participation, or have focused exclusively on non-

Hispanic whites. The data set employed in this study is unique in that it contains a relatively large number of respondents ages 19 and over along with information on their religious background. It is thus possible to conduct separate analyses for the three main racial/ ethnic groups in the United States: non-Hispanic whites, African-Americans, and Hispanics, allowing for possible differences across groups in the magnitudes of the religious affiliation and participation effects. The more recent cycle of the NSFG conducted in 2002 collected information on religious participation in the childhood years only for the youngest subjects.

ANALYTICAL FRAMEWORK

Patterns of schooling differentials by religion have been interpreted within the context of a human capital model where religious affiliation and participation are viewed as reflecting distinctive features of the home environment that can affect the supply and/or demand for funds for investments in schooling (Chiswick 1988; Lehrer 1999, 2005). On the demand side, religion can affect the returns from investments in education: among groups characterized by larger benefits from schooling, a higher level of attainment is expected, *ceteris paribus*. On the supply side, religion can affect the parents' willingness and ability to supply funds for such investments: a higher level of education is expected for religious groups in which the parents have a greater willingness and ability to supply funds for investments in schooling, *ceteris paribus*. This framework is used below to organize ideas suggested in earlier studies and to develop hypotheses regarding the effects of religious affiliation and participation on the likelihood of completing high school. Mainline Protestants are used as the reference category for all comparisons.

Conservative Protestants. Previous studies show that the level of educational attainment is relatively low for this group (Darnell and Sherkat 1997; Sherkat and Darnell l999; Lehrer 1999, 2005), a

pattern which has both supply- and demand- side explanations. On the supply side, conservative Protestant parents often have concerns that secular schooling may adversely affect their children and this influences their willingness to supply funds for investments in their schooling (Darnell and Sherkat 1997). On the demand side, a conservative Protestant upbringing may imply lower levels of certain types of home investments in child quality that increase the productivity of formal schooling, in part because it is associated with an authoritarian approach to knowledge and a rejection of critical inquiry and unconventional modes of thinking (Sherkat and Darnell 1999). Thus I hypothesize that r*espondents raised as conservative Protestants have a relatively low likelihood of completing high school.*

Catholics. A large body of research shows that there has been a convergence between Catholics and mainline Protestants in recent decades, in most aspects of economic and demographic behavior (Jones and Westoff 1979; Brinkerhoff and MacKie 1988; Lehrer and Chiswick 1993; Lehrer 1996). Consistent with this transformation that has taken place, there is evidence that non-Hispanic Catholics and mainline Protestants do not differ significantly in terms of educational attainment (Lehrer 1999, 2005). In light of these results, and assuming that similar patterns prevail in the Hispanic and African-American populations, I expect to find that *the likelihood of high school completion for Catholics is the same as for mainline Protestants.*

Jews. Chiswick (1988) presents arguments suggesting that the high educational attainment of Jews is due to both demand and supply reasons. On the demand side, family size tends to be small (Della Pergolla 1980) and a large amount of resources, especially maternal time, are invested in each child during the early, formative years (Chiswick 1986). These investments increase the productivity of formal education and thus the benefits from additional investments in schooling are high. On the supply side, the "diaspora hypothesis" posits that historically, Jews have placed a high priority on

making investments in the human capital of their children, as these are more portable than investments in physical capital (Brenner and Kiefer 1981). Parents would thus be willing to invest more in the human capital of their offspring at any given interest rate, also implying a higher level of educational attainment. Thus, I hypothesize that *youth raised as Jews have a relatively high probability of completing high school.*

Mormons. As Albrecht and Heaton (1984) note, the Mormon Church has emphasized the importance of education from its very beginning. Theoretically, this high priority placed by the Mormon religion on schooling is a supply-side force that should lead to a high level of educational attainment. At the same time, however, the Mormon religion is characterized by a strongly pronatalist theology. The early entry into motherhood and extended length of the child-rearing period that are associated with high fertility imply a low level of lifetime involvement in labor market activity for women, with correspondingly low expected market returns from schooling. Thus on the demand side, Mormon women should have fewer incentives than their mainline Protestant counterparts to make investments in secular education, and their schooling level is expected to be relatively low. Although Albrecht and Heaton (1984) find that for both men and women, the educational attainment of Mormons exceeds that of the U.S. population as a whole, more recent analyses suggest that educational attainment for Mormon women is relatively low (Keysar and Kosmin 1995, Lehrer 2005). I thus hypothesize that *Mormon women have a relatively low probability of completing high school.*

The Unaffiliated and the Role of Religious Participation. Individuals who report that they were raised with "no religion" constitute a relatively small and heterogeneous group. The few studies that have included a "no religion" category provide some evidence of low educational attainment for this group (Glass 1999; Lehrer 2005). Theoretically, the effect on education of growing up with no affiliation can best be understood following Glenn (1987), thinking of the "no religion" category as

an extreme point in the religiosity scale: children who grew up unaffiliated had no involvement in religious activities during childhood, at least not in an institutional context.

A growing body of literature shows that some religious involvement may be associated with benefits for youth in a wide range of areas, including delayed sexual debut, and lower levels of depression, substance use, and juvenile delinquency (Waite and Lehrer 2003; Smith 2003). Several studies show that the positive outcomes associated with religious involvement also include better performance in the area that is the focus of this paper: education (Freeman 1986; Regnerus 2000; Muller and Ellison 2001). These studies have noted that religion can help integrate youth into helpful social networks. Religious congregations often sponsor family activities, stimulating the cultivation of closer parent-child relations; they also bring children together with grandparents and other supportive adults (parents of peers, Sunday-school teachers) in an environment of trust. This broad base of social ties can be a rich source of positive role models, confidants, useful information, and reinforcement of values that promote educational achievement. In addition, there is also a positive regulative effect: most religions encourage healthy behaviors and discourage conduct that is self-destructive, and participation in religious activities can thus promote emotional well-being (Levin 1994; Regnerus 2003). In these and other ways (see Donahue and Benson 1995; Smith 2003), involvement in religious activities can lead to better mental health, more constructive behaviors, and greater access to valuable resources, all of which are conducive to better academic performance and schooling outcomes.

Within the human capital framework, the arguments presented above suggest that if one compares children who grow up with no religious affiliation to their counterparts raised with an affiliation, the latter should have more favorable educational outcomes for demand-side reasons: such children may have lower psychological costs of attending school and their time spent on human

capital investments is likely to be more productive. Regarding the continuous religiosity variable, the same reasoning implies that a higher level of religious involvement should have a positive impact on educational outcomes. In light of the above, I expect to find that *(a) youth who grow up with no religious affiliation are less likely to graduate from high school; and (b) greater involvement in religious activity during the childhood/ adolescence years is associated with a higher probability of high school graduation.*

Differences in the Effects of Religious Participation by Religious Affiliation and by Race/ Ethnicity

The beneficial influences of religious participation on high-school completion may differ in magnitude across religious groups, but on theoretical grounds the ranking is unclear. Religiosity could actually be a negative force for conservative Protestants, as the adverse effects on educational attainment associated with the conservative Protestant theology may be more pronounced among those who are more observant. Recent research, however, suggests that the beneficial effects associated with religious involvement may well outweigh this influence, as youth raised in observant conservative Protestant homes tend to benefit from interactions with fathers who have high levels of emotional and practical engagement with their families (Wilcox 2004). As to non-Hispanic Catholics and mainline Protestants, patterns of economic and demographic behavior are similar (Lehrer 2004b). Thus I hypothesize that *for non-Hispanic whites, the effect of religious involvement on the odds of completing high school is positive for the three main religious groups-- conservative Protestants, mainline Protestants, and Catholics-- and the magnitudes of the effects are similar across groups.*

With regard to race/ ethnicity, the effects of religious involvement may be most pronounced for youth from disadvantaged minority groups, partly because such youth are at a higher risk of

unfavorable outcomes (including non-completion of high school), partly because they have less access to non-religious institutions and other helpful resources. In an ethnographic study that is part of the broader *Youth and Religion Project*, Williams and Warner (2001) observe that, for youth who face real risks in the wider society (p. 3):

> church is there to help them dodge both the real and figurative bullets of life in a major urban center. Adult leaders of the groups we observed could often name off very quickly the young people who had brothers in gangs, or who had family members with drug or alcohol problems. Part of the way religious involvement seems to help remove kids from risk is by the inculcation of values and ideals that urge them away from substance abuse, crime, and so forth. But, more important in our view is the creation of an "alternative community" for youth who are surrounded by problematic or self-destructive behaviors in other parts of their lives."...

Furthermore, the authors note that religious institutions may help adolescents by imposing limits and constraints, when parents may be absorbed by the stresses of meeting major economic demands or dealing with familial disruptions. In related quantitative work, Regnerus and Elder (2003) find that religiosity is more likely to contribute to the academic progress of youth who live in low-income neighborhoods. I thus hypothesize that *the beneficial influence of religious involvement on the odds of high school completion is more pronounced for African-American and Hispanic youth than for their non-Hispanic white counterparts.*

DATA AND METHODS

The empirical analysis uses data from Cycle 5 of the National Survey of Family Growth. The survey was conducted in 1995 by the Research Triangle Institute, under contract from the National Center for Health Statistics (see Kelly et al. 1997 for a description of the methodology). The questionnaires were addressed to a nationally representative sample of 10,847 civilian, non-institutionalized women ages 15-44 years of age of all marital statuses living in the United States.

The interviews included questions on socioeconomic and family background variables, as well as information on religion, educational attainment, marriage, employment, and fertility.

Cases with missing information for key variables were deleted. The sample was further limited to women ages 19 and older at the time of the interview, who were either non-Hispanic white, African-American, or Hispanic, and who were raised in one of the following faiths: Roman Catholic, mainline Protestant (Presbyterian, Episcopalian, Methodist, Lutheran)[1], conservative Protestant (Baptists and various smaller denominations associated with Pentecostal, charismatic, evangelical, and fundamentalist movements, including Assembly of God, Church of Christ, and Holiness),[2] Mormon, and no religion. Jews were excluded from the sample as preliminary analyses revealed that among the 110 respondents raised in the Jewish faith there was virtually no variance in the outcome of interest: only three subjects had failed to complete their high school degree. The resulting sample size is 8,670.

The religiosity variable is based on information in the 1995 NSFG on the respondents' frequency of attendance to religious services at age 14. This is a measure, albeit an imperfect one, of the young women's involvement with religion at that age. Unfortunately, the survey does not contain information on other dimensions of religiosity at that time, nor does it contain any questions on the parents' religiosity. The working assumption used here is that at age 14, the child's behavior in the religious arena closely mirrors that of her parents.[3] Religious participation is operationalized as a dichotomous variable. Individuals who attended religious services 1-3 times per month or more frequently are classified in the high religiosity category; others are placed in the low religiosity group.

Table 1 presents descriptive statistics for the religion variables by race/ ethnicity. As expected, Panel A shows that the main groups among non-Hispanic whites are mainline Protestants,

conservative Protestants, and Catholics; conservative Protestants are by far the dominant group among African-Americans, and the vast majority of Hispanics are Catholic. Panel B reveals that religiosity is particularly high among African-Americans, consistent with other studies (Taylor et al. 1996; Pattillo-McCoy 1998).

Definitions and means for the dependent and control variables are shown in Table 2. The dependent variable is dichotomous, equal to 1 for respondents who completed their high school education through regular schooling and earned a high school diploma, 0 otherwise. The rate of completion is 0.86 for non-Hispanic white youth, compared to only 0.75 and 0.60 for their African-American and Hispanic counterparts, respectively. The controls include the parents' average years of schooling,[4] dummy variables for family structure at age 14, the size of the family of origin, whether the mother was 18 years of age or younger at the time of her first birth, and indicators of place of birth, birth cohort, and ethnicity (for the Hispanic group). These factors are included as controls because they are expected to have a direct impact on the likelihood of high school completion. The analyses also include variables for whether the respondent had ever had formal birth control instruction or abstinence instruction by age 19, as such variables may influence the odds of completing high school indirectly by affecting the probability of an unwanted teen pregnancy. It would have been desirable to control also for the rural-urban nature of the area where the respondent grew up, but unfortunately this information is not available.

EMPIRICAL RESULTS

The Effects of Religious Affiliation

Tables 3A, 3B, and 3C present the results of logit regressions that estimate the effects of religious affiliation on high-school graduation for non-Hispanic whites, African-Americans, and

Hispanics, respectively. The relative magnitudes of the effects can be assessed from the odds-ratios reported therein. The absolute magnitudes of the influences may be ascertained from the predicted probabilities shown in Table 4. The faith used as the reference category in the empirical analyses is mainline Protestant for non-Hispanic whites, conservative Protestant for African-Americans, and Catholic for Hispanics.

Focusing first on the results for non-Hispanic whites, consistent with expectations, the zero-order regression reveals that conservative Protestants, Mormons, and the unaffiliated are significantly less likely to earn a high school diploma than mainline Protestants; no significant difference can be discerned between mainline Protestants and Catholics. All of the religion effects decrease in size when controls for family background variables (excluding parental education) are added in the next column, and decrease even further when parental education is added in the last column. Two effects remain significant in this last specification: *ceteris paribus*, conservative Protestants and the unaffiliated are less likely than mainline Protestants to complete high school. Table 4 shows that the probability of high-school completion is 0.93 for a typical mainline-Protestant respondent (with average characteristics for other variables), compared to 0.86 and 0.84, respectively, for their conservative Protestant and unaffiliated counterparts.

The "true" effect of religious affiliation on the probability of high-school graduation, net of other factors, can be thought of as being bracketed by the estimates in columns two and three of Table 3A. Parental education is the best proxy for socioeconomic status in these data, and the positive coefficient on this variable in part captures an income effect that should be controlled for. At the same time, however, the education differentials by religion in the respondents' generation are mirrored by corresponding differences in their parents' generation, which are due in part to the influence of religion.

Turning to the results for African-Americans shown in Table 3B, youth raised as mainline Protestant are significantly more likely to complete their high school education than those raised as conservative Protestant, as expected; the magnitude of the effect diminishes only slightly when controls are added. Additional pairwise comparisons among the religious affiliation coefficients reveal that mainline Protestants are significantly more likely to complete high school than Catholics, a result that had not been anticipated. Table 4 shows that for mainline Protestants the probability of high school completion is 0.90, compared to 0.80-0.83 for Catholics, conservative Protestants, and the unaffiliated.

Among Hispanics, the zero-order regression in Table 3C reveals that, compared to Catholics, the likelihood of high-school completion is lower for the unaffiliated and higher for mainline Protestants. The mainline Protestant advantage, however, disappears after controls for other factors are added. At the same time, the disadvantage of the unaffiliated becomes even more pronounced when controls are added. This reflects in part that among Hispanics born in the Western states, who are disproportionately unaffiliated, the high-school graduation rate is high (compared to that of their counterparts born in the South and outside of the U.S.).

Table 4 shows that, all other factors held constant, the probability of high school completion is 0.67 for respondents raised as Catholics, compared to only 0.45 for those brought up with no religion. This gap of 22 percentage points underscores the elevated risk of being a high-school dropout among Hispanic youth raised with no religious affiliation and no religious involvement. It is important to note, however, that part of this gap is likely to reflect a Catholic-school effect, as Catholic youth are more likely to have been enrolled by their parents in Catholic schools. Prior research has found that for minority youth (but not for non-Hispanic whites), attendance to Catholic schools has a very large favorable effect on high-school graduation rates, a result interpreted as

reflecting the poor quality of the public- school alternatives generally available to them (Neal 1977; Sander 2001). Unfortunately the present data do not include information on the type of schools attended, and thus the 22 percentage point differential must be interpreted as capturing both a religious affiliation and a Catholic school effect. It is noteworthy that the Table 3B results discussed earlier show no evidence of a positive Catholic school effect in the African-American sample.

The results for the control variables are generally consistent with expectations. For all racial/ ethnic groups, a nonintact family, a larger number of siblings, and having a mother who entered parenthood early influence the odds of high-school graduation negatively; full-time maternal employment has no significant effect; parental education, as expected, has a very large positive impact. Differentials by place /date of birth, and ethnicity among Hispanics, are also observed. Having been exposed to formal birth control instruction increases the odds of high-school graduation for all groups; abstinence instruction, however, makes a difference for non-Hispanic whites only. These results are consistent with other research that suggests that the effectiveness of abstinence-only programs may be limited (Kirby 2001). The estimates for these control variables help assess the relative importance of the religion variables. For example, for non-Hispanic white youth, being raised with no religion has an effect on the odds of high-school graduation similar in size to that of having parents who dissolved their marriage; for African-American youth, the advantage of mainline Protestants over conservative Protestants is larger in size than the helpful influence of having been exposed to formal birth control instruction.

The Effects of Religiosity

In order to study the effects of religious participation, each of the largest religious groups was subdivided into high- and low- religiosity categories. The column 3 models of Tables 3A, 3B, and

3C were then re-estimated with this more refined specification. Subdivision was feasible for conservative Protestants in the African-American sample, for Catholics in the Hispanic sample, and for both groups of Protestants and Catholics in the non-Hispanic white sample. Based on these models, the estimated probabilities of high-school completion for each affiliation/ religiosity category were computed. The results, along with t-tests for the comparisons of the underlying coefficients of interest, are reported in Table 5.

A consistent pattern is observed across all religious affiliation and racial/ethnic groups: in each case, members of the high-religiosity group are significantly more likely to complete high school than their counterparts in the low- religiosity group. The fact that this result holds without exception, in analyses that control for a wide range of family background variables, provides support for the hypothesis that religious involvement has a beneficial effect for youth in the area of high-school completion. In particular, this finding holds for conservative Protestants (in both the non-Hispanic white and African-American samples). As noted earlier, conservative Protestants have a relatively low rate of high school completion, a result interpreted as reflecting theological aspects of the faith that exert both supply and demand side influences. Higher levels of involvement do not accentuate that pattern—by the contrary, the beneficial effects of such involvement are clearly dominant.

Among non-Hispanic whites, the gap between the high- and low-religiosity groups ranges from 6 percentage points for mainline Protestants to 8 percentage points for Catholics and 10 percentage points for conservative Protestants. These point estimates suggest that the effect is smallest for mainline Protestants, but the differences across groups are modest in magnitude.

In the African-American sample, the gap between high- and low-religiosity conservative Protestants is 7 percentage points. While the size of this effect is not trivial, there is clearly no

support for the hypothesis that the effect of religiosity is particularly large in the African-American sample. Earlier research in the sexual behavior arena has uncovered a parallel puzzle: even though religious involvement tends is a salient feature of most African-American households, religiosity appears to have only a limited impact in promoting healthy behaviors such as delayed sexual debut and safer sex (Regnerus 2005). Perhaps the same factors reviewed by Regnerus-- including more tolerant attitudes toward premarital sex and pregnancy, and congregations that are overextended — underlie in part the present results.

In contrast, for the other minority group, Hispanics, Table 5 shows a differential of fully 21 percentage points between high- and low-religiosity Catholics. As was the case for the affiliation models in Table 3C, this gap includes a Catholic-school effect. So although the results indicate a very large difference in the probability of high school graduation for youth who grew up with high versus low levels of religious involvement, the extent to which this gap reflects a pure religious participation effect cannot be ascertained with these data.

Beyond the Catholic-school omitted variable in the Hispanic sample, other unmeasured factors may bias the estimates of the effects of religious involvement on high school graduation. The results in Table 5 must thus be interpreted with caution and qualified as possibly subject to omitted variables biases. If church attendance is correlated with unobserved behaviors that are associated with positive educational outcomes, the present estimates would *overstate* the positive causal effect of religiosity on educational attainment. This would be the case, for example, if the more observant parents who encourage their children to attend religious services are also supportive of activities that are conducive to success in the secular arena. In interpreting his finding that among black youths, churchgoing is positively associated with school attendance, Freeman (1986) has emphasized this

type of bias: he cautions that the true causal impact of religious participation on educational outcomes may in fact be smaller than suggested by his estimates.

It is important to emphasize, however, that the estimates may be affected by omitted variables biases that operate in the opposite direction (Waite and Lehrer 2003; Lehrer 2004a). There is some evidence that religious participation may be especially valuable for individuals who are more vulnerable for various reasons, including health problems or pronounced economic disadvantage (Hummer et al. 2002). To the extent that such individuals are aware of this and respond by embracing religiosity as a coping mechanism, the more religious homes would disproportionately have unobserved characteristics that affect educational outcomes adversely. If so, the estimated models would lead to an *understatement* of the true impact of religiosity on educational attainment. A priori, it is unclear which biases are dominant, and it may well be the case that the true religiosity effects are actually larger than those reflected in the Table 5 estimates.

CONCLUSIONS AND DIRECTIONS FOR FUTURE RESEARCH

Using data from the 1995 National Survey of Family Growth, this paper quantifies the role of religious affiliation and participation on the likelihood of successfully completing the transition to a high school degree for young women in the United States. Among non-Hispanic white youth, conservative Protestants and the unaffiliated are less likely than mainline Protestants to complete high school, consistent with the hypotheses. Although there is some evidence of a lower likelihood of completing high school for Mormons in the zero-order regressions, the Mormon coefficient becomes insignificant once background factors are held constant. Simple descriptive statistics for these data also lend support to the hypothesis that high school graduation rates are very high among Jews.

Among African-Americans, conservative Protestants are less likely than mainline Protestants to graduate from high school, consistent with expectations. Catholics also are less likely than mainline Protestants to complete their secondary schooling, an effect that had not been anticipated. This result suggests that the convergence of Catholics to the mainline Protestant pattern in virtually all areas of economic and demographic behavior that has been documented for non-Hispanic whites (Lehrer 2004b) may not extend to African-Americans. Also unanticipated was the result that among Hispanics, no significant differences in high-school graduation rates can be discerned among any of the main religious groups: mainline Protestants, conservative Protestants, and Catholics—perhaps due to the relatively small size of this sample. The one group that stands out is the unaffiliated, who have a markedly lower rate of high-school graduation than the dominant Catholic group. In part, this finding may reflect the poor quality of public schools in inner-city neighborhoods.

With regard to the religiosity dimension, religious participation during childhood was hypothesized to have a positive impact on educational attainment for a demand-side reason: the beneficial effects of religious involvement on children's ability to be productively engaged in schooling endeavors, and the effects were expected to be most pronounced for the minority groups. The results show that for all the religious and racial/ ethnic groups considered, frequent attendance to religious services at age 14 is indeed positively associated with the probability of completing high-school, after controlling for a wide range of family background factors. The magnitudes of the effects are not trivial. Among non-Hispanic white youth, being in the high- rather than the low- religiosity group is associated with a gap of 6, 8, and 10 percentage points in such probability, respectively, for mainline Protestants, Catholics, and conservative Protestants. Among African- American youth, the corresponding gap for conservative Protestants is 7 percentage points, a result that does not support the hypothesis that the beneficial influence of religiosity is larger for African-Americans than for

their non-Hispanic white counterparts. By far the largest gap between the probability of high school graduation for youth raised with high versus low levels of religious involvement is observed for Catholics in the Hispanic sample: a differential of fully 21 percentage points. This differential, however, includes also a Catholic-school effect, so it is not possible with these data to confirm the hypothesis that the religiosity effect is particularly pronounced among Hispanics.

Although the 1995 NSFG contains a rich array of family background variables that are included in the analysis as controls, there are of course important unmeasured factors, and the results of this study must be interpreted with caution. To the extent that the more religious homes have unobserved characteristics that are positively correlated with favorable educational outcomes, the present estimates would overstate the beneficial influence of attendance to religious services; the opposite would hold if the correlations are predominantly negative. Our knowledge of the factors that underlie religious involvement is quite limited at present, and it thus remains unclear whether the estimates in this and previous studies in the literature overstate or understate the positive impact of religious involvement.

The present analyses specified religious participation as a dichotomous variable, indicating high or low frequency of attendance to religious services. Future research with larger sample sizes might refine this specification, as the effects of religiosity may be non-linear: higher levels of involvement in religious activities during childhood may have beneficial effects, but only up to a point. Beyond a certain level, participation in religious activities might crowd out investments in secular human capital. Furthermore, there may be important differences between those who never attended religious services during adolescence versus those who did so infrequently.

Finally, this study focused on completion of a regular high school degree. Another dimension of early educational attainment worth studying is completion of high school via a General

Equivalency Diploma (GED). Future work might explore the role of religious factors in the odds of going on to obtain the GED credential among youth who have dropped out of high school. Our understanding of the religion-education linkage will increase as future research begins to provide answers to these various questions.

ENDNOTES

[1] One of the religious codes in the 1995 NSFG is "Protestant with no specific denominational affiliation." As Steensland et al. (2000) note, such individuals constitute a heterogeneous group that includes Protestants with no denomination along with nondenominational Protestants. Based on analysis of patterns of religious participation by race/ ethnicity, respondents in this category were included with mainline Protestants in the non-Hispanic white sample, and with conservative Protestants in the African-American and Hispanic samples.

[2] The 1995 NSFG includes all Baptists in one category. In his research on the classification of Protestants into fundamentalist, moderate, and liberal, Smith (1987) distinguishes between seven different Baptist denominations, classifying six of them as fundamentalist and one as moderate. This limitation of the data implies that the respondents classified in the present paper as conservative Protestants include a small number of "moderate" religious groups.

[3] While parents are likely to have considerable influence on their offspring's religious participation in early adolescence, important divergences often occur as children go through the high-school years. Whether or not such differences develop has been found to be a major factor in parents' willingness to provide financial support for investments in schooling (Sherkat and Darnell 1999).

[4] If the respondent was raised by some other "mother figure," such as a step-mother or grandmother, the information for this individual was used; the same was done in the case of the father. If educational attainment was missing for the father or mother, the value for the other parent was used.

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Table 1. Descriptive Statistics -- Religion Variables

	Non-Hispanic White	African-American	Hispanic
Panel A: Means of Religious Affiliation Variables			
Mainline Protestant	0.30	0.10	0.03
Conservative Protestant	0.24	0.75	0.09
Mormon	0.03	--	- -
Catholic	0.35	0.10	0.85
No religion	0.07	0.05	0.03
Panel B: Fraction in High Religiosity Category			
Mainline Protestant	0.74	0.86	0.66
Conservative Protestant	0.78	0.87	0.89
Mormon	0.81	- -	- -
Catholic	0.82	0.86	0.81
n	5,412	2,157	1,101

Table 2. Descriptive Statistics: Means of Dependent Variable and Control Variables[a]

		Non-Hispanic White	African-American	Hispanic
Dependent Variable				
High school completion	= 1 if R earned a high school diploma	0.86	0.75	0.60
Control Variables				
Parental education	=1 if the average years of schooling completed by R's father (or father figure) and mother (or mother figure) is in category indicated			
Less than 12 years		0.34	0.54	0.73
12 years (benchmark)		*(0.26)*	*(0.23)*	*(0.11)*
13-15 years		0.27	0.17	0.12
16 years or more		0.13	0.06	0.04
Family nonintact	=1 if R's family was not intact at age 14 for the reason indicated			
Death of parent		0.05	0.09	0.07
Separation or divorce		0.22	0.22	0.18
Parents never married		0.04	0.27	0.11
Intact family (benchmark)		*(0.69)*	*(0.42)*	*(0.64)*
Family Size	Number of siblings (including R)	3.76	5.18	5.65
Mother worked full-time	= 1 if R's mother worked full time during most of R's childhood	0.37	0.61	0.37
Mother <18 at first birth	= 1 if R's mother had first birth before age 18	0.10	0.33	0.28
Birth Control Instruction	= 1 if R said she had ever (by age 19) had any formal instruction regarding methods of birth control at school, church, community center, or some other place	0.60	0.66	0.54

Abstinence Instruction	= 1 if R said she had ever (by age 19) had any formal instruction at school, church, community center, or some other place, about abstinence or how to say no to sex	0.53	0.60	0.45
Place of Birth	= 1 if R's place of birth was in the region/ country indicated			
South (benchmark)		*(0.26)*	*(0.53)*	*(0.18)*
Northeast		0.22	0.15	0.07
Midwest		0.33	0.20	0.05
West		0.16	0.06	0.24
Foreign		0.03	0.05	0.46
Birth Cohort	=1 if R was born during the time period indicated			
1950s (benchmark)		*(0.42)*	*(0.37)*	*0.34*
1960s		0.39	0.44	0.43
1970s		0.19	0.19	0.23
Ethnicity	=1 if ethnicity (for Hispanic respondents) is as indicated			
Mexican (benchmark)		- -	- -	*(0.65)*
Puerto-Rican		- -	- -	0.11
Cuban		- -	- -	0.05
Other-Hispanic		- -	- -	0.19

[a] The benchmark categories and mean values are noted in parentheses for variables with more than two categories.

Table 3A. Effects of Religious Affiliation on High School Completion: Non-Hispanic-White Women
Logit Regressions: Odds Ratios

	Zero-order effects	*Including Background Variables (except Parental Education)*	*Including All Background Variables*
Religion Variables			
Mainline Protestant *(benchmark)*	- -	- -	- -
Conservative Protestant	0.272**	0.377**	0.478**
Mormon	0.577**	0.708	0.791
Catholic	0.911	1.002	1.013
No religion	0.274**	0.349**	0.386**
Control Variables			
Family nonintact			
Death of parent		0.555**	0.591**
Separation or divorce		0.359**	0.358**
Parents never married		0.277**	0.301**
Family Size		0.830**	0.853**
Mother worked full-time		0.894	0.894
Mother <18 at first birth		0.509**	0.706**
Birth Cohort			
1960s		0.873	0.776**
1970s		0.898	0.685**
Place of Birth			
Northeast		1.335**	1.356**
Midwest		1.309**	1.309**
West		1.385**	1.178
Foreign		1.080	1.047
Birth Control Instruction		1.352**	1.311**
Abstinence Instruction		1.457**	1.470**
Parental Education			
12 years			2.387**
13-15 years			3.623**
16 years or more			6.226**
Likelihood Ratio chi square (df)	238.4 (4)**	622.3 (18)**	801.3 (21)**

n= 5,412 ** p<0.05; * p<0.10; #p<0.15

Note. Additional pairwise comparisons for the column 3 model, changing the benchmark categories, reveal that the following differences are significant at the 0.10 level (or lower): the likelihood of high-school completion is lower for the unaffiliated than for Catholics and Mormons; it is also lower for conservative Protestants than for Catholics and Mormons

Table 3B. Effects of Religious Affiliation on High School Completion: African-American Women
Logit Regressions: Odds Ratios

	Zero-order effects	*Including Background Variables (except Parental Education)*	*Including All Background Variables*
Religion Variables			
Mainline Protestant	2.180**	2.021**	1.900**
Conservative Protestant *(benchmark)*	- -	- -	- -
Catholic	1.123	0.975	0.874
No religion	0.952	1.050	1.047
Control Variables			
Family nonintact			
Death of parent		0.509**	0.542**
Separation or divorce		0.790**	0.766**
Parents never married		0.462**	0.475**
Family Size		0.918**	0.938**
Mother worked full-time		1.044	0.954
Mother <18 at first birth		0.732**	0.784**
Birth Cohort			
1960s		1.076	0.961
1970s		0.725**	0.589**
Place of Birth			
Northeast		0.670*	0.619**
Midwest		0.899	0.826
West		1.073	0.808
Foreign		1.276	1.184
Birth Control Instruction		1.473**	1.479**
Abstinence Instruction		1.161	1.116
Parental education			
12 years			1.558**
13-15 years			3.491**
16 years or more			3.689**
Likelihood Ratio : chi square (df)	18.1 (3)**	142.0 (17)**	206.5 (20)**

n = 2,157 ** p<0.05; * p<0.10 ; #p<0.15

Note. Additional pairwise comparisons for the column 3 model reveal that the following difference is significant at the 0.10 level: the likelihood of high-school completion is higher for mainline Protestants than for Catholics.

Table 3C. Effects of Religious Affiliation on High School Completion: Hispanic Women
Logit Regressions: Odds Ratios

	Zero-order effects	*Including Background Variables (except Parental Education)*	*Including All Background Variables*
Religion Variables			
Mainline Protestant	2.381**	1.153	0.748
Conservative Protestant	0.833	0.744	0.735
Catholic *(benchmark)*	- -	- -	- -
No religion	0.561**	0.466**	0.411**
Control Variables			
Family nonintact			
Death of parent		0.499*	0.500**
Separation or divorce		0.496**	0.423**
Parents never married		0.387**	0.356**
Family size		0.883**	0.907**
Mother worked full-time		0.977	0.995
Mother <18 at first birth		0.731**	0.850
Birth Cohort			
1960s		0.949	0.875
1970s		0.790	0.693*
Place of Birth			
Northeast		1.748#	1.620
Midwest		1.215	1.141
West		1.651**	1.447#
Foreign		0.764	0.808
Ethnicity			
Puerto-Rican		0.927	0.879
Cuban		1.175	0.878
Other-Hispanic		2.572**	2.178**
Birth control instruction		2.174**	2.202**
Abstinence instruction		1.416*	1.345
Parental education			
12 years			2.723**
13-15 years			4.897**
16 years or more			7.489**
Likelihood Ratio : chi square (df)	8.4 (3)**	235.0 (20)**	291.2 (23)**

n = 1,101 ** p<0.05; * p< 0.10 ; #p<0.15

Note. Additional pairwise comparisons for the religion variables in the column 3 model reveal that the are no other differences are significant at the 0.10 level.

Table 4: Predicted Probabilities of High-School Completion by Religious Affiliation[a]

	Non-Hispanic White	*African-American*	*Hispanic*
Mainline Protestant	**0.93**	0.90	(0.60)
Conservative Protestant	0.86	**0.82**	(0.59)
Mormon	(0.91)	- -	- -
Catholic	(0.93)	(0.80)	**0.67**
No religion	0.84	(0.83)	0.45

[a] These probabilities are based on the models of Table 3A, 3B, and 3C that include all control variables. Number of siblings is set at the mean and the categorical variables are set at the modal group (for the specific racial/ ethnic group). Figures corresponding to the category that was used as benchmark in each case are noted in bold; figures corresponding to coefficients that did not differ significantly from the benchmark at the 0.10 level are shown in parentheses.

Table 5. Predicted Probabilities of High School Completion by Religious Affiliation and Religious Participation[a]

	Non-Hispanic White	t-value	*African-American*	t-value	*Hispanic*	t-value
Mainline Protestant- low	0.88	4.0**	- -	- -	- -	- -
- high	0.94		- -	- -	- -	- -
Conservative Protestant- low	0.77	4.3**	0.76	2.5**	- -	- -
- high	0.87		0.83		- -	- -
Catholic- low	0.86	4.8**	- -	- -	0.50	4.4**
- high	0.94		- -	- -	0.71	

[a]These probabilities are based on models that have all the control variables shown in Tables 3A, 3B, and 3C, column 3. The religion variables included are as follows: (a) For non-Hispanic whites, the first model estimated has the benchmark category as the group of high religiosity mainline Protestants; the model also includes dummy variables for high and low religiosity conservative Protestants, high and low religiosity Catholics, and the unaffiliated. The t-value of 4.0 reported is for the low vs high religiosity comparison within mainline Protestants. The model was then re-estimated two more times, first using high-religiosity conservative Protestants and then high-religiosity Catholics as the benchmark. All of the models for non-Hispanic whites also include dummies for Mormon religion and no religion. (b) In the model for African- American women, high-religiosity conservative Protestants constitute the benchmark category. The model also includes variables for Catholic, mainline Protestant, and no affiliation. (c) In the model of Hispanics, the reference category is the group of high-religiosity Catholics. The model also includes variables for mainline Protestant, conservative Protestant, and no affiliation.

** $p < 0.05$