RELIGIOUS PARTICIPATION VERSUS SHOPPING: WHAT MAKES PEOPLE HAPPIER?

Danny Cohen-Zada* and William Sander**

September 2009

Abstract.

Survey data indicate that there is a positive correlation between religious participation and happiness. However, it is not necessarily the case that religious participation affects happiness. In this study, we try to test whether religious participation has a causal positive effect on happiness. Following previous research, we use the repeal of blue laws in states to identify the relationship between religious participation and happiness. We find that religious participation does indeed have a positive effect on happiness. The primary data source for our study is the National Opinion Research Center's "General Social Survey."

Keywords: Religious participation; Happiness; Blue laws.

*Department of Economics, Ben-Gurion University, Beer-Sheva 84105, Israel (e-mail: danoran@bgu.ac.il). **Department of Economics, DePaul University, Chicago, IL 60604, USA (WSANDER@depaul.edu).

RELIGIOUS PARTICPATION VERSUS SHOPPING: WHAT MAKES PEOPLE HAPPIER?

1. Introduction

Americans have relatively high levels of religiosity as measured by attendance at religious services. For example, about half of the population of the United States attends a religious service at least once a month; about one in five attend every week (Gruber and Hungerman, 2008). Americans allocate a substantial amount of time to shopping as well. For example, Schor (1991) notes that Americans spend three to four times as much time shopping relative to their Western European counterparts. She calls this a national passion. Whereas there is evidence that religion makes people happier, there is no evidence (to our knowledge) whether shopping results in more or less happiness. In this paper we address this issue by analyzing the effect of an exogenous increase in the opportunity cost of religious activity caused by the repeal of blue laws on religious participation and happiness.

Many studies indicate that religiosity (often measured by attendance at religious services) is positively correlated with many outcomes including earnings and education, marital stability, health, and happiness (e.g., Gruber, 2005; Layard, 2005; Lehrer, forthcoming; Okulicz-Kozaryn, 2009; Waite and Lehrer, 2003). One of the shortcomings in some of the research on this topic is that religiosity is often treated as an exogenous determinant of many outcomes. Research by Azzi and Ehrenberg (1975), Barro and McCleary (2003), Gruber, 2005; McCleary and Barro (2006) indicate that it could be the case that religiosity is endogenous with various economic and demographic variables. If this were the case, estimates of the effects of religiosity on economic and demographic outcomes could be seriously flawed.

In this paper, we explore the relationship between religious participation and happiness. Data indicate that men and women who have higher levels of attendance at religious services say that they are happier (Table 1). For example, respondents from our sample who attend religious services more than once a week are about twice as likely to say that they are very happy relative to respondents who never attend religious services. At the outset, we would note that such subjective measures of happiness are correlated with other measures of happiness (Layard, 2005). However, they are not always precise measures of happiness (Kahneman and Krueger, 2006). Respondents to surveys who say they are very happy might not be happier than respondents who say they are pretty happy.

Data indicate that over time men and women in the United States have not become happier. Since the 1970s, the percentage of adults twenty-five and older who say they are very happy has declined modestly while the percentage who reports that they are pretty happy has increased modestly. The percentage that is not happy has stayed about the same over time (Table 2). The percentage of the population in the United States who report they are "very happy" peaked in 1957 (Schor, 1991). Easterlin (1980) attributes higher levels of happiness at this time to a smaller generational size. He attributes an increase in generational size after 1957 to a decrease in happiness.

Some of the determinants of happiness have been shown to be relative income (the rich are happier than the poor), education (higher levels of education increase happiness), gender (women are happier than men), race (whites are happier than blacks), family relationships, work, health, personal freedom, community and friends, and personal values such as religious beliefs (see Kahneman and Krueger, 2006; Layard, 2005; Stevenson and Wolfers, 2008). Also, Okulicz-Kozaryn (2009) shows

that “religious people are happier in religious nations” because religious people are better able to fulfill a need to belong if many others are religious as well.

A recent study by Gruber and Hungerman (2008) (hereafter GH) develops a novel approach to identifying the effects of religious participation on alcohol abuse and illegal drug use. They use the repeal of so-called blue laws to show how an exogenous decline in religious participation affects behavior. Following GH, we also use the repeal of blue laws to identify the effect of religious participation on, in our case, happiness. If one goes back in time, many states passed such laws that prohibited retail activity on Sundays. This was done for religious reasons: Sundays were to be a day for church and family. More recently, many states have repealed these laws. However, some states still retain bans on car sales on Sundays.

There has been controversy regarding such laws since the American colonial period. Roger Williams opposed such laws that mixed religion and government in 1636 when he founded the colony of Rhode Island (Newman, 2008). Although there is still controversy regarding laws that restrict retail activity on Sundays, most households are now free to go shopping on Sundays. One of the consequences of repealing blue laws is that the opportunity cost of religious activity has increased thus reducing church attendance and church contributions (Gruber and Hungerman, 2008).

We show that religious participation as defined by church attendance is positively related to happiness. In addition, we show that when blue laws are repealed, church attendance declines as does happiness. We formally link declines in church attendance to declines in happiness.

Our results are consistent with the economic approach to the allocation of time as developed by Becker (1976) and others: An increase in the opportunity cost of attending church should result in lower levels of attendance and more shopping others

things being equal. Further, as more people allocate time to shopping, the incentive to shop increases even more (i.e., there is a social multiplier effect) while the incentive to attend church declines (Becker and Murphy, 2000).

Our results are also consistent with studies from behavioral economics and elsewhere that indicate although individuals maximize "decision utility" they do not always maximize "experienced utility" (Kahneman and Thaler, 2006). This simply means that individuals maximize what they perceive as their self-interest rather than what is their self-interest. Some possible reasons for this include incomplete information, time inconsistent behavior, making errors in predicting future outcomes, and problems of self-control. Kahneman and Kruger (2006) and Kahneman and Thaler (2006) provide good reviews of this literature. Some other related studies include (e.g., Frank, 1988; Gruber and Mullainathan, 2002; Laibson, 1997; O'Donogheu and Rabin, 1999; Offer, 2006; Thaler and Benartzi, 2004; Thaler and Shefrin, 1981; Thaler and Sunstein, 2003 and 2009).

This literature indicates that broadening the choice set of economic agents or lifting a constraint from their choice set does not necessarily imply an increase in their utility and in their happiness. Thaler and Sunstein (2009) provide many examples of this.. For example, guests at a dinner party might prefer not to have the option of eating more cashew nuts before dinner. Similarly, imposing new constraints on an agent's choice set does not necessarily imply a decrease in their utility as one would expect, according to the traditional rational theory model. For example, in a related study on happiness, Gruber and Mullainathan (2005) find that cigarette taxes seem to make smokers happier because at least some smokers have present-biased preferences or a problem of self-control. Once again, Thaler and Sunstein (2009) provide many additional examples. For example, some states try to help individuals with a

gambling addition by letting them place their name on a list that bans them from casinos.

The paper is organized as follows. First, we discuss the data that are used in our study. Second, our empirical strategy is developed. Third, the empirical results are presented. The paper closes with a brief discussion of the findings.

2. Data

The primary data source for this study is the National Opinion Research Center's "General Social Survey' (GSS). The GSS is a cross-sectional national survey of individuals in the United States who are at least eighteen years old and live in a non-institutional setting. It has been undertaken either annually or biannually since 1972. The GSS has been one of the key data sources for research on happiness in the United States. It is also the same data source that GH uses.

Following GH, we select respondents who live either in states where there was a discrete clear and significant change in the prohibition of retail activity on Sundays for the 1973 to 1998 period or where there was no change at all. This approach leaves us with respondents from sixteen states: ten states with policy changes (Indiana, Minnesota, North Dakota, Tennessee, Texas, Virginia, and Vermont) and six states which serves as controls since policy did not change during this period (Florida, Iowa, Kansas, Ohio, Utah, and Washington).[1] The reason for this approach is that by significantly reducing the prohibition on retail activity on Sundays, the opportunity cost of church attendance increases. Data for the exact year blue laws changed in a

[1] The time of repeal for each state is reported in Table 1 of Gruber and Hungerman (2008). GH mention the reasons for dropping the remaining states from the analysis. First, in some states, blue laws regulations were made at the county and city levels while our data are at the state level. Second, in few states they could not verify when blue laws were repealed. Third, four states were dropped because there were too many exceptions to their laws. Finally, there were seven states that never had retail blue laws during the period of our analysis.

state are excluded because it is not clear what effect they would have the year of change. We also use data for Catholics and Protestants because they are more likely to attend church on Sundays. Non-Christian religions and respondents with no religion are excluded. About 90% of the GSS sample is either Catholic or Protestant.

Our measure of religious participation is based upon a question in the GSS on church attendance. Respondents were given nine possible responses to a question on their frequency of attending religious services. The possible responses are never, less than once a year, about once a year, about once or twice a year, several times a year, about once a month, two to three times a month, nearly every week, every week, and several times a week. Once again, data on religious participation and happiness are presented in Table 1.

Other data that we use from the GSS include household income, educational attainment (relative to high school graduate), male, black, Hispanic, age, living in one of the twelve largest metropolitan areas, living in one of the thirteenth to one hundred largest metropolitan areas (the type of residence variables are relative to areas outside of the one hundred largest metropolitan areas), and region (relative to south). The adjustments that are made are partly a result of how certain variables are defined by the GSS rather than by us.

Our key variable is a measure of happiness which has three categories: not happy, pretty happy and very happy. We dichotomized this variable into two categories (not happy versus at least pretty happy) because it is not clear whether "very happy" is significantly different from the answer "pretty happy." For example, Kahneman and Krueger (2006) note that respondents may interpret and respond to questions on subjective well-being differently. One person may not use superlatives to indicate his level of happiness while another person might. In the case of the former, the

respondent might say that he is pretty happy while the other person might say he is very happy. The response pretty happy for the first person could be equivalent to the response very happy for the second person. For this reason, it is important to compare a response regarding level of happiness to a response that has a more clear meaning like not happy.[2]

In addition, we also include in our estimates a set of state/year controls which includes percent African-American in a state, percent foreign-born in a state, inflation-adjusted per capita disposable income, and the rate of insured unemployment in a state. Summary statistics for the data set are provided in Table 3.

3. Empirical Estimation

3A. The repeal of blue laws and church attendance

We begin by estimating the effect of repealing blue laws on church attendance. Following GH, we estimate a "difference in difference" equation of the form

$$A_{ist} = Repeal_{st} + X_{ist} + Z_{st} + S_s + Y_t \,, \qquad (1)$$

[2] Another reason we dichotomized the happiness measure is that multinomial logit and multinomial probit estimates were found to be non-ideal. For example, multinomial logit has the property of independence from irrelevant alternatives (IIA), which assumes that the relative probabilities of choosing between two alternatives are independent of the existence and attributes of any other alternative. We tested the validity of the IIA assumption using the Hausman and McFadden (1984) test and found that it was violated in many of our estimates. Similarly, there were problems with multinomial probit estimates. First, the estimates failed to converge for several sub-samples. Second, because our specification included both state and year fixed effects and also a time trend for each state, multinomial probit estimates as well as ordered probit estimates could be biased due to the incidental parameter problem (Neyman and Scott, 1948). Ignoring these econometric problems, the vast majority of the results with multinomial logit and multinomial probit indicated that repealing blue laws significantly affected the probability of being pretty happy relative to not happy but did not affect the probability of being very happy relative to pretty happy. In this case, one does not lose much information by dichotomizing the happiness measure to have only two categories which are "not happy" relative to "at least pretty happy". In fact, logit regressions are found to yield much cleaner results than ordered probit or ordered logit regressions. Ordered models did not provide a good fit since they have the assumption that the effect of *x* on the dependent variable is the same no matter where one dichotomizes the dependent variable. This assumption is far from being satisfied in our data.

where A_{ist} is church attendance for individual i in state s at time t; $Repeal_{st}$ is a dummy variable indicating whether the blue laws were already repealed (repeal=1) in state s in year t; X_{ist} is a set of individual controls; Z_{st} is a set of state/year controls; S_s is a set of state fixed effects; and Y_t is a set of time fixed effects. As GH point out, this specification allows us to test whether repealing blue laws causes a deviation from a state's mean of religious participation relative to other states at the same time. We report both state clustered t-statistics and state/year clustered t-statistics.

The results presented in Column 1 of Table 4 are very similar to those of Gruber and Hungerman (2008). They indicate that there is a strong significant negative effect of repealing blue laws on church participation. Repealing blue laws reduced attendance by almost a quarter indexed point. As GH point out, the causal interpretation of this finding relies on the assumption that no other change occurred at the time the law was repealed that could also have caused a decline in church attendance. We thus replicate the results in GH and present two tests that support this assumption.

First, to show that there was no downward trend in church attendance at the same time of repeal, we added to the basic specification that includes state fixed effects, state-specific linear time trends.[3] These additional controls help us capture any reduction in church attendance over time within the states that repealed blue laws. The results of this specification are reported below (Column 2 of Table 4). The results indicate that when state-specific time trends are added to the equation the estimated effect of blue laws on church attendance is only strengthened. Second, in order to rule out the possibility that blue laws are just picking up a preexisting reduction in the demand for attending church (and an increase in demand for secular activities), we

[3] When we tried to add a quadratic time trend we found that all the state fixed effects were dropped due to collinearity.

add to the basic specification a placebo dummy for the two years before blue laws were repealed. If this dummy is negative and significant it would indicate that church attendance was declining prior to the repeal of blue laws and not a result of it. The results indicate that the placebo dummy is insignificant (Column 3 of Table 4). Further, the estimated effect of repeal on church attendance is even stronger than in the basic specification. Estimates of the effect of repeal by gender indicate that the repeal of blue laws affected women more than men (Columns 4 and 5 of Table 4).

3B. Blue laws, religiosity and happiness

First, we present estimates from a naïve logit regression of the effect of church attendance on happiness. The results indicate that church attendance has a substantial positive effect on happiness (Column 1 of Table 5). A one index point increase in church attendance is associated with a 10.5% increase in the odds ratio of being at least pretty happy relative to not happy. This is a sizeable effect: an increase in church attendance from "never" to "every week" has the same effect on happiness as the effect of being married relative to not married. Columns 2 and 3 of Table 5 present similar logit estimates by gender. These estimates indicate that church attendance always has a very significant positive effect on happiness. In addition, this effect is found to be larger for males than for females. However, these estimates cannot be interpreted as causal since the church attendance measure is endogenous. For example, it may be the case that happiness affects church attendance rather than vice versa.

Estimating the effect of repealing blue laws on happiness can shed light on the effect of religious participation on happiness. If religious participation indeed increases happiness, the repeal of blue laws may lead to a decline in happiness among those whose religious participation has fallen. A logit estimate of the effect of the

repeal of blue laws on happiness is presented below (Column 1 of Table 6). This estimate takes the following form:

$$H_{ist} = Repeal_{st} + X_{ist} + Z_{st} + S_s + Y_t, \quad (2)$$

where H_{ist} is our happiness measure for individual i in state s and time t. The other variables are as reported in equation (1). The results show that the effect of repeal on happiness is negative and significant at the 10% level. The repealing of blue laws decreases the odds ratio of being at least pretty happy relative to not happy by about 17%. This is half as large as the effect of not finishing high school (relative to finishing high school) on happiness.

A regression in which linear time trends for each state are included indicates that this addition to the regression only strengthen the effect of repealing blue laws on happiness (Column 2 of Table 6). A third specification that adds a placebo dummy to the estimation to capture preexisting declines in happiness indicates that the placebo dummy is not significant while the repeal dummy still has a significant effect on happiness (Column 3 of Table 6).

If repealing blue laws decreases happiness through its negative effect on religious participation, this effect should be stronger for women whose religious participation has fallen more sharply and more significantly. The results by gender are reported below (Columns 4-9 in Table 6). We do not observe any decline in happiness in any of our three specifications for men whose religious participation was not affected by the repeal of blue laws. However, for women all three specifications indicate a significant decrease in happiness.

Similarly, based upon the same logic, if the repeal of blue laws reduces happiness through its negative effect on religious participation, it should only affect

church attendees. Separate results for attendees and non-attendees are reported in Table 7.[4] The separate results for attendees and non attendees support our predictions: While the repeal dummy is positive and insignificant for non-attendees it is negative and significant for attendees.

Next, we focus on estimates for women by whether they attend church. The results again support our hypothesis that the effect of repealing blue laws on happiness works through its negative effect on church attendance (Table 8). The effect of repeal on happiness is negative and highly significant for women who attended church and positive and insignificant for those who do not attend.

Finally (and following GH) we show that our estimated repeal effects on church attendance and happiness are not likely to be biased because of omitted individual or state characteristics. We re-estimate the model for the whole sample without individual and state controls. The results indicate that the significant negative effects of repeal on church attendance and happiness are not sensitive to the inclusion of individual and state controls (Table 9). While the magnitude of the repeal effect changes somewhat in the basic specification when controls are omitted, the specification that includes linear time trends for each state does not change when covariates are omitted.

Gruber and Hungerman (2008) note the possibility that estimates are sensitive to changes in a particular state. Following GH, we treat this concern by checking the robustness of our repeal estimates if one state is excluded. We find that the estimates are not sensitive to the exclusion of any particular state. While the coefficient of repeal on happiness is -0.33 when all states are included, the coefficient ranges from

[4] We must note that since church attendance is measured at the year of the survey, it is possible that many attendees might have become non-attendees as a result of the repeal of blue laws. However, this is not likely to be the case since, as indicated by GH (with the same data), repealing blue laws had no effect on the "not attending at all" category. The most consistent interpretation that they give to this finding is that blue laws do not cause individuals to drop out of church-going but rather they go less.

between -0.41 and -0.29 and is always significant at the 5% level. However, the specification without linear time trends is somewhat more sensitive. While the coefficient of repeal on happiness is -0.19 when all states are included, the effect ranges between -0.07 and -0.26 and is not always statistically significant. Overall, we find that the repeal variable is exogenous and that the repeal of blue laws decreases happiness though its negative effect on religious participation.

Our finding that the repeal of blue laws decreases happiness seems to support the possibility of time inconsistent behavior by respondents. If economic agents are rational and maximize utility, their utility and happiness should increases if constraints on their choice set are reduced. Further, our finding that happiness decreases when blue laws are repealed implies that people derive greater utility from religious participation than from shopping. If this is the case, in contrast to our findings, they should not have reduced their religious participation when blue laws were repealed.

One possible reason for time inconsistent behavior is that people have a problem with self control. Shopping like cigarettes and drugs provides immediate satisfaction. However, this satisfaction remains only at the time of consumption and certainly not much longer than that. In addition, shopping like cigarettes is addictive. On the other hand, satisfaction from religious participation does not come immediately. Instead, one gets satisfaction from religious activity only after one persists at it for a longer time. Thus, the choice between shopping and religious participation is actually between immediate lower satisfaction and long-run higher satisfaction. We suggest that since shopping is addictive and gives immediate satisfaction even if people know that in the long run the net effect on happiness is

negative, they still choose shopping over religion.[5] Another possible explanation is that consumers are misled by the immediate satisfaction derived from shopping and get the illusion that shopping would make them happier also in the long-run.

3C. Instrumental variable estimates of the effect of church attendance on happiness

In the previous sections, we provided evidence that repealing blue laws had a significant negative effect on church attendance and happiness. We provided further evidence that the effect of repealing blue laws on happiness is only among groups for which repealing blue laws reduced church attendance. We claim that the effect of repealing blue laws on happiness is through its effect on church attendance. That is, when blue laws are repealed people go to church less and therefore they become less happy. In order to provide direct evidence that church attendance has a positive causal effect on happiness, we provide instrumental variable (IV) estimates, using the repeal of blue laws as an instrument for church attendance.

Column 1 of Table 10 reports IV estimates of our basic specification. Since our instrument, the repeal dummy, varies in the state/year dimension, we clustered our standard errors at the same dimension. The results indicate that church attendance has a substantial positive effect on happiness. A one unit increase in the church attendance index increases the probability of being at least pretty happy relative to not happy by more than 7 percentage points. A limitation of this estimate is that although the repeal dummy is significant in the first stage (as indicated in Table 4), the F-statistic on the excluded instrument is slightly lower that the threshold value required by Stock and Yogo (2005) for the instruments not to be considered weak (the F-statistic on the

[5] Gruber and Mullainathan (2005) provide a thorough explanation why such behaviors are not necessarily time inconsistent but rather present-biased behaviors. That is, although the net effect on happiness of choosing more shopping over religious participation is negative (as the decrease in happiness in the long run is more substantial than the immediate happiness in the very short run), when appropriately discounted, the long-run effect may be positive.

excluded instrument in our estimation is 4.69 while the minimal critical value required by Stock and Yogo (2005) is 5.53). Consequently, inferences about the significance of the causal effect of church attendance on happiness cannot be reliably based on conventional t-statistics. Therefore, to test the significance of the causal effect of church attendance on happiness we use the Anderson and Rubin (1949) test. This test is robust to weak instruments and also takes into account the clustered structure of our data. The results indicate that church attendance is significant at the 10% level. Thus, although the instruments are not as strong as one might like, the AR test indicates that they are strong enough to provide significant results.

Column 2 (Table 10) shows results when state specific time trends are added to the estimate. The results indicate that the magnitude of the effect of church attendance on happiness increases. In addition, the AR test indicates that the causal effect of church attendance on happiness is significant at the 5% level. However, adding a placebo dummy to the estimate slightly reduces the magnitude and the significance of the church attendance effect. In this estimate, it is about significant at the 10% level (Column 3).

Finally, in order to show that our IV estimates are not sensitive to omitted individual or state characteristics, we re-estimated the model without individual and state controls. The results indicate a slightly stronger effect of church attendance on happiness. Finally, we also report IV estimates among females. The results show that the effect of church attendance on happiness among females is much larger and more significant than in the whole population (Table 10). This finding is consistent with the well-noted higher rate of religious attendance by women. Our results thus provide strong evidence that church attendance has a positive causal effect on happiness.

Further, our results are consistent with the hypothesis that the repeal of blue laws affects happiness through its effect on church attendance.

Discussion

The results in this study are consistent with the hypothesis that religious participation as measured by church attendance has a positive effect on happiness. An exogenous decline in church attendance brought about by the repeal in blue laws seemed to result in lower levels of happiness. This was especially the case for women who attended church.

Why might more shopping and less religion have a negative effect on happiness? We can only speculate why this is the case. However, one plausible hypothesis is that an excessive focus on materialism or consumerism provides less meaning than religion (see Schor, 1991). For example, drawing on a decade's worth of empirical data, Kasser (2002) shows that when we organize our lives around materialistic pursuits, it undermines our well-being. The reason for this is that materialistic values perpetuate feelings of insecurity, weaken the ties that bind us, and make us feel less free. Also, the late Trappist monk Thomas Merton writes that "the wrong idea of personal fulfillment is promoted by commercialism" (Steinddl-Rast, 1969). That is, some people have the illusion that materialism will make them happy. Also, it is possible that religious people are less happy when blue laws are repealed because the law no longer reflects their values. This issue is grist for future research. To be clear, although there might be several possible explanations why the repeal of blue laws has a negative effect on happiness, our IV estimates indicate that one channel certainly works through reducing church attendance.

Our results are consistent with studies that find that individuals fail to allocate their time and money in a way that maximizes their experienced utility or happiness. The idea that individuals do not necessarily pursue their experienced well-being has been around for many years. For example, in 1854 Henry David Thoreau suggested that individuals were not only not utility maximizers (although he did not use such language), but that "the mass of men lead lives of quiet desperation" (Thoreau, 1960). More recently, Galbraith (1958) argues that individuals were manipulated by advertising to serve industry's needs rather than their own. Chou, Rashad, and Grossman (2008) show that this might indeed the case for fast-food restaurant advertising directed at children. On the other hand, Benham (1972) shows how advertising can provide useful information.

Our findings are in line with several closely related studies that also indicate undesirable effects from lower church attendance brought about by repealing blue laws. Gruber and Hungerman (2008) show that repealing blue laws brought about more drinking and drug use. Gerber, Gruber, and Hungerman (2008) show that repealing blue laws has negative effects on political participation. In any case, more related studies would be useful.

Acknowledgements

We are grateful to Naomi Feldman, Daniel Hungerman, Evelyn Lehrer, and Avner Offer for their valuable comments and suggestions. We are also grateful to Daniel Hungerman and Jonathan Gruber for providing data.

References

Anderson, T. and H. Rubin. 1949. “Estimation of the Parameters of a Single Equation in a Complete System of Stochastic Equations.” Annals of Mathematical Statistics, Vol. 20, pp. 46-63.

Azzi, Corry and Ronald Ehrenberg. 1975. “Household Allocation of Time and Church Attendance.” Journal of Political Economy, Vol. 83, No. 1, pp. 27-56.

Barro, Robert J. and Rachel M. McCleary. 2003. “International Determinants of Religiosity.” NBER Working Paper 10147. Cambridge, MA: National Bureau of Economic Research.

Becker, Gary S. 1976. The Economic Approach to Human Behavior. Chicago: The University of Chicago Press.

Becker, Gary S. and Kevin M. Murphy. 2000. Social Economics. Cambridge: The Belknap Press of Harvard University Press.

Benham, Lee. 1972. “The Effect of Advertising on the Price of Eyeglasses.” Journal of Law and Economics, Vol. 15, pp. 337-352.

Chou, Shin-Yi, Inan Rashad, and Michael Grossman. 2008. “Fast-Food Restaurant Advertising on Television and it Influence on Childhood Obesity.” Journal of Law and Economics, Vol. 51, Issue 4, pp. 599-618.

Easterlin, Richard A. 1980. Birth and Fortune. New York: Basic Books.

Frank, Robert H. 1988. Passion within Reason: The Strategic Role of Emotions. New York: W.W. Norton.

Kasser, Tim. 2002, "The High Price of Materialism". Cambridge. The MIT Press.

Galbraith, John Kenneth. 1958. The Affluent Society. New York: The New American Library.

Gerber, Alan, Jonathan Gruber, and Daniel M. Hungerman. 2008. “Does Church

Attendance Cause People to Vote? Using Blue Laws' Repeal to Estimate the Effect of Religiosity on Voter Turnout." National Bureau of Economic Research Working Paper No. 14303.

Gruber, Jonathan H. 2005. "Religious Market Structure, Religious Participation, and Outcomes: Is Religion Good for You?" Advances in Economic Analysis & Policy Vol. 5, Issue 1, Article 5.

Gruber, Jonathan and Daniel M. Hungerman. 2008. "The Church Versus The Mall: What Happens When Religion Faces Increased Secular Competition?" Quarterly Journal of Economics, Vol. 123, Issue 2, pp. 831-862.

Gruber, Jonathan and Sendhil Mullainathan. 2005. "Do Cigarette Taxes Make Smokers Happier?" Advances in Economic Analysis & Policy, Vol. 5, issue 1, Article 4.

Kahneman, Daniel and Alan B. Krueger. 2006. "Developments in the Measurement of Subjective Well-Being." Journal of Economic Perspectives, Vol. 20, No. 1, pp. 3-24.

Kahneman, Daniel and Richard H. Thaler. 2006. "Utility Maximization and Experienced Utility." Journal of Economic Perspectives, Vol. 20, No. 1, pp. 221-234.

Layard, Richard. 2005. Happiness: Lessons from a New Science. New York: The Penguin Press.

Lehrer, Evelyn L. Forthcoming. Religion, Economics, and Demography. Routledge.

Laibson, David. 1997. "Golden Eggs and Hyperbolic Discounting." Quarterly Journal of Economics, Vol. 112, Issue 2.

McCleary, Rachel M. and Robert J. Barro. 2006. "Religion and Economy."

The Journal of Economic Perspectives, Vol. 20, No. 2, pp. 49-72.

Newman, Barry. Nov. 6, 2008. “Car Dealers, Believing in a Day of Rest, Still Renounce Sunday Sales.” Wall Street Journal.

Neyman, J and E.L, Scott. 1948. "Consistent estimation from partially consistent observations." Econometrica 16, 1-32.

O’Donoghue, Ted and Matthew Rabin. 1999. “Doing It Now or Later.” American Economic Review, Vol. 89, No. 1, pp. 103-124.

Offer, Avner. 2006. The Challenge of Affluence. Oxford: Oxford University Press.

Okulicz-Kazaryn, Adam. 2009. “Religiosity and Life Satisfaction.” Working Paper, Harvard University.

Schor, Juliet B. 1991. The Overworked American. Basic Books.

Steindl-Rast, David. 1969. “Recollections of Thomas Merton’s Last Days in the West.” Monastic Studies. Pine City, New York: Mount Saviour Monastery.

Stevenson, Betsey and Justin Wolfers. Happiness Inequality in the United States. NBER Working Paper 14220. Cambridge, MA: National Bureau of Economic Research.

Stock, J. and M. Yogo. 2005. “Testing for Weak Instruments in Linear IV Regressions.” In D. Andrews and J. Stock (eds.), Identification and Inference for Econometric Models. Cambridge: Cambridge University Press.

Thaler, Richard H. and Shlomo Benartzi. 2004. Save More Tomorrow: Using Behavioral Economics to Increase Employee Saving.” Journal of Political Economy, Vol. 112, No. 1, pt. 2, pp. s164-s187.

Thaler, Richard H. and H. M. Shefrin. 1981. An Economic Theory of Self-Control.” Journal of Political Economy, Vol. 89, No. 2, pp. 392-406.

Thaler, Richard H. and Cass R. Sunstein. 2003. “Libertarian Paternalism.” American

Economic Review, Vol. 93, No. 2, pp. 175-179.

Thaler, Richard H. and Cass R. Sunstein. 2009. Nudge: Improving Decisions about Health, Wealth, and Happiness. New York: Penguin Press.

Thoreau, Henry David. 1960. Walden. New York: New American Library.

Waite, Linda J. and Evelyn L. Lehrer. 2003. “The Benefits from Marriage and Religion in the United States: A Comparative Analysis.” Population and Development Review, Vol. 29, No. 2, pp. 255-275.

Table 1

Happiness and Religious Participation

Religious Services Attendance	Very Happy	Pretty Happy	Not Happy
Never	26.1%	56.5%	17.4%
Less Than 1/Year	26.5%	59.5%	14.0%
Once/Year	28.3%	59.6%	12.2%
2-3 Times/Year	29.1%	58.5%	12.4%
Once/Month	30.7%	58.0%	11.3%
2-3 Times/Month	31.8%	56.3%	11.9%
Nearly Weekly	35.9%	55.1%	9.0%
Weekly	39.4%	51.9%	8.7%
More Than Once/Week	46.7%	44.4%	8.9%
All	32.8%	55.4%	11.8%

Source: National Opinion Research Center, “General Social Survey: 1972-2004.”

Table 2

Happiness by Decade for Respondents 25+

Decade	Very Happy	Pretty Happy	Not Happy
1970s	35.3%	52.3%	12.4%
1980s	32.3%	55.7%	12.0%
1990s	31.4%	57.0%	11.6%
2000s	32.6%	56.4%	11.0%
All	32.8%	55.4%	11.8%

Sources: National Opinion Research Center, “General Social Survey: 1972-2004.”

Table 3. Summary statistics				
Variable	Mean	Standard Deviation	Min	Max
Happy	0.89	0.31	0	1
Church attendance	4.37	2.57	0	8
Repeal	0.81	0.39	0	1
Income (000$)	26.48	24.66	0	162.61
Income missing	0.09	0.29	0	1
Gender (male=1)	0.42	0.49	0	1
College Graduate	0.17	0.38	0	1
Some college	0.21	0.41	0	1
High school dropout	0.27	0.44	0	1
Age (years)	46.06	17.78	18	89
African-American	0.10	0.30	0	1
Hispanic	0.03	0.18	0	1
Catholic	0.24	0.42	0	1
Fundamentalist	0.37	0.48	0	1
Dummy for living in one of the twelve largest metropolitan areas	0.10	0.30	0	1
Dummy for living in one of the thirteenth to one hundredth metropolitan areas	0.32	0.46	0	1
West	0.06	0.24	0	1
East	0.14	0.34	0	1
North	0.32	0.47	0	1
Married	0.60	0.49	0	1
State disposable income per capita (000$)	15.37	6.53	4.03	29.09
State rate of insured unemployment	2.50	1.39	0.7	8.4
State percent black	10.97	6.33	0.39	30.37
State Percent foreign born	4.79	3.78	0.66	15.94

Table 4. OLS estimates of the effect of Blue Laws' repeal on church attendance					
	Whole sample			Females	Males
	(1)	(2)	(3)	(4)	(5)
	Basic	Time trend	Placebo dummy	Basic	Basic
Repeal dummy (state clusters) (state/year clusters)	-0.23 (-2.97) (-2.17)	-0.31 (-2.58) (-2.17)	-0.28 (-2.08) (-2.25)	-0.28 (-3.69) (-2.02)	-0.19 (-1.63) (-1.34)
Placebo dummy (state clusters) (state/year clusters)			-0.11 (-0.66) (-0.88)		
Individual Controls	Yes	Yes	Yes	Yes	Yes
State dummies	Yes	Yes	Yes	Yes	Yes
Year dummies	Yes	Yes	Yes	Yes	Yes
Time Trends	No	Yes	No	No	No
Observations	10,980	10,980	10,980	6,357	4,623
R squared	0.13	0.13	0.13	0.11	0.13

Notes: Clustered t-statistics in parentheses. Individual controls include income, age, age squared, race, ethnicity, gender, educational attainment, marital status, religion (Catholic, Fundamentalist), region dummies (west, east and north), a dummy for living in one of the twelve largest metropolitan areas, a dummy for living in one of the thirteenth to one hundredth metropolitan areas and income missing. All regressions include the following state-year variables: state percent African-Americans, state percent foreign born, state disposable income per capita. For each state, we omitted the observations in the year the blue laws were repealed.

Table 5. Naïve logit estimates of happiness			
	(1)	(2)	(3)
	Whole Sample	Males	Females
Church attendance (state clusters) (state/year clusters)	0.10 (7.62) (7.26)	0.12 (4.59) (5.47)	0.08 (6.42) (4.58)
State dummies	Yes	Yes	Yes
Year dummies	Yes	Yes	Yes
Observations	10,980	4,623	6,357
Pseudo R squared	0.10	0.10	0.10

Notes: Clustered t-statistics in parentheses. Individual controls include income, age, age squared, race, ethnicity, gender, educational attainment, marital status, religion (Catholic, Fundamentalist Protestant), region dummies (west, east and north), a dummy for living in one of the twelve largest metropolitan areas, a dummy for living in one of the thirteenth to one hundredth metropolitan areas and income missing. All regressions include the following state-year variables: state percent African-Americans, state percent foreign born, state disposable income per capita. For each state, we omitted the observations in the year the blue laws were repealed.

Table 6. Logit estimates of the effect of repealing Blue Laws on happiness

	Whole sample			Females			Males		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Basic	Time trend	Placebo dummy	Basic	Time trend	Placebo dummy	Basic	Time trend	Placebo dummy
Repeal dummy (state clusters) (state/year clusters)	-0.19 (-1.83) (-1.70)	-0.33 (-2.34) (-2.10)	-0.23 (-2.93) (-1.62)	-0.49 (-3.38) (-3.20)	-0.57 (-2.50) (-2.69)	-0.62 (-4.49) (-3.37)	0.16 (0.91) (0.87)	-0.02 (-0.08) (-0.08)	0.25 (1.43) (1.16)
Placebo dummy (state clusters) (state/year clusters)			-0.07 (-0.58) (-0.44)			-0.26 (-1.20) (-1.25)			0.18 (0.77) (0.71)
Individual Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
State dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time Trends	No	Yes	No	No	Yes	No	No	Yes	No
Observations	10,980	10,980	10,980	6,357	6,357	6,357	4,623	4,623	4,623
R squared	0.09	0.09	0.09	0.10	0.10	0.10	0.09	0.09	0.09

Notes: Clustered t-statistics in parentheses. Individual controls include income, age, age squared, race, ethnicity, gender, educational attainment, marital status, religion (Catholic, Fundamentalist), region dummies (west, east and north), a dummy for living in one of the twelve largest metropolitan areas, a dummy for living in one of the thirteenth to one hundredth metropolitan areas and income missing. All regressions include the following state-year variables: state percent African-Americans, state percent foreign born, state disposable income per capita. For each state, we omitted the observations in the year the blue laws were repealed.

Table 7. Logit estimates of the effect of repealing Blue Laws on happiness among church attendees and non-attendees

	Whole sample			Attendees			Non-attendees		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Basic	Time trend	Placebo dummy	Basic	Time trend	Placebo dummy	Basic	Time trend	Placebo dummy
Repeal dummy (state clusters) (state/year clusters)	-0.19 (-1.83) (-1.70)	-0.33 (-2.34) (-2.10)	-0.23 (-2.93) (-1.62)	-0.26 (-2.14) (-2.08)	-0.30 (-1.63) (-1.72)	-0.32 (-3.80) (-2.11)	0.25 (0.75) (0.62)	0.05 (0.12) (0.08)	0.31 (0.90) (0.57)
Placebo dummy (state clusters) (state/year clusters)			-0.07 (-0.58) (-0.44)			-0.11 (-0.72) (-0.60)			0.12 (0.56) (0.26)
Individual Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
State dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time Trends	No	Yes	No	No	Yes	No	No	Yes	No
Observations	10,980	10,980	10,980	9,978	9,978	9,978	979	979	979
R squared	0.09	0.09	0.09	0.09	0.10	0.09	0.13	0.14	0.13

Notes: Clustered t-statistics in parentheses. Individual controls include income, age, age squared, race, ethnicity, gender, educational attainment, marital status, religion (Catholic, Fundamentalist), region dummies (west, east and north), a dummy for living in one of the twelve largest metropolitan areas, a dummy for living in one of the thirteenth to one hundredth metropolitan areas and income missing. All regressions include the following state-year variables: state percent African-Americans, state percent foreign born, state disposable income per capita. For each state, we omitted the observations in the year the blue laws were repealed.

Table 8. Logit estimates of the effect of repealing Blue Laws on happiness among women

	Attendees			Non-attendees		
	(1)	(2)	(3)	(4)	(5)	(6)
	Basic	Time trend	Placebo dummy	Basic	Time trend	Placebo dummy
Repeal dummy (state clusters) (state/year clusters)	-0.56 (-3.69) (-3.40	-0.64 (-2.25) (-2.58)	-0.69 (-4.60) (-3.62)	0.56 (1.12) (0.97)	1.06 (1.59) (1.41)	0.50 (0.98) (0.64)
Placebo dummy (state clusters) (state/year clusters)			-0.25 (-0.94) (-1.10)			-0.10 (-0.28) (-0.15)
Individual Controls	Yes	Yes	Yes	Yes	Yes	Yes
State dummies	Yes	Yes	Yes	Yes	Yes	Yes
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes
Time Trends	No	Yes	No	No	Yes	No
Observations	5,822	5,822	5,822	526	526	526
R squared	0.10	0.11	0.10	0.15	0.18	0.15

Notes: Clustered t-statistics in parentheses. Individual controls include income, age, age squared, race, ethnicity, gender, educational attainment, marital status, religion (Catholic, Fundamentalist), region dummies (west, east and north), a dummy for living in one of the twelve largest metropolitan areas, a dummy for living in one of the thirteenth to one hundredth metropolitan areas and income missing. All regressions include the following state-year variables: state percent African-Americans, state percent foreign born, state disposable income per capita. For each state, we omitted the observations in the year the blue laws were repealed.

Table 9. Sensitivity of our estimates to the inclusion of individual and state controls

	Church attendance			Happiness		
	(1)	(2)	(3)	(4)	(5)	(6)
	Basic	Time trend	Placebo dummy	Basic	Time trend	Placebo dummy
With individual and state controls (10,980 observations)	-0.23 (-2.17)	-0.31 (-2.17)	-0.28 (-2.25)	-0.19 (-1.70)	-0.33 (-2.10)	-0.23 (-1.62)
Without individual and state controls (11,010 observations)	-0.25 (-2.30)	-0.30 (-2.08)	-0.27 (-2.27)	-0.25 (-2.26)	-0.33 (-2.61)	-0.29 (-2.24)

Notes: State/year clustered t-statistics in parentheses. For each state, we omitted the observations in the year the blue laws were repealed.

Table 10. IV estimates of the effect of church attendance on happiness					
	(1)	**(2)**	**(3)**	**(4)**	**(5)**
Sample	Basic	Time trend	Placebo	Basic	Basic (Female)
Church attendance	0.072	0.089	0.066	0.094	0.153
Anderson-Rubin F-statistic of significance of church attendance (State/year clustered, P-value in	2.75 (0.096)	4.34 (0.038)	2.55 (0.111)	4.86 (0.028)	11.53 (0.001)
Individual controls	+	+	+	-	+
State and Year dummies	+	+	+	+	+
Time trends	-	+	-	-	-
Placebo	-	-	+	-	-
Number of observations	10,980	10,980	10,980	11,010	6,357
First stage F-statistic on excluded instruments (state/year clustered)	4.69	4.77	5.04	5.30	4.10

Note: All F-statistics are clustered at the state/year level. Since the repeal dummy varies in the state/year dimension, we must cluster our standard errors at this dimension as well.