

Pornography, Religion, and the Happiness Gap: Does Pornography Impact the Actively Religious Differently?

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Club good models developed by economists suggest that the club provides a benefit to members by fostering the provision of semi-public goods. In the case of religion, churches create enforcement mechanisms to reduce free riding. Consequently, the psychic costs of deviant activity should be higher for individuals who belong to religious groups with strong social norms. Data from the General Social Survey are used to examine whether the cost of using pornography is greater for the more religiously involved. We measure the cost of using pornography as the happiness gap or the gap between the average happiness reported by individuals who do and individuals who do not report using pornography. The happiness gap is larger for individuals who regularly attend church and who belong to religious groups with strong attitudes against pornography.

Keywords: pornography, happiness, church attendance, club good, cognitive dissonance.

INTRODUCTION

Research on the link between religion and positive outcomes is expansive. Religious participation is associated with increases in education, income, and marriage and decreases in welfare collection and divorce (Gruber 2005). Those who regularly attend church tend to live longer lives (Hummer et al. 1999), engage in less adolescent deviant behavior (Patock-Peckham et al. 1998), and report higher levels of life satisfaction and happiness (Myers and Diener 1995).

One way religious groups might promote these outcomes for their members is through the creation of club goods (Iannaccone 1992). The key insight from club good models is that the club provides a benefit to members by fostering the provision of semi-public goods, such as emotional support, role models, and church resources (Dehejia, DeLeire, and Luttmer 2007). In order to reduce the free rider problem inherent in all public goods, churches create enforcement mechanisms (e.g., stigmatization, excommunication, etc.) for members who do not fulfill their obligations to the group or maintain the expected standards of conduct. As a result, the psychic costs of engaging in a deviant activity should be higher for individuals who belong to religious groups with stronger social norms against that activity (Clark and Lelkes 2006).

One activity that religious groups may be particularly concerned about is pornography use. Attitudes about pornography play an important role in the pro-family values espoused by many religious groups. For example, almost half of the measures used by Hertel and Hughes (1987) to measure pro-family values are directly related to pornography. In addition, religious groups have led the fight against pornography at both the community and national level (Jelen 1986; Swatos 1988; Wood and Hughes 1984).

Social norms about pornography use may be a particularly important aspect of the club-good nature of religious groups. Sherkat and Ellison (1997) find that one reason for the strong

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opposition to pornography among various religious groups is concern about social contamination, where the immoral actions of one person can have consequences on others. Another reason for the strong opposition to pornography by religious groups is that pornography use can be destructive to the marriages and families that often form the basic unit supporting the congregation (Manning 2006).

Past research has documented the fact that individuals who use pornography report lower levels of overall happiness or happiness with their marriage (Doran and Price 2009; Stack, Wasserman, and Kern 2004).¹ In this article, we examine whether the cost of using pornography is greater for individuals who have a higher level of religious participation and whether this cost is even larger for individuals who belong to denominations that have stronger attitudes about pornography. We measure the costs of using pornography based on the happiness gap associated with using pornography. This happiness gap is the difference in the average happiness reported by individuals who do and who do not report using pornography. We find that this happiness gap is larger among individuals who regularly attend church (more than once a month). We also find that the happiness gap is larger among individuals who belong to a denomination in which a higher fraction of members report that pornography should be illegal or that pornography leads to a decline in morals.

We also document the gender differences in reported pornography use and provide some descriptive information about how these differences have changed over the four decades of data that are included in our sample. Since there are notable differences in reported pornography use by gender, we report most of the results in this article separately by gender. One of the surprising findings of this article is that while the prevalence of reported pornography use is much higher for men, the estimated relationships between church attendance, reported pornography use, and happiness are very similar between men and women.

METHOD

We use data from the General Social Survey (GSS), a nationally representative sample of adults that has been conducted annually since 1972. The GSS includes questions about the respondent's age, race, education, marital status, and presence of children. In our analysis age is rescaled to 10-year increments, education is coded as years of school completed, marital status is coded as a binary variable indicating whether the individual is married, and presence of children is coded as a binary variable. The GSS also includes questions about frequency of church attendance and religious affiliation. As our primary measure of church attendance, we use an indicator of whether the individual attends church at least once a month (which is true for about 42.9 percent of the sample). For religious affiliation, we use the same division of religious groups used by Steensland et al. (2000), which are Catholic, evangelical Protestant, mainline Protestant, black Protestant, Jewish, other religions, and no religious affiliation.

Since 1973, the GSS has consistently asked whether the respondent has viewed an X-rated movie in the last year. Over the period we examine in this study, there have been dramatic technological advances that have changed the way in which individuals can access pornography. In Figure 1, we plot the fraction of respondents in our sample who report viewing an X-rated movie for each year (separately by gender). A surprising pattern from this figure is that the rates of reported pornography use (based on this X-rated movie question) have not changed dramatically over time. Over this period, it has been between 25 and 35 percent for men and between 15 and

¹ There has also been considerable research documenting the relationship between religious participation and happiness. While the majority of this literature has documented a positive relationship between religiosity and happiness, there have been other studies that find no relationship (Lewis and Cruise 2006).

Figure 1
Reported pornography use by gender over time; fraction of men and women who report having watched an X-rated movie in the last year



20 percent for women, with a general increase for both groups. This figure may even overstate the increase in pornography use since this measure only includes video-based pornography and there have been large shifts from print-based to video-based forms of pornography during this period.

One explanation for the small increase in reported pornography use over time is that each new technology brings with it innovations that allow consumers to protect themselves from accessing pornography. For example, the effect of the Internet on pornography use was likely blunted by increased precautions by individuals and families, such as putting computers in open areas of the home, changes in default settings on Internet browsers that made it less likely to inadvertently stumble on a pornography website, legal restrictions on pornography use at work, and increased demand for products to filter content while using the Internet.

One advantage of using a question related to viewing an X-rated movie is that while the technological advances have changed the delivery system by which individuals access these films (theaters, video tapes, cable television, and Internet), the nature of the media has stayed the same (all of these technologies provide different ways of watching a video). One potential issue with using an X-rated movie question after the advent of the Internet is that some respondents might not consider shorter pornographic Internet clips to be “movies.” As a robustness check, we estimate our main results for the subset of observations prior to 1995 and find results that are similar to those for the full sample (though slightly larger in magnitude for women and with less statistical precision for men).

The outcome measure is a self-reported measure of happiness. There is a growing body of literature documenting that these types of self-reported happiness measures can be a valid and important means of assessing individual well-being (Frey and Stutzer 2002). An indicator of whether the individual reports being very happy (rather than pretty happy or not too happy) is used for convenience of interpretation. This dichotomous variable approach has been used by Davis (1982), DeMaris (1995), Gruber and Mullainathan (2005), and Stark and Maier (2008). Other approaches used in research about the relationship between religiosity and happiness include using an ordered-probit or ordered-logit model (Ellison and Fan 2008; Moghaddam 2008) or treating the happiness scale as a continuous variable ranging from 1 to 3 (Childs 2010). The main results are qualitatively the same when using these alternative empirical approaches.

Table 1: Summary statistics

	Full Sample		Watched X-Rated Movie		Regularly Attends Church	
	Male	Female	Male	Female	Male	Female
Reports being very happy	.318	.327	.254	.288*	.399	.377*
Watched X-rated movie	.303	.167*	—	—	.191	.112*
Regularly attends church	.355	.486*	.225	.326*	—	—
Porn should be illegal	.297	.482*	.108	.220*	.451	.597*
Porn leads to decline in morals	.550	.687*	.352	.467*	.698	.780*
Age	44.50	45.80*	36.90	36.00*	47.2	48.6*
Black	.111	.143*	.152	.193*	.136	.179*
Other race	.043	.039	.047	.048	.043	.036
Married	.596	.518*	.463	.510*	.704	.553*
Has children	.673	.761*	.558	.706*	.755	.801*
Evangelical Protestant	.237	.255*	.184	.204*	.330	.311*
Mainline Protestant	.204	.227*	.167	.189*	.191	.209*
Black Protestant	.072	.100*	.089	.128*	.095	.128*
Catholic	.248	.249	.268	.250	.289	.276
Jewish	.021	.019	.026	.024	.007	.006
Other religion	.054	.051	.055	.051	.067	.053*
No religion	.125	.071*	.170	.120*	.011	.006*
N	12,888	16,536	3,901	2,768	4,577	8,039

Note: The sample includes all respondents from the General Social Survey, 1973–2006 for those years in which the question about watching an X-rated movie was asked. The question about whether pornography leads to a breakdown in morals was only asked in 1973–1994 and so the sample sizes for that variable are about 30 percent smaller.

**p* < .05.

Table 1 reports the mean values of each of the key variables used in the analysis. The full-sample includes 29,424 respondents who responded to the survey between 1973 and 2008. The primary restriction for inclusion in the sample is whether a respondent answered a question about having seen an X-rated movie in the last year. There were five years that did not include the X-rated movie question in the survey (1972, 1974, 1977, 1982, and 1985), and starting in 1988, only a subset of the respondents were asked the question (about a third of respondents). Among those respondents who were asked this question, the nonresponse rate was extremely low (less than 1 percent).

Table 1 also provides the mean values of each key measure for respondents who reported seeing an X-rated movie in the last year and those who regularly attended church. These raw descriptive comparisons indicate that both men and women who reported watching X-rated movies were less likely to report being very happy than the sample average while regular church attendants were more likely to report being very happy.

RESULTS

Church Attendance and Pornography Use

We begin by examining the relationship between church attendance and self-reported pornography use. All of our analyses include year and region fixed effects and control for basic demographic information of the respondent (i.e., age, gender, race, and education). For this analysis we use a logistic regression and report all of the results as a log odds ratio. All of the results are

Table 2: Factors related to having seen an X-rated movie in the past year (odds ratios from logistic regression); robust standard errors in parentheses

	Men			Women		
	(1)	(2)	(3)	(1)	(2)	(3)
Regularly attends church	.438** (.021)	.453** (.022)	.472** (.023)	.514** (.024)	.537** (.026)	.535** (.026)
Age (10s)	.670** (.052)	.683** (.053)	.809* (.069)	.944 (.081)	.963 (.084)	.908 (.085)
Age squared	.997 (.008)	.995 (.008)	.980* (.009)	.958** (.009)	.957** (.009)	.962** (.010)
Black	1.813** (.120)	1.824** (.173)	1.723** (.165)	1.510** (.091)	1.461** (.133)	1.454** (.134)
Other race	.857 (.087)	.820 (.085)	.827 (.086)	1.057 (.115)	1.054 (.116)	1.051 (.116)
Years of education	1.017* (.007)	1.012 (.007)	1.012 (.007)	.996 (.008)	.992 (.008)	.995 (.009)
Mainline Protestant		1.164* (.080)	1.147* (.079)		1.108 (.078)	1.111 (.078)
Black Protestant		1.168 (.142)	1.146 (.140)		1.156 (.130)	1.160 (.131)
Catholic		1.463** (.094)	1.423** (.091)		1.169* (.078)	1.175* (.079)
Jewish		1.805** (.264)	1.771** (.261)		1.604** (.254)	1.603** (.254)
Other religion		1.201 (.122)	1.180 (.120)		1.013 (.111)	1.016 (.111)
No religious affiliation		1.350** (.101)	1.286** (.097)		1.374** (.121)	1.389** (.123)
Married			.695** (.035)			1.006 (.049)
Children			1.013 (.055)			1.101 (.063)
<i>N</i>	12,888			16,536		

Note: The omitted religious affiliation is evangelical Protestant and the omitted racial group is white. Each regression also includes year and region fixed effects.

* $p < .05$, ** $p < .01$.

reported separately for men and women. We also test the sensitivity of the results to controlling for denominational affiliation and indicators for marriage and parenthood.

Results for the basic specification are found in the first column of Table 2. Men who attend church regularly are 56 percent less likely to report seeing an X-rated movie in the last year (the corresponding difference for women 49 percent). These estimated differences only change slightly when controls for religious denomination are included.² The coefficients on the religious affiliation variables indicate that, controlling for demographic characteristics, the evangelical

² In addition to including a separate dummy variable for each of the religious groups listed in Table 1, we also include a dummy variable for whether the individual left this particular question missing (which was the case for 3.1 percent of the sample of individuals who provided information about the other variables we use in our analysis).

Table 3: Differences in fraction of respondents who report being very happy by gender, church attendance, and pornography use

Church Attendance	Men			Women		
	X-Movie	No X-Movie	Diff	X-Movie	No X-Movie	Diff
Less than monthly	.239	.294	.054**	.280	.279	-.001
At least monthly	.305	.422	.117**	.306	.386	.080**
			-.063**			-.079**

Note: The number reported in each cell is the fraction of people in that group that report being very happy. The bottom right number for each gender is the difference-in-difference estimate.
p* < .05, *p* < .01.

Protestants are the least likely to report they had seen an X-rated movie, followed by mainline Protestants and black Protestants.

Finally, controls for the individual’s marital status and whether he or she has children are included in the third model. We do not include these variables in our basic set of demographic variables, since marital status and fertility are likely endogenous outcomes that are influenced by regular church attendance (Heaton 1986; Thornton, Axinn, and Hill 1992). However, these are included in the final column to control for one of the channels through which religious participation may influence pornography use. Again, these additional controls have very little effect on the estimated relationship between church attendance and reporting pornography use, providing some evidence that the relationship may not be driven by an omitted variable bias (Altonji, Elder, and Taber 2005).

These results indicate that there is a relationship between reported pornography use and religious participation, which matches the results of past studies (Carroll et al. 2008; Nelson, Padilla-Walker, and Carroll 2010; Stack, Wasserman, and Kern 2004). The nature of this relationship, however, is not clear. It is possible that attending church makes one less likely to consume pornography, or it could also be that those who are less disposed to consuming pornography are more disposed to attending church. It is also possible that actively religious individuals feel far more compelled to underreport consuming pornography.

Pornography Use, Church Attendance, and Happiness

While the results above provide insight into the association between church attendance and reported pornography use, our primary focus is whether the *cost* of using pornography is greater for individuals who have higher levels of religious participation. This cost is measured by examining the difference in happiness between individuals based on whether or not they report using pornography.

In Table 3, respondents are divided into eight groups based on gender, whether respondents regularly attend church, and whether they report having seen an X-rated movie in the last year. Table 3 reports the fraction of individuals within each group that reports being very happy. Men who attend church regularly and have not reported seeing an X-rated movie in the last year report the highest level of happiness (42.2 percent). Men who do not attend church regularly and report watching an X-rated movie in the last year report the lowest level of happiness (23.9 percent).

The happiness gap associated with using pornography for both individuals who do and do not regularly attend church is reported in the third and sixth columns of Table 3. The happiness gap, or the difference in the fraction of men who report being very happy when comparing pornography users and nonpornography users, is 11.7 percentage points for regular church attendees and only 5.4 percentage points for individuals who do not attend church regularly. The bottom right number for men represents a simple difference-in-differences estimate that indicates the happiness gap

Table 4: Factors associated with being very happy by gender of respondent

	Men				Women	
<i>A. Linear Probability Model</i>						
X-movie * regularly attends church	−.063** (.020)	−.064** (.020)	−.054** (.020)	−.074** (.020)	−.074** (.020)	−.065** (.020)
X-movie	−.026* (.010)	−.024* (.010)	−.013 (.010)	.010 (.012)	.011 (.012)	.008 (.012)
Regularly attends church	.122** (.010)	.117** (.011)	.096** (.011)	.112** (.008)	.110** (.008)	.095** (.008)
<i>B. Logistic Regression (Odds Ratio)</i>						
X-movie * regularly attends church	.790* (.077)	.785* (.077)	.815* (.081)	.714** (.069)	.713** (.070)	.738** (.073)
X-movie	.865** (.047)	.874* (.048)	.921 (.051)	1.047 (.063)	1.054 (.064)	1.038 (.064)
Regularly attends church	1.724** (.079)	1.681** (.080)	1.545** (.075)	1.679** (.063)	1.661** (.065)	1.583** (.063)
Demographic controls	✓	✓	✓	✓	✓	✓
Religious affiliation		✓	✓		✓	✓
Family controls			✓			✓
Observations	12,888	12,888	12,888	16,536	16,536	16,536

* $p < .05$, ** $p < .01$.

is greater for regular church attendance by 6.3 percentage points. This estimate is statistically significant at the 1 percent level.

Among women who do not attend church regularly, there is a .1 percent difference in the fraction who report being very happy when comparing pornography users and nonusers; however, for women who regularly attend church, the happiness gap is 8 percentage points. This provides a difference-in-differences estimate for women that is slightly larger than the estimate for men. It is also statistically significant at the 1 percent level.

Table 4 reports the same type of comparisons using a regression-based approach. The results from a linear probability model are reported in panel A. The coefficients are the percentage point difference in the likelihood of the respondent reporting that he or she is very happy. The odds ratios from a logistic regression are reported in panel B and can be interpreted as the percent difference in the likelihood of the respondent reporting that he or she is very happy.

The regression-based approach allows us to control for the characteristics of each group that may help explain some of the differences in reported happiness. We start by controlling for basic demographic variables such as age, race, and education. Men who report using pornography are about 2.6 percentage points less likely to report being very happy and this happiness gap is 6.3 percentage points larger for men who regularly attend church.

Both of these gaps shrink as the additional controls for religious denomination, marriage, and parenthood are added to the model. The happiness gap for men who do not attend church is only 1.3 percentage points (and no longer statistically significant), but the happiness gap for men who regularly attend church is 5.4 percentage points larger, for a combined happiness gap for these men of 6.7 percentage points (see third column). These results are very similar for women, though the magnitudes are slightly larger.

Table 5: Differences in attitudes about pornography across religious groups (percent)

	Pornography Should be Illegal for Everyone	Pornography Leads to a Breakdown in Morals
Evangelical Protestant	53.5	74.8
Other religion	44.3	68.5
Mainline Protestant	42.3	63.8
Catholic	37.2	61.7
Black Protestant	32.6	56.5
Jewish	19.9	38.2
No religious affiliation	18.7	34.5
<i>N</i>	29,041	18,103
Years included	1973–2006	1973–1994

Note: Each cell provides the fractions of individuals who responded affirmatively to the statement listed in the column heading.

In Panel B, our results using a logistic regression indicate that, controlling for religious denomination, marriage, and parenthood, men who report using pornography are 8 percent less likely to report being very happy (though this difference is not statistically significant). The interaction term indicates that this difference is even larger for men who regularly attend church (about 19 percent larger). For women, reported pornography use is not associated with difference in happiness among women who do not regularly attend church but among those who regularly attend church, women who report using pornography are 26 percent less likely to report being very happy.

One concern about these estimates is the possibility of some omitted variable (such as an unsatisfied romantic relationship) that is affecting both the happiness of the individual as well as their decision to use pornography. This issue of omitted variable bias would be of greater concern if we were primarily focused on the direct effect of pornography use on happiness. Although we do report the coefficient for the main effect of using pornography, we are primarily focused on whether the difference in happiness is larger for individuals who regularly attend church. The primary assumption in using this approach is that the relationship between the omitted variables and happiness is similar for both individuals who regularly attend church and those who don't.

One way to address this concern is to include the omitted variable as an additional control in the regression. There is a question in the GSS about how happy the person is about their marriage. This question was asked for most years between 1973 and 1987 and includes about 8,385 observations. Including this control in the regression in Table 4 reduces the size of the interaction term in the linear probability model for women by about a third but has no effect on the coefficient for men. Even with this additional control, the magnitude of the coefficient continues to be rather large and similar to what we find in our original specification for the full sample.

Differences Between Religious Groups

One final question is whether the relationship observed between church attendance, pornography use, and happiness is strongest for members of religious groups with the strictest attitudes about pornography. The GSS provides two questions related to attitudes towards pornography. We use these questions to provide some insight about which religious groups have the strongest social norms against the use of pornography. Table 5 reports the fraction of respondents from

Table 6: Difference in estimated effect based on religious affiliation (robust standard errors in parentheses)

	Evangelical Protestants	Mainline Protestants	Black Protestants	Catholic	Jewish	Other	None
X-movie * attends	−.090** (.029)	−.097** (.034)	−.024 (.036)	−.048 (.026)	.138 (.130)	−.008 (.061)	.111 (.110)
X-movie past year	−.015 (.018)	.001 (.018)	−.001 (.025)	.004 (.016)	.005 (.047)	−.012 (.033)	−.020 (.018)
Regularly attends church	.101** (.013)	.112** (.014)	.087** (.020)	.072** (.013)	.166* (.069)	.101** (.027)	.026 (.053)
Mean	.368	.359	.223	.314	.318	.321	.247
R-squared	.074	.063	.052	.061	.150	.100	.042
N	7,265	6,374	2,585	7,313	584	1,538	2,790

Note: The omitted religious affiliation is evangelical Protestant. Each regression also includes year and region fixed effects as well as all of the demographic and family controls from Table 2.

* $p < .05$, ** $p < .01$.

each religious group that answers yes to these two questions: “Should pornography be illegal for everyone?” and “Does pornography lead to a breakdown in moral values?”

Across both measures, evangelical Protestants consistently report the strongest attitudes against pornography. Other religious groups that have strong attitudes against pornography include mainline Protestants, Catholics, and members of the “other” religion category. The two groups that have the weakest attitudes about pornography include Jews and individuals with no religious affiliation.

Table 6 reports estimated levels of the happiness gap associated with pornography use for each religious group in Table 5. The reported happiness gap is largest for those groups that have the strongest attitudes against pornography use, with results even going in the opposite direction (though not statistically significant) for those groups that have the weakest opposition to pornography use. To provide additional power, since we are splitting the data into smaller groups, these estimates are based on a sample in which both men and women are pooled together.

DISCUSSION

Our results suggest that while reported pornography consumption is correlated with lower levels of reported happiness on average, this relationship is the strongest among individuals who regularly attend a religious denomination with strong attitudes against the use of pornography. While men are much more likely to report using pornography, the relationship between church attendance, pornography use, and happiness is similar for both men and women.

Although we consistently find that individuals who attend church and belong to denominations with stronger opinions about pornography experience lower levels of relative happiness, there are some limitations to our findings. First, because the data are cross-sectional, all results are necessarily based on group-level comparisons. Data with longitudinal observations on individuals could enable researchers to examine changes in happiness when individuals start to use pornography and whether this change differs based on whether the individual regularly attends church. Second, our measure of reported pornography use provides little information about frequency of pornography use. This limits the analysis to a binary distinction between individuals based on whether they have seen an X-rated movie in the last year. This limitation prevents us from looking at whether the differences observed would vary based on how much the person is using pornography. Third, proxies for the social norms of denominations are based on the survey

responses related to pornography use provided by members of each broad religious group. A better measure of social norms might include the stated beliefs of the religious groups or the messages that are commonly shared with the congregations related to pornography.

Perhaps the most important area of further research is establishing the causal link between church attendance, pornography use, and happiness. Explanations of these relationships should address both why active members who report consuming pornography have greater disparity in reported happiness than others and why religious organizations are structured in ways such that these disparities exist. On one hand, behavioral models such as cognitive dissonance seem to answer why active church members experience greater reductions in happiness when they consume pornography. On the other hand, a model of club goods can help explain why churches, in spite of having a vested interest in the well-being of their members, would impose psychic costs on members who violate expected standards of conduct.

One difference between the club good model and cognitive dissonance is whether the psychic costs are imposed by the religious group on the individual or whether the individual imposes the psychic costs on himself or herself. Although we are unable to separate the source of such psychic costs, operationally both will create a similar rationale for individuals to choose to participate in religious groups—to raise the cost of bad behavior. This practice of raising the costs of a targeted behavior is similar to the type of precommitment devices that have been successful in promoting positive financial or health decisions (Ashraf, Karlan, and Yin 2006; Giné, Karlan, and Zinman 2010). Viewing churches as clubs and their standards of conduct as commitment devices helps explain why it may be in the best interest both for churches and members of churches to hold strict positions on activities such as pornography.

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