


Explaining Abortion Attitudes:

Competing Reproductive Strategies and the Welfare State

Dong-Eun (Dara) Lee



Introduction

January 22nd is a strange day for many cities across the United States. For the past forty years, the anniversary of the landmark decision to legalize abortion in *Roe v. Wade* has drawn in waves of impassioned activists to the streets to voice their concerns about the moral state of the nation. As pro-life and pro-choice camps butt heads in a national debate that has remained center-stage after all these years, one can't help but wonder what all the fuss is about.

A closer investigation of what informs abortion attitudes is worthwhile because the American abortion debate is as resilient as it is impactful. A quick skimming of national headlines over the years indicates that abortion views in the United States are mired in seemingly permanent conflict. Activists on either side are engaged in a debate that pits two arguably unquestionable values against one another. In fact, Gallup polling shows that pro-life or pro-choice identification of survey respondents have remained split fairly evenly down the middle over the last few years, with little sign of convergence (Saad 2012). When abortion is framed as a choice between the right to life and the right to liberty, can one value ever successfully come out on top? It seems not. Does that matter? Absolutely. In the 2012 election, 45% of registered voters responded that they considered a candidate's position on abortion as one of many important factors in determining their vote for major offices, along with the 17% who responded that they would only vote for a candidate who shared their views on abortion (Saad 2012). It is clear that abortion informs much of American politics. But is it clear that views on abortion are informed solely by considerations of life versus liberty?

The purpose of this paper is to explain abortion attitudes not through unmovable ideology, but through the pursuit of self-interest. How does the availability of abortion advance the interests of pro-choice individuals? And conversely, how does the restriction of abortion advance the interests of pro-life individuals? I will be tackling these questions through the lens of evolutionary psychology to say that people choose their positions on the abortion debate to defend their respective reproductive strategies. The findings in this paper aim

to add to our understanding of public opinion on abortion by suggesting an association between the strength of the welfare state and abortion attitudes.

Before moving to a description of the methodology used to support the link between these two concepts, it would be prudent to review existing literature on the causes of public opinion on abortion.

Literature Review

For the last few decades, social scientists have set out in various different ways to explain causes of abortion attitudes. Common themes found among the existing literature will be outlined in this section, along with an evaluation as to how convincing they are.

Demographic Predictors

A number of the studies that find trends in abortion attitudes point to the demographics of a population as a significant predictor in prevailing abortion attitudes. A demographic characteristic that has been often cited is that of race. For example, McCormick (1975) found that among a group of 200 women surveyed for their views on the permissibility of abortion, there was consistently less acceptance of abortion among the black respondents. Race was also significantly related to all other independent variables that were considered, which included size of family, religiosity, economic class, marital status, and number of children. The “race gap” in abortion attitudes narrowed between the late 1980s and early 1990s, but has reemerged over the late 1990s (Jelen and Wilcox 2003). Since then, racial explanations for abortion attitudes has fallen in popularity, but persists in the literature for its relationship with levels of religiosity and education (Carter et al. 2009).

If racial demographics can be taken to be an indicator of broader socioeconomic differences, then it could be argued that level of education is a more direct demographic predictor of abortion attitudes. Granberg and Granberg’s (1980) study on abortion trends and determinants have shown that among numerous social and demographic variables, level of education had the strongest effect, with better educated respondents most likely to favor abortion availability. Some explain this finding by arguing that education leads to a better knowledge of social norms and values (Jackman 1972). More recent studies, however, have shown that there has been a decline in the relationship between support for abortion and education (Jelen and Wilcox 2003). Another commonly cited demographic predictor for abortion attitudes is also marital status. Woodrum and Davison (1992) observed there is a marital status becomes a significant predictor of support for more restrictive abortion

laws, especially when considering views on abortion as an issue of sexual morality. However, Bolzendahl and Myers (2004) note that the differences in abortion attitudes related to marital status have also declined over time.

While studies on demographic predictors are useful in introducing macro level trends and data on abortion attitudes, the question remains as to why certain demographic characteristics are more predictive at certain times, and not at other times. It is also worth noting that when considering different demographic predictors, many studies did not (a) have a robust theoretical underpinning as to why these demographic predictors were chosen to be considered, and (b) did not explain the reasons and motivations on the individual level for identification with certain abortion attitudes.

Sociocultural Differences

Studies comparing abortion attitudes in different regions as opposed to trends over time, on the other hand, generally point to differences in how abortion is conceptualized by most people in their reference network. For example, a comparative study by Hertog and Iwasawa (2011) between abortion attitudes in Japan and the United States showed that abortion was more permissible in Japan because of the absence of Christian-inspired respect for unborn life and the initial introduction of abortion as a form of birth control in Japan. The study also pointed to Japanese moral priority placed on preventing birth outside of marriage over disapproval of abortion. Another study comparing Swedish and American abortion attitudes (Reiss 1980) points to socio-cultural differences as the source of differences. Reiss argues that relatively higher levels of state promotion of gender egalitarianism in Sweden contribute to more permissive attitudes toward sexuality.

Studies on domestic comparisons of abortion attitudes between American states have pointed to “state political cultures,” (Cook et al 1992) arising out of important differences regarding “morality policies,” (Mooney and Lee 1995) as a significant source of a person’s abortion attitudes. The link between the political culture of a state and individual attitudes toward abortion can be explained through the theories that suggest abortion is an “easy” issue. That is to say, the abortion debate has become so ingrained over a long period of time that attitudes toward abortion are “gut responses” to candidates and political parties, requiring no conceptual sophistication (Carmines and Stimson 1980). This suggests that identification with liberalism or conservatism may be closely related to prevalent abortion attitudes within a state. Along the same lines, Hussey (2011) notes that a state’s conservative or liberal leaning in its abortion policies, access to abortion providers, and public opinion on abortion influence welfare recipients within that state into making

pregnancy decisions that reflect the state's culture.

There is also broad and consistent consensus in most of the literature that levels of religiosity are one of the strongest social predictors of views on abortion. Religious preference (McIntosh et al. 1979), church attendance (Cook et al. 1992), denominational orthodoxy (Wilcox 1992), and religious commitment (Granberg and Granberg 1980) are just some of the various religious characteristics of populations that have been shown to be significantly linked to abortion attitudes. These are not very surprising finds, as religious groups such as the Catholic Church and evangelical Protestants are well known to take strong anti-abortion stances. On the other hand, there are a number of studies that also indicate that the relationship between religion and abortion attitudes may not be as simple as it seems. For example, the general trend over time has shown that the abortion debate is based less on religious terms and has become more secular since *Roe v. Wade* (Grindstaff 1994). Furthermore, polarization in abortion attitudes has not only occurred along religious lines, but also within them. Evans (2002) has shown that among mainline Protestants and Catholics, there is internal polarization of abortion attitudes.

Both international and domestic comparisons of differing abortion attitudes reveal that social and cultural differences may be a good starting point to explain variances in attitudes. However, the cultural differences considered in these studies are, for the most part, taken to be emergent. Little explanation is given as to why certain cultures have arisen in certain reference networks, and little explanation is given as to why individuals conform to their surroundings the way they do. Cultural explanations of differences in abortion attitudes, therefore, are barely skimming the surface. A deeper, more meaningful explanation is required to explain how abortion attitudes come about.

Empathy

Anderson and Fetner (2008) propose a possible non-cultural explanation of variations in abortion attitudes. They suggest that tolerant attitudes for postmaterialist issues (i.e. social issues) tend to decline as national income inequality rises and subsequent levels of generalized trust decreases. Therefore, the level of income inequality in a given setting may be able to predict the level of acceptance of abortion. The tolerance explanation of abortion attitudes, while able to explain differences in attitudes on a macro level of analysis, does not seem to give a thorough explanation as to how abortion attitudes are formed on the individual level. Explaining abortion attitudes on the individual level requires a psychological look into the cognitive processes that are behind the formation of certain abortion attitudes.

Weiner et al (2010) suggest that the attributional approach to explaining reactions to poverty can be applied to individual-level abortion attitudes. They argue that an agent conducts a moral evaluation of abortion based on whether the agent perceives the recipients of the procedure as being responsible for their plight. Such responsibility elicits anger and blame, and thus does not arouse sympathy in the agent's mind. Thus, according to the attributional approach, people should have different views on elective abortion (abortion sought because the woman does not want the child, cannot afford the child, or does not wish to marry the father) and traumatic abortion (abortion sought because woman was raped, pregnancy is life-threatening, or child will have severe birth defect). And in fact, studies have shown that they do; people are generally more supportive of traumatic than elective abortion (Cook et al. 1992).

However, the attributional approach is also limited in its scope of explaining abortion attitudes. Firstly, its conclusion only explains how people choose to react when presented with two types of abortion – one that attributes fault to the receiver and one that does not. There is a hole in the theory as to how people come to decide whether to place responsibility on the abortion recipient for getting herself in a situation that requires abortion. While it is more or less clear that a victim of rape is not responsible for her unwanted pregnancy, it is less clear why an unwanted pregnancy as a result of consensual sex is seen as something that could have been prevented. There are several factors that are outside of a woman's control that can lead to pregnancy after consensual sex (e.g. failure or limited access to contraception, deception of the partner, etc.). Though it could be said that practicing abstinence is a controllable course of action the woman could have taken to prevent an unwanted pregnancy, this argument could also reasonably be applied to life-threatening pregnancies or pregnancies with fetal defect. So how can we explain why anger is attributed to elective abortion, but not traumatic abortion?

Abortion Attitudes Based on Interest: Genetic Consequentialism

The Consequentialist Stance argues that differences in public opinion on abortion reflect conflicts of interest, rather than moral or ideological differences (Weeden 2003). Weeden explores this idea through an evolutionary psychological lens, which posits that genetic interests in passing on one's own genes to future generations drive people to pursue either promiscuous or commitment-driven reproductive strategies, as well as decisions that either will or will not lead to the limiting of family size (Weeden 2003). Essentially, Weeden sees the abortion debate as a result of the conflict between different people's reproductive strategies. This paper will examine, given the existence of the two reproductive strategies to promote one's interests, how certain

local conditions influence the promiscuous strategy being appealing to some people and the commitment strategy to others, and how this then influences their views on abortion. This paper will argue that the strength of the welfare system is a very important local condition that influences views on abortion.

Explaining Reproductive Strategies

Beginning with the idea that human beings are motivated by genetic interests, Weeden states that ensuring the continuation of one's genes in future generations requires decision-making across one's full lifetime. Such decision-making involves making choices with regards to the trade-offs between investing in yourself and earlier reproduction, and between the quality and quantity of offspring (Weeden 2003). Within the context of American society, people must make these decisions taking into consideration other people's strategies and unequal distribution of resources. Considering other people's reproductive strategies, conflict of interest between reproductive strategies arises in certain environments, as summarized in Table 1.

PAYOFFS IN A PROMISCUOUS ENVIRONMENT		
COMMITMENT STRATEGIST	Man	Harm: women become less reliable <ul style="list-style-type: none"> • Increased ability for potential wives to cheat on husbands • Increased risk of cuckoldry
	Woman	Harm: men become less reliable <ul style="list-style-type: none"> • Men have less incentive to invest in children due to lower paternity assurance • Increased risk of abandonment
PROMISCUOUS STRATEGIST	Man	Benefit: more short-term mating opportunities
	Woman	Benefit: seeing potential husbands "in action" before marriage

Table 1: Zero-sum conflict of interest between promiscuity strategists and commitment strategists (Weeden 2003)

As for the unequal distribution of resources, it is a reality that in American society, the trade-offs between self-improvement and earlier reproduction, and those between quality and quantity of offspring are determined differently. Women who do not have the means to pursue higher education and higher income at the risk of earlier reproductive opportunities have reduced incentive to limit the number of children they have and to delay their first child. Men have less incentive to focus on existing children because paternity certainty is low and he has fewer resources he has to give

(Weeden 2003). This is to say that women in lower socioeconomic classes with less access to education and other factors that can increase the future resource availability for their children have less interest in being promiscuous strategists because delaying the birth of their first child is not likely to lead to additional genetic benefit. This idea is also illustrated by what Nettle (2010) calls the “fast” life-history strategy. When expected reproductive life span is short (due to limited access of resources), the life-history strategy that is taken involves early reproduction, reduced investment in each offspring, and a high reproductive rate.

How does abortion play into the above situation? The primary service that abortion provides is the ability to have childless sex, and many members of the public view legal abortion as a provider of this service; a means of reducing the risks of sex outside of marriage (Jelen 1988). Therefore, a promiscuous strategist would favor abortion because it would allow him/her to have sexual relations without the consequence of a child. On the other hand, a commitment strategist would oppose availability of abortion because such services run the risk of creating a promiscuous environment, which as Table 1 illustrated, would ultimately conflict with their strategy to find reliable spouses. The implication for this theory is that public opinion on abortion is more likely to be influenced by interests in pursuing a certain reproductive strategy, rather than identification with a religion or ideology. In fact, Kurzban et al. (2010) illustrate that the explanatory power of religious and ideological beliefs in predicting abortion attitudes are reduced to nearly zero by controlling for sexual beliefs. They argue that reproductive lifestyles cause religiosity, not the other way around (Kurzban et al. 2010). The interests-based view on the rise of public opinion on abortion is also supported by the tendency for pro-life women activists to be less-educated, married homemakers with higher numbers of children. Pro-choice women activists, on the other hand, tend to be educated professional women with fewer children (Luker 1984). This supports Weeden’s theory that access to education and other factors that contribute to self-improvement (and thus future resource availability) increase the incentive to control one’s reproduction so as to delay the birth of children.

Now that a connection between public opinion on abortion and interests is established, it is possible to take the theory one step further based on the likelihood that the interest in finding reliable spouses is increased when the welfare state is weak. This is because the consequences of spousal abandonment are higher if there is no social safety net for a spouse and his/her child in the event that the other partner leaves the family. Individuals thus have a strong interest in preventing a promiscuous environment from emerging because increased opportunities for less risky sexual relations may lead to increased risk of abandonment. Since abortion facilitates engagement

in childless sex, most likely leading to a promiscuous environment, it follows that opposition against abortion is more likely to be found when there is a weak welfare system because of the relatively higher cost of abandonment. This is a view that has been supported by Gal and Kligman (2000) in their historical essay on the politics of gender – they argue that in Western Europe, the intactness of the family does not seem to be a major cause for concern in public debates because the welfare arrangements have decreased the importance of “family forms” through income replacement and parental support policies. I will set out to support the notion that this theory is applicable both on the national level as well as on more micro levels.

Data Analysis: Methodology

The following section of the paper will present statistical analyses that support the hypothesis that there is a strong relationship between support for abortion and the level of welfare availability. The first section of the analysis is based on the finding that there have been small, but statistically significant, changes in aggregate opinion on abortion over time. An overview of changes in opinion on abortion in the United States shows that opinion on abortion has waxed and waned since *Roe v. Wade* for reasons that have been largely unexplained (Jelen and Wilcox 2003). A comparison of trends in abortion attitudes and welfare availability will be explored in this section within the context of a brief historical introduction to both.

The following two sections will be based on the assumption that abortion attitudes vary across region, both on a domestic plane and a global plane. On the domestic level, comparisons between varying abortion approval rates will be drawn along state lines. Taking U.S. states as the preliminary unit of analysis is useful because, firstly, much of abortion legislation and availability are determined on the state level within a general framework established by *Roe v. Wade* (Tribe 1990). Secondly, welfare availability is also largely determined by the state, as evidenced by wide heterogeneity in the level of payments across states (Alesina and Glaeser 2004).

Following the domestic comparison, a comparative analysis is also done on a global level among nations that belong to the Organization for Economic Cooperation and Development (OECD) to verify that the link between welfare and abortion attitudes is not unique to the United States. Other OECD nations (particularly those of Western Europe) are useful to compare against the United States because they are, for the most part, commonly democratic and wealthy. Furthermore, restricting the comparisons between OECD nations also allowed for this study to be a natural extension of existing research on the differences between European and American welfare

(Alesina and Glaeser 2004; Meyers et al 1999), as well as between European and American abortion attitudes (Tribe 1990; Gal and Kligman 2000).

In all three levels of analysis, I will compare the relative success of the four models outlined in the literature review (i.e. demographic predictors, sociocultural differences, empathy, consequentialism) in explaining variations in abortion attitudes across geographic region and time. This will be done through selecting representative variables for each model and testing to what degree they correlate with opinions on abortion.

Data: Social Surveys

The dataset in this paper comes from three different surveys. The first survey, used in the time series level of analysis, is the US General Social Survey (GSS). The GSS has been conducted since 1972 by NORC, a social science research center at the University of Chicago. The sample size of respondents each year is typically about 1,000 to 2,000 individuals across the nation. The second, for the domestic level of analysis, was conducted by the American National Election Studies (ANES). The ANES is a national survey of American voters that aims to inform explanations of election outcomes by collecting information on social beliefs among the American electorate along with other relevant variables. The particular dataset used was the “1988-1992 merged senate file,” which merged results of telephone surveys conducted in 1988, 1990, and 1992 among eligible voters in U.S. households, with the target number of interviews set as 56 per state. The total sample size for collecting data on abortion views came to be 8,810 individuals. The third dataset, used in the global level of analysis, comes from the International Social Survey Programme (ISSP), an annual cross-national collaboration of surveys for social science research. Most of the data is taken from the survey on religion conducted mostly in the year of 2008, which had a total number of more than 50,000 respondents answering questions regarding their view on issues of religion. Datasets from a selection of OECD nations were used as the unit of analysis in this section. The phrasing of the survey questions from which the data in this paper is based can be found in Appendix A, B, and C.

Data Analysis: Results

1. Abortion Attitudes over Time

The following time-series analysis of abortion attitudes will serve as a visual representation of a brief historical look into trends in American public opinion on abortion since the late 1970s. The timeframe for this study was

chosen on the basis that there have already been extensive studies done on the trends in abortion attitudes between the 1960s and 70s, due to the intrigue of how the landmark decision in *Roe v. Wade* (1973) affected public opinion on abortion. Statistically speaking, there are a number of periods in the trends in abortion attitudes that show significant change. The first and largest increase in approval for abortion occurred between 1965 and 1972 with successful attempts to liberalize abortion laws in seventeen states. Surprisingly, the 1973 Supreme Court decision did not affect trends in abortion attitudes to the large extent expected from the intense drama and news coverage that the court case provided (Granberg and Granberg 1980).

Following *Roe v. Wade*, abortion attitudes stayed relatively stable until the late 1970s, which is the point at which this time-series analysis of abortion attitudes will begin. Near the end of the 1970s, we see a dip in support for abortion in all circumstances (figure 1). The late 1970s brought with it a mobilization of anti-abortion movements, ultimately succeeding in the passage of the original Hyde Amendment, which prohibited federal Medicaid funds to provide abortions to low-income women. This was then revised in 1977, allowing for Medicaid funding of abortion if the woman's life is endangered, a pregnancy resulted from rape or incest, or there is risk of "severe and long-lasting" health damage to the mother (Tribe 1990).

The 1980s also saw a dip in approval for abortion within the context of the rise of the New Right after Reagan's victory in the 1980 election (Carter et al 2009). The early 1990s, however, saw a slight increase in approval for abortion, which Tribe (1990) attributes to the pro-choice backlash against the decision made in *Webster v. Reproductive Health Services* to uphold a Missouri law that imposed restrictions on the use of state funding in performing abortions. This decision essentially allowed states to form legislation on abortion, upheld by *Roe v. Wade* as a fundamental privacy right. The slight increase in approval for abortion set the backdrop for another important Supreme Court case regarding abortion rights, *Planned Parenthood v. Casey*, which reaffirmed the decision made in *Roe v. Wade* that women have the right to abortion before fetal viability, and also introduced the concept of an "undue burden" as the criterion for judging to what extent a state would be allowed to restrict abortion access. The pro-choice backlash was short-lived, however, as a relatively steady decline in approval for abortion has been seen since the mid-1990s.

Several patterns can be identified by analyzing the trends presented in Figure 1 and by placing such trends within the context of the history of the American abortion debate. The first, which is illustrated by a graphical representation of trends in abortion attitudes across time, is that approval for

traumatic abortion (e.g. abortion in cases of fetal defect) is consistently higher than approval for elective abortion (e.g. abortion in cases of low income). Even though the levels of approval for each types of abortion shown in Figure 1 are different in absolute terms, the trends across time for attitudes towards all types of abortion are relatively similar.

A second pattern is that significant changes in public opinion on abortion were accompanied, usually, by legal (e.g. Supreme Court decisions) and political (e.g. election of new administration) changes. It is difficult to ascertain, however, whether the relationship between public abortion attitudes and legal and political changes is causal, and if it is, in which direction the causality runs. What does remain clear, however, is that abortion attitudes are closely linked to abortion policies and legislation in the United States; it is, therefore, prudent to investigate abortion attitudes in greater depth, as they are related to policies that affect the lives and rights of many individuals.

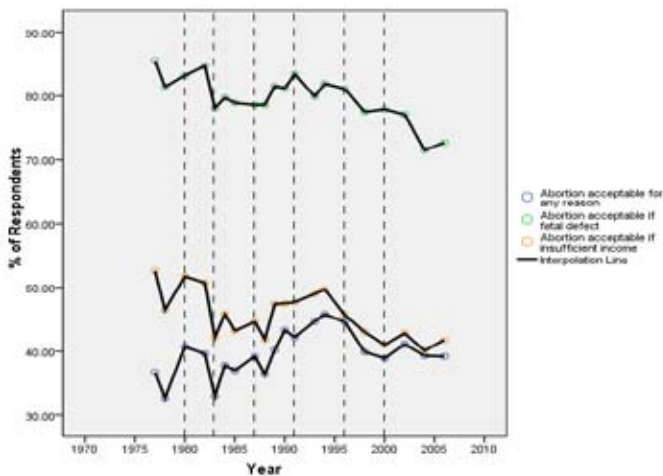


Figure 1: Trends in abortion attitudes in the United States from 1977 to 2006 (Source: GSS)

Legal and political events, however, are not the only phenomena that coincide with changes in abortion attitudes. Figures 2 to 7 will serve to illustrate the changes across time of different variables representative of the explanatory models discussed in the literature review. These trends will be compared to those of attitudes toward abortion “for any reason,” as this dependent variable is the closest to representing views on abortion under general circumstances.

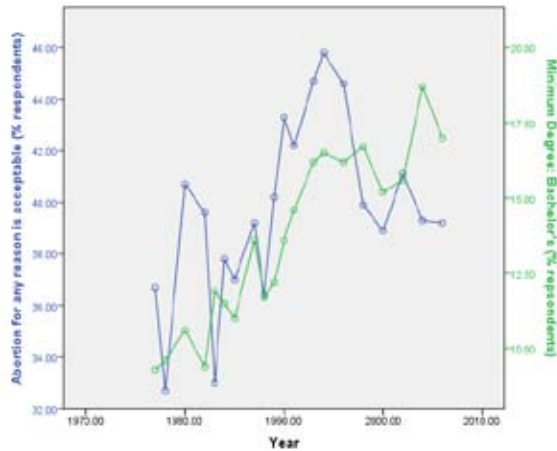


Figure 2: Abortion attitudes and education level of the United States from 1977 to 2006
(Source: GSS)

The level of education, a demographic predictor of abortion attitudes, seems to follow similar trends across time as approval for abortion. Both variables see a rise in the early 1990s, followed by a general decline in the mid-1990s. Education levels, however, have risen significantly in the 2000s, whereas approval for abortion has remained at around the same level as in the 1980s. Furthermore, the spike in approval of abortion leading up to the 1980s and the decline of approval by the mid-1980s is not reflected in the same magnitude as the slight increase and subsequent decrease of education levels around the 1980s. However, the overall similarities in the trends between high levels of education and approval for abortion support the idea that education and abortion attitudes are linked.

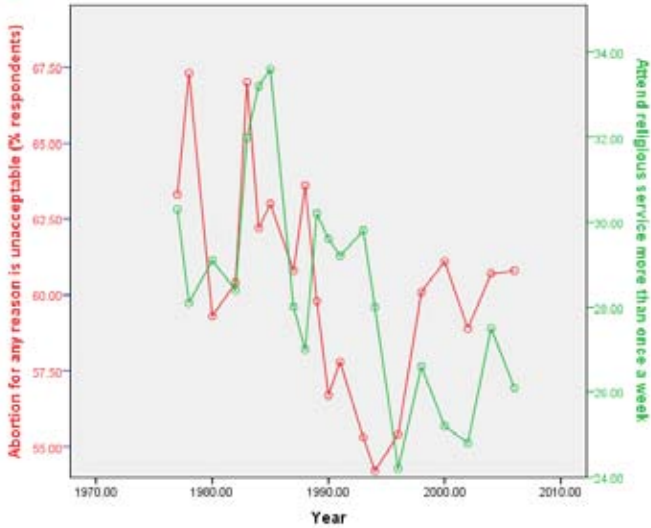


Figure 3: Abortion attitudes and religiosity level of the United States from 1977 to 2006 (Source: GSS)

If level of religiosity is a good sociocultural explanation of abortion attitudes, trends in levels of religiosity over time would be similar to trends in opposition to abortion. Figure 3 illustrates that the two trends are relatively similar over time, especially during the 1980s onwards, when both opposition to abortion and levels of religious service attendance rise in numbers throughout the early 1980s, then undergo a drop from the late 1980s to the mid-1990s, and ultimately resurge the mid-1990s onward.

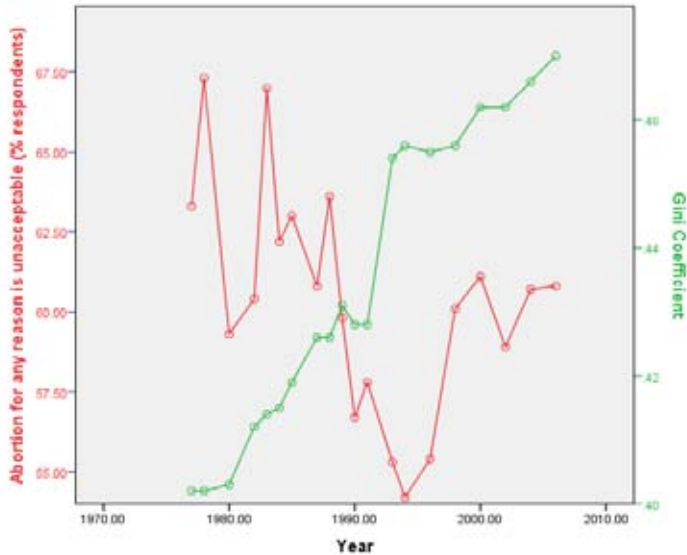


Figure 4: Abortion attitudes and inequality the United States from 1977 to 2006
(Source: GSS, U.S. Census Bureau)

Anderson and Fetner (2008) are right about the existence of a relationship between levels of inequality and empathetic tolerance of social issues, we would expect to see similar trends between the Gini coefficient and opposition to abortion over time. This is because according to the empathy model of explanation, with higher levels of income inequality (measured by a high Gini coefficient), we would expect to see a decline of tolerance, leading to increased opposition to abortion. Figure 4 shows that the Gini coefficient among U.S. households has been steadily on the rise since the late 1970s. Opposition to abortion, on the other hand, has changed over the years in a much more erratic manner. The time-series analysis indicates, therefore, that other variables must be taken into consideration in order to explain the dips in opposition to abortion when inequality has consistently been on the rise.

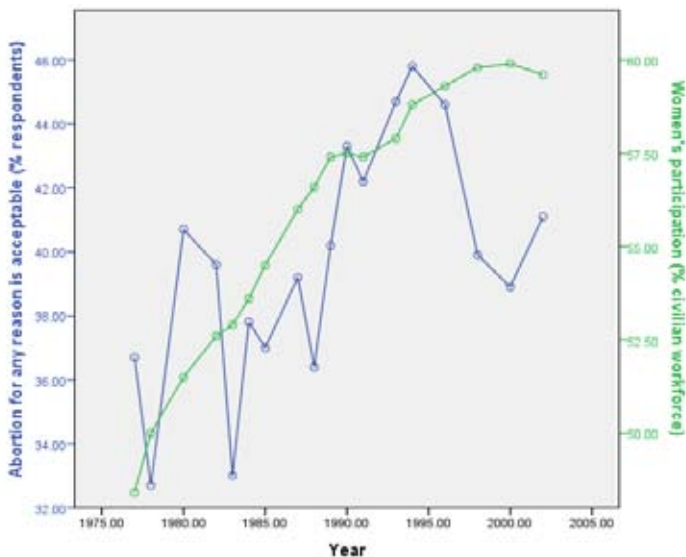


Figure 7: Abortion attitudes and women’s economic participation in the United States from 1977 to 2006 (Source: GSS, U.S. Census Bureau)

According to the consequentialist model, if women have access to opportunities to amass resources for future potential offspring, she will have an incentive to delay the first childbirth and thus support abortion. If this theory is correct, we would expect to see women’s participation in the labor force, which is arguably an indicator for availability of opportunities for women, have a similar trend across time as support for abortion has. Unfortunately, Figure 4 shows that women’s participation in the civilian workforce has a similar consistent upward trend as the Gini coefficient, thus limiting its ability to explain the dip in support for abortion we see in the late 1970s, throughout the 1980s, and mid-1990s. The dissimilarity of the two variables’ trends indicates that other variables must be considered in order to validate the consequentialist model as an adequate predictor for abortion attitudes.

One such variable could be attitudes toward premarital sex. Since the consequentialist model is built around the premise that people behave in accordance to a commitment-based reproductive strategy or a promiscuous reproductive strategy, it would be worth observing trends in attitudes toward premarital sex (support for which indicates a promiscuous reproductive strategy) as compared to trends in attitudes toward abortion. The premise is

that the trends between the two attitudes would be similar because high levels of support for premarital sex would indicate a promiscuous reproductive strategy, which would be more easily achieved with the availability of abortion. Thus, alongside high levels of support for premarital sex, we would expect to see high levels of support for abortion.

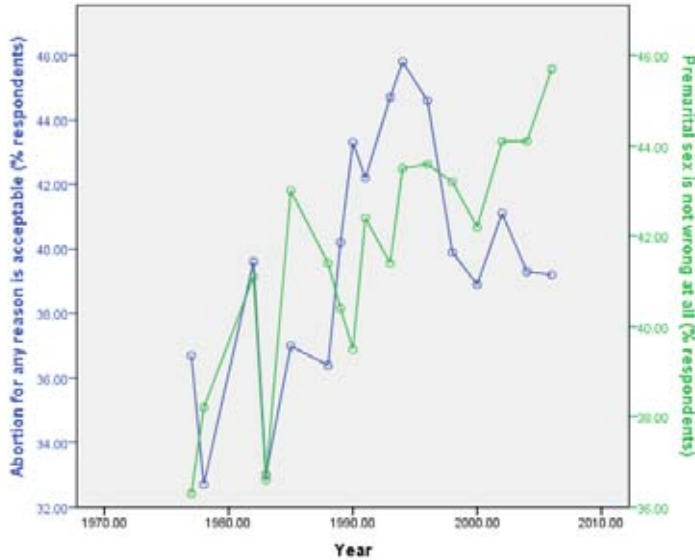


Figure 5: Attitudes toward abortion and premarital sex in the United States from 1977 to 2006 (Source: GSS)

From Figure 5, we can see that trends for support for premarital sex from the early 1980s have more or less been similar to those of support for abortion. Starting from the early 2000s, however, we see a divergence between the two trends; it appears that approval for premarital sex is converging towards higher approval rates, whereas abortion approval rates are at the same level in 2006 as they were in the 1980s. What, therefore, would be able to explain the continued downward trend in abortion attitudes since the mid-1990s, when attitudes towards premarital sex have been converging to higher levels of acceptance?

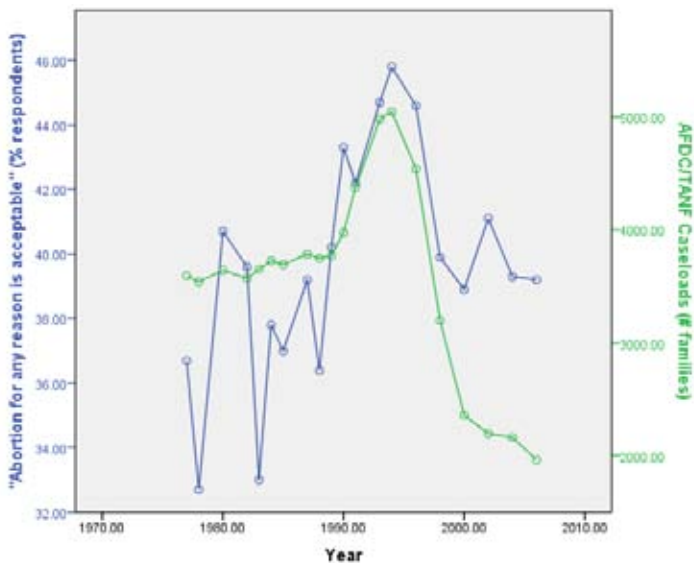


Figure 6: Trends in abortion attitudes and strength of the welfare state the United States from 1977 to 2006 (Source: GSS, U.S. Census Bureau)

This paper will argue that the level of welfare availability is a strong predictor for abortion attitudes because when individuals receive less support from the state, commitment strategists have a stronger interest in keeping the family intact due to the fact that there is a limited social safety net available to support oneself in the event of spousal abandonment. In the United States, the structure of welfare was drastically changed over the course of the 1990s. The Aid to Families with Dependent Children federal program (AFDC) was replaced by the Temporary Assistance for Needy Families (TANF) block grant. With this came a number of changes, such as greater state discretion in determining the amount of cash assistance and the nature of work requirements (Blank 2002). Such welfare reforms resulted in a rapid decline of caseloads between the mid-1990s and 2000 after a rise in the number of caseloads in the early 1990s due to a relatively mild recession (Blank 2002).

A visual representation of this dramatic change in caseloads is shown in Figure 6. What should be noted is that a radical change in the number of AFDC/TANF caseloads between 1990 and 2000 was mirrored by a change in the same direction of approval for abortion within the same time period. However, such a cursory time-series analysis is not sufficient to establish a concrete relationship between welfare levels and abortion attitudes. For one

thing, it cannot establish any sort of relationship between the selected variables and abortion attitudes beyond a mere coincidental semblance in trends across time. Finding supporting evidence that the relationships are causal would require moving beyond a temporal analysis of these relationships. The next two sections will attempt to strengthen this relationship through more rigorous analysis on a geographic plane of comparison.

II. Abortion Attitudes by State

There is significant variation of public opinion on abortion across states. A straightforward way of illustrating a relationship between this variation and the strength of the welfare system would be to compare public opinion on abortion with the level of AFDC across states. AFDC is an appropriate measure of the level of welfare availability for a number of reasons. The first is that the amount of assistance provided under AFDC varies significantly from state to state (Alesina and Glaeser 2004). Secondly, using AFDC as a measure of welfare levels allows this preliminary level of analysis to avoid possible distortionary effects associated with the welfare reform in the mid-1990s. Figure 8 shows that there is a strong positive correlation between maximum AFDC benefits available in each state and its percentage of respondents who support abortion in all cases.

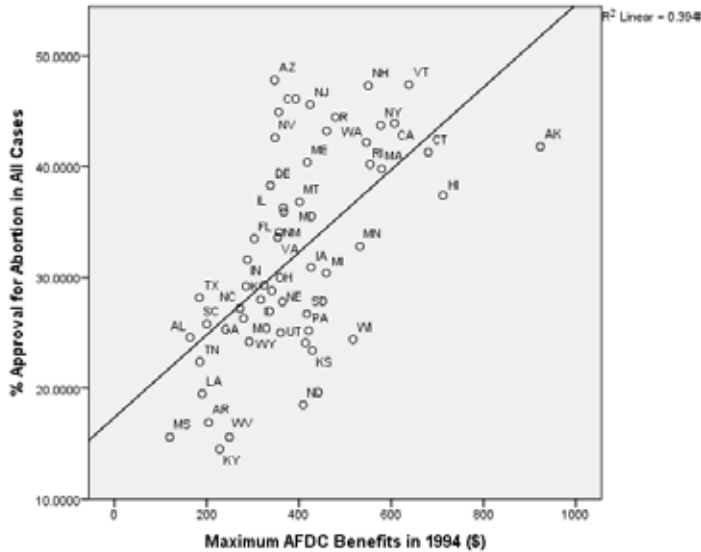


Fig 8: Maximum AFDC benefits and support for abortion in all cases across U.S. states
(Source: ANES 1988-1992 Merged Senate File and 1994 US Census)

With a Pearson’s correlation coefficient of 0.628, the bivariate correlation between level of welfare available and abortion approval across states is significant at the 0.01 level. However, a simple bivariate correlation is not sufficient to defend the theory at hand. There may be confounding variables that correlate with both the abortion approval and welfare levels, rendering the above correlation a spurious relationship. In order to avoid omitted-variable bias, Table 2 outlines possible independent variables I have selected based on existing literature and possible covariables for the theory proposed in this paper

	Variable	Reasoning	Source
1	Proportion of Respondents: Approval of abortion in all cases	Dependent variable	ANES 1988-1992
2	Proportion of Respondents: African American	Demographic predictor	ANES 1988-1992
3	Proportion of Respondents: obtained at least Bachelor Degree	Demographic predictor	ANES 1988-1992
4	Proportion of Respondents: Married, living with spouse	Demographic predictor	ANES 1988-1992
5	Reproductive Rights Composite Index ¹	Sociocultural Differences (state “political culture” towards abortion)	IWPR 1996 ²
6	Proportion of state population: Christian church adherents	Sociocultural Differences (state religiosity)	Census 1990
7	Proportion of state population: identifies as “liberal”	Sociocultural Differences (state “political culture”)	ANES 1988-1992
8	Household Gini Ratio	Empathy	Census 1989
9	Proportion of state: “most people can be trusted”	Empathy	GSS (from <i>Bowling Alone</i>)
10	Proportion of respondents: “government should make every effort to support black people”	Empathy (acknowledgement that success can be beyond individual control)	ANES 1988-1992
11	Maximum AFDC benefits available for a family of three	Consequentialism (level of welfare available)	Census 1994
12	Women’s political participation composite index	Consequentialism (impact of women’s status on abortion interests)	IWPR 1996
13	Women’s status in employment and earnings composite index	Consequentialism (impact of women’s status on abortion interests)	IWPR 1996
14	Women’s social and economic autonomy composite index	Consequentialism (impact of women’s status on abortion interests)	IWPR 1996

Table 2: Selected variables for multivariate analysis and reasoning for inclusion

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	1	.297	.622	.20	.595	.597	.656	.283	.414	.10	.628	.655	.763	.755
2	.297	1	.053	.16	.087	.254	.306	.509	.694	.07	.476	.376	.169	.365
3	.622	.053	1	.19	.557	.218	.469	.030	.092	.10	.464	.292	.670	.627
4	.207	.161	.196	1	.326	.060	.299	.157	.002	.04	.260	.008	.262	.173
5	.595	.087	.557	.32	1	.378	.388	.130	.144	.03	.561	.390	.617	.569
6	.597	.254	.218	.06	.378	1	.247	.215	.184	.00	.348	.523	.363	.408
7	.656	.306	.469	.29	.388	.247	1	.278	.468	.00	.582	.492	.639	.698
8	.283	.509	.030	.15	.130	.215	.278	1	.767	.19	.536	.400	.300	.500
9	.414	.694	.092	.00	.144	.184	.468	.767	1	.27	.692	.636	.399	.608
10	.100	.079	.106	.04	.036	.003	.005	.194	.275	1	.189	.099	.003	.094
11	.628	.476	.464	.26	.561	.348	.582	.536	.692	.18	1	.483	.737	.766
12	.655	.376	.292	.00	.390	.523	.492	.400	.636	.09	.483	1	.496	.587
13	.763	.169	.670	.26	.617	.363	.639	.300	.399	.00	.737	.496	1	.885
14	.755	.365	.627	.17	.569	.408	.698	.500	.608	.09	.766	.587	.885	1

*. Correlation is significant at the 0.05 level (1-tailed).
 **. Correlation is significant at the 0.01 level (1-tailed).

Table 3: Correlational Matrix for Selected Variables

The column labeled “1” in Table 3 indicates the bivariate correlations between the dependent variable (approval for abortion in all cases) and the selected independent variables. The numbered rows are color-coordinated according to the theory that the independent variable is representative of. Two of the three relevant demographic predictors available in the ANES survey share statistically significant correlations with the dependent variable in the expected direction. However, the proportion of respondents who were African-American did not share as significant of a correlation as the proportion with at least a Bachelor’s degree, while marital status was not a statistically significant predictor. The weakness of race as a demographic predictor may be because the vast majority of ANES respondents were Caucasian; there

may not have been a sufficient number of African American respondents to create a meaningful dataset. Insufficient data could also explain why the racial demographic variable did not correlate with other relevant independent variables, as expected by existing literature, such as level of education attained and levels of religiosity.

All three of the variables selected to represent sociocultural characteristics of the state shared a statistically significant correlation with the dependent variable in the expected direction. On the other hand, variables selected to represent perceptions of others did not correlate with the dependent variable as significantly. Most notably, support for redistribution schemes to benefit African Americans was the only independent variable that did not share a statistically significant correlation with the dependent variable. This weakens the theory that attitudes toward abortion and redistribution are commonly informed by attributional analysis, as suggested by Weiner et al (2010). Inequality and trust, on the other hand, were significantly correlated with the dependent variable.

And finally, the three indicators of women's status and level of welfare available not only shared statistically significant correlations with the dependent variable, but shared correlations that had the highest numerical value of the Pearson's correlation coefficient, suggesting that individually, these independent variables had the largest effect on the dependent variable. The relative weakness in degree of effect by women's political participation compared to other indicators of women's status (employment and socioeconomic autonomy) may further support the theory put forth in this thesis because a woman's economic status has more direct influence on her decision-making between present and potential future resources than her political clout does. It is also worth noting that women's economic status and level of welfare availability were the only independent variables that were significantly related to all of the other independent variables considered, with the exception of race, marital status, and attitudes toward redistribution.

Now that the independent variables that are significantly related to the dependent variable have been determined, we may perform partial correlations with the statistically significant variables in order to more concretely determine whether the consequentialist model provides the best explanation for abortion attitudes. The primary prediction was that controlling for consequentialist items (i.e. welfare level and three indicators of women's status) would reduce the effects of the other variables to a greater extent than controlling for other variables would reduce the effects of consequentialist variables. It was also predicted that controlling for independent variables representative of different explanatory models would not reduce the effect of

the variables from the consequentialist model significantly. For the most part, the findings upheld these predictions and are presented below in Table 4.

	Correlations with approval for abortion in all cases	Partial Correlations (controlling for demographic predictors)	Partial Correlations (controlling for sociocultural differences)	Partial Correlations (controlling for empathy)	Partial Correlations (controlling for consequentialist items)
2	-.297*	-	-.071	-.011	-.077
3	.622**	-	.394**	.642**	.296*
5	.595**	.382**	-	.598**	.212
6	-.597**	-.570**	-	-.594**	-.407**
7	.656**	.372*	-	.573**	.227
8	-.283*	-.205	-.073	-	-.274*
9	.414**	.329*	.187	-	.165
11	.628**	.391**	.190	.521**	-
12	.763**	.578**	.294*	.721**	-
13	.655**	.579**	.454**	.558**	-
14	.755**	.534**	.364**	.705**	-

* Correlation is significant at the 0.05 level (1-tailed)
 ** Correlation is significant at the 0.01 level (1-tailed)

Table 4: Pearson correlation and partial correlations between approval for abortion in all cases and independent variables listed in Table 2

Controlling for welfare level and indicators of women’s status resulted in four variables being rendered statistically insignificant, and the correlation coefficient of education level to be significantly lowered. The variables that were largely unaffected by controlling for consequentialist items were the religiosity of the state and the Gini coefficient. In fact, religiosity of the state and most of the consequentialist items were the only variables that were unaffected in any of the partial correlations. The model that had the least impact when controlled was that of empathy, which did not significantly reduce the effect of any other variables aside from the African American demographic predictor, which was already relatively weakly correlated with the dependent variable to begin with.

Consequentialist items, therefore, have the largest effect on other variables when controlled, and were among the least affected by the control of other variables in the partial correlations. This supports the hypothesis that out of all the explanatory models, the items in the consequentialist model would be the strongest predictors for abortion attitudes.

Now that the consequentialist model is shown to have the most explanatory power, it is important to analyze in more depth the relationship

between abortion attitudes, welfare level, and women’s status. Given that we know welfare levels are related to both abortion attitudes and women’s status, controlling for women’s status indicators will give us a purer measure of the relationship between welfare levels and abortion attitudes. Squaring the r-value from the correlational matrix in Table 3 reveals that before controlling for women’s status indicators, welfare levels account for 39.4% of the variance in support for abortion. Table 5 shows the resulting r-value for the correlation between welfare levels and support for abortion after controlling for women’s status indicators.

Control Variables			Support for abortion in all cases
-none ^a	Maximum AFDC benefits for family of 3 - 1994	Correlation Significance (1-tailed) df	.628 .000 48
	Women's employment/earnings composite index 1996	Correlation Significance (1-tailed) df	.763 .000 48
	Women's political participation composite index 1996	Correlation Significance (1-tailed) df	.655 .000 48
	Women's socioeconomic autonomy composite index 1996	Correlation Significance (1-tailed) df	.755 .000 48
Women's status indicators	Maximum AFDC benefits for family of 3 - 1994	Correlation Significance (1-tailed) df	.027 .427 45

a. Cells contain zero-order (Pearson) correlations.

Table 5: Partial correlations between approval for abortion in all cases and indicators for women’s status after controlling for level of welfare availability

Controlling for women’s status indicators reduces the explanatory power of welfare levels from being able to account for 39.4% of abortion attitudes variance to less than 0.1%. This indicates that variance in abortion attitudes as explained by welfare levels is not unique at all, and that women’s status accounts for nearly all of it. This in turn indicates that women’s status is integral in the relationship between welfare and abortion attitudes. An interpretation of this finding could be that support from the state allows for women to access career opportunities to amass resources for potential children in the future. However, this does not mean that any form of government assistance that would raise the status of women would contribute to variance in abortion attitudes. In fact, only three types of state spending were significantly related to abortion attitudes, as shown in Table 6 below.

Type of spending (% total state expenditure)		Correlation with support for abortion in all cases
Elementary education	Pearson Correlation	-.387**
	Sig. (1-tailed)	.003
	N	48
Higher education	Pearson Correlation	-.422**
	Sig. (1-tailed)	.001
	N	48
Medicaid	Pearson Correlation	.055
	Sig. (1-tailed)	.354
	N	48
Transportation	Pearson Correlation	-.033
	Sig. (1-tailed)	.411
	N	48
Cash Assistance (mostly AFDC)	Pearson Correlation	.489**
	Sig. (1-tailed)	.000
	N	48
Corrections	Pearson Correlation	.253*
	Sig. (1-tailed)	.041
	N	48

** Correlation is significant at the 0.01 level (1-tailed)

* Correlation is significant at the 0.05 level (1-tailed)

Table 6: Correlations between types of state expenditure and support for abortion

Out of the six major types of state level spending in the U.S. at the time, both types of education spending, cash assistance, and corrections spending were significantly related to abortion attitudes. Having found which types of government spending contribute substantially to abortion attitudes, hierarchical multiple regression was performed to test if AFDC spending would have an effect on approval for abortion independent of the effects of the other types of spending.

The regression model summary in Table 7 shows that excluding AFDC spending, state spending accounts for 39% of variability in approval for abortion. By including AFDC in “Model 2,” the predictive power goes up to 43.6%. The ANOVA also indicated that both models were also statistically significant a p-value of less than 0.001.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.625 ^a	.390	.349	7.6202228
2	.660 ^b	.436	.384	7.4135144

a. Predictors: (Constant), - Corrections, Higher education, Elementary education

b. Predictors: (Constant), Corrections, Higher education, Elementary education, AFDC

Table 7: Regression model summary

Table 8 below, however, shows that though “Model 2” as a whole is statistically significant, AFDC spending as a variable does not contribute significantly to the model, as its significance does not fall below 0.05. Interestingly, spending on corrections seems to wield the most influence in Model 2, even though the correlational matrix showed corrections spending as having the lowest correlation coefficient in its relationship with abortion attitudes. In short, the effect of AFDC spending independently (Table 6) and the effect of AFDC relative to other spending types (Table 8) are different. One possible factor that may explain this discrepancy is that AFDC as a percentage of state spending is less likely to be a signal for people as to how much support from the government they are likely to receive; the maximum amount of benefits allocated to a family of three is a clearer indicator for the amount of support available from the government on an individual level. Furthermore, the significance of corrections spending on abortion attitudes could also be explained through the consequentialist model in that increased spending on law enforcement and court procedures provides ways for “strangers” to form relationships with less risk of deception or fraud. This in turn places less importance on the family and the welfare state as sources of support, as the possibility of cooperation with other members of society would be facilitated through publicly funded avenues of sanctioning in the case of defection (Funk 2005).

Another surprising finding from the regression model is the negative relationship between elementary education spending and abortion attitudes; that is, the higher the proportion of state expenditure on education, the lower the approval for abortion in any given state. This seems to run counter to the literature on abortion attitudes that suggest a positive correlation between levels of education and approval for abortion. Further research will be required to explain these contradictory findings on the relationship between education and abortion attitudes.

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
	B	Std. Error	Beta			
1	(Constant)	45.920	5.121		8.967	.000
	Elementary education	-.734	.225	-.400	-3.261	.002
	Higher education	-.594	.202	-.351	-2.935	.005
	Corrections	2.841	1.001	.343	2.839	.007
2	(Constant)	39.026	6.201		6.294	.000
	Elementary education	-.646	.224	-.352	-2.882	.006
	Higher education	-.408	.221	-.241	-1.850	.071
	Corrections	2.437	.998	.294	2.443	.019
	AFDC	1.266	.678	.252	1.868	.069

a. Dependent Variable: Support for abortion in all cases - 1988-1992

Table 8: Coefficients of the regression model before and after inclusion of AFDC spending

The domestic level of comparison in variation among abortion attitudes revealed that out of the four models for explaining abortion attitudes, the relationship between consequentialist items of explanation and abortion attitudes was the strongest and most immutable. However, controlling for indicators of women's status revealed that there was no unique relationship between maximum AFDC funds available and abortion attitudes, suggesting that the level of welfare available is most likely not taken as a direct signal for informing abortion attitudes. Furthermore, a regression analysis on the ability of the different types of government spending in predicting abortion attitudes showed that when taken in the context of other spending types, AFDC as a proportion of total state expenditure was not a statistically significant predictor of abortion attitudes. The absence of a unique relationship between welfare availability and American abortion attitudes requires alternative explanations for the initial relationship between the level of welfare availability and abortion attitudes seen in the time-series level of analysis and in Figure 8.

III. Global Abortion Attitudes

Taking the national aggregate of the domestic variation in public opinion on abortion offers an opportunity to compare the American average in abortion attitudes to those of other OECD countries. As was the case within the United States, a global comparison also reveals statistically significant variation in abortion attitudes. A rudimentary illustration of the relationship between this variation and variations in social expenditure (defined loosely as spending and services provided to support the standard of living of disadvantaged or vulnerable groups by the OECD) is illustrated below in Figure 9 and 10. They show that there is a strong positive correlation between social expenditure as a percentage of GDP and support for elective and traumatic abortion respectively.

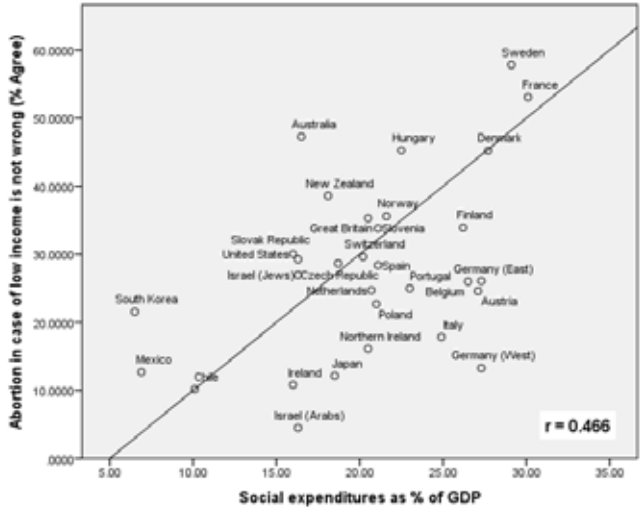


Figure 9: Social expenditure and approval for elective abortion across OECD nations (Source: ISSP Religion Survey 2008, OECD Economic Outlook Database 2009)

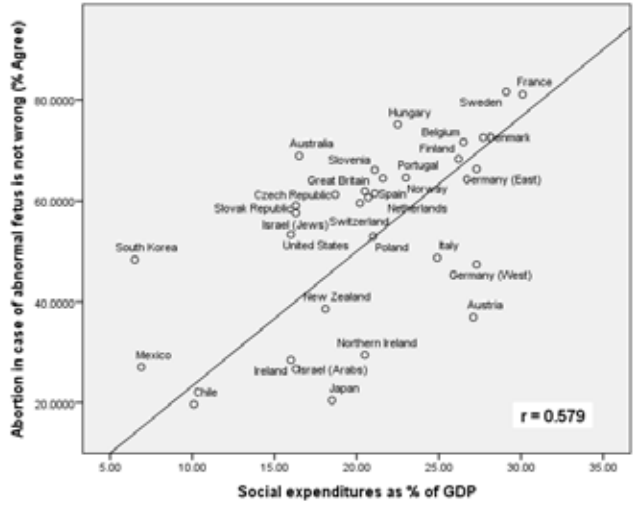


Figure 10: Social expenditure and approval for traumatic abortion across OECD nations (Source: ISSP Religion Survey 2008, OECD Economic Outlook Database 2009)

With Pearson's correlation coefficients of 0.466 and 0.579 respectively, elective and traumatic abortion were both correlated significantly with social spending levels. As discussed before, however, a bivariate correlation is not rigorous enough of a test to support the premise of this thesis adequately. Table 9 shows a list of variables that were chosen to represent the different explanatory models, so as to perform more rigorous comparative analysis.

	Variable	Reasoning	Source
1	Proportion of respondents: Approval of abortion in case of inadequate income	Dependent Variable I	ISSP 2008
2	Proportion of respondents: Approval of abortion in case of fetal defect	Dependent Variable II	ISSP 2008
3	Proportion of respondents: Degree higher than high school diploma	Demographic predictor	ISSP 2008
4	Proportion of respondents: Married	Demographic predictor	ISSP 2008
5	Proportion of population: Catholic	Sociocultural differences	Pew Research Center 2011
6	Proportion of respondents: agree with traditional gender roles	Sociocultural differences	ISSP 2008
7	Household Gini Ratio	Empathy	OECD Statistics
8	Proportion of respondents : "most people can be trusted"	Empathy	ISSP 2008
9	Proportion of respondents: agree with unemployment benefits	Empathy	ISSP 2009
10	Social expenditure (% GDP)	Consequentialism (level of welfare available)	OECD Statistics
11	Female legislators (% total)	Consequentialism (women's status)	OECD Statistics
12	Female professional and technical workers (% total)	Consequentialism (women's status)	OECD Statistics
13	Proportion of Respondents: Approval of Premarital Sex	Consequentialism (reproductive strategy)	ISSP 2008

Table 9: Selected variables for multivariate analysis and reasoning for inclusion

	1	2	3	4	5	6	7	8	9	10	11	12	13
1	1	.825**	.357*	-.174	-.222	-.397*	.489**	.489**	.138	.476**	.076	.301*	.651**
2	.825**	1	.060	-.064	-.083	.425**	.604**	.305*	.229	.543**	.079	.305*	.699**
3	.357*	.060	1	.056	.592**	.262	.005	.536**	-.176	-.066	.012	.050	-.005
4	-.174	-.064	.056	1	-.111	.109	-.004	-.299	.176	-.055	-.183	-.258	-.388*
5	-.222	-.083	.592**	-.111	1	-.308*	.127	.521**	.046	.003	.008	.096	.056
6	.397*	.425**	.262	.109	-.308*	1	-.319*	.508**	.228	.534**	.161	-.104	.503**
7	.489**	.604**	.005	-.004	.127	-.319*	1	.529**	-.235	.680**	-.083	-.320*	.610**
8	.489**	.305*	.536**	-.299	.521**	.508**	.529**	1	-.155	.424*	.063	.001	.562**
9	.138	.229	-.176	.176	.046	.228	-.235	-.155	1	.153	-.361**	.141	-.111
10	.476**	.543**	-.066	-.055	.003	.534**	.680**	.424*	.153	1	.394*	.170	.715**
11	.076	.079	.012	-.183	.008	.161	-.083	.063	-.361**	.394*	1	.483**	.364*
12	.301*	.305*	.050	-.258	.096	-.104	-.320*	.001	.141	.170	.483**	1	.319*
13	.651**	.699**	-.005	-.388*	.056	.503**	.610**	.562**	-.111	.715**	.364*	.319*	1

** . Correlation is significant at the 0.01 level (1-tailed).
 * . Correlation is significant at the 0.05 level (1-tailed).

Table 10: Correlational Matrix for Selected Variables

The correlational matrix above reveals that out of the variables selected, those that represent the consequentialist model, apart from women’s political participation, correlated significantly with approval for both types of abortion. It is clear that the strongest variable in the correlational matrix above is that of views on premarital sex, which is significantly related to the two dependent variables on abortion attitudes to the greatest degree. Furthermore, views on premarital sex are also significantly correlated with the most number of other independent variables, which possibly indicates that many of the significant relationships we see between other independent variables and abortion attitudes could be attributable to views on premarital sex. The “empathy” model was also strong in predicting both the dependent variables, with the Gini coefficient and beliefs about trustworthiness of others significantly relating to attitudes toward abortion and many of the other independent variables. It should be noted, however, that attitudes toward unemployment benefits did not share a statistically significant correlation with attitudes toward either type of abortion. This shows that attributional analysis, as suggested by Weiner et al (2010), does not work in predicting abortion attitudes on either the national or global level.

Variables representing the sociocultural differences model were relatively less successful in predicting abortion attitudes. Surprisingly, the prevalence of Catholicism in a given country was not a good predictor of the abortion attitudes within it, which seems to contradict much of the literature

that argues global differences in abortion attitudes hinge upon the differing degrees of religiosity across nations. Sociocultural differences in perception of gender roles, however, did share a statistically significant correlation with attitudes toward abortion, suggesting that on the international level, differences in social understandings of gender equality may be a better predictor for abortion attitudes than differences in religiosity. Out of all explanatory models, demographic predictors were the weakest in establishing a relationship with abortion attitudes on the international level.

The extent to which there is an overlap of explanatory power among the statistically significant independent variables is explored in Table 11 below, by seeing the effect of controlling key independent variables on the relationship between abortion attitudes and other independent variables.

	Correlations with approval for abortion		Partial Correlations (controlling for demographic predictors)		Partial Correlations (controlling for sociocultural differences)		Partial Correlations (controlling for empathy)		Partial Correlations (controlling for consequentialist items)	
	Income	Defect	Income	Defect	Income	Defect	Income	Defect	Income	Defect
3	.357*	.060	-	-	.285	-.059	.291	.119	.477**	.092
6	.397*	.425**	.336*	.425**	-	-	.185	.349*	.154	.148
7	-.489**	-.604**	-.525**	-.606**	-.416*	-.540**	-	-	.233	-.127
8	.489**	.305*	.377*	.324*	.364*	.114	-	-	-.135	-.289
10	.478**	.543**	.535**	.549**	.340*	.413*	.203	.230	-	-
12	.301*	.305*	.304	.303	.375*	.388*	.259	.147	-	-
13	.651**	.699**	.699**	.700**	.570**	.620**	.451**	.568**	-	-

* Correlation is significant at the 0.05 level (1-tailed)

** Correlation is significant at the 0.01 level (1-tailed)

Table 11: Pearson correlation and partial correlations between approval for abortion in all cases and independent variables listed in Table 2

The partial correlations reveal that, indeed, views on premarital sex are the strongest independent variable for prediction, having not been affected by any of the partial correlations performed. Its representative model was also the model with the control of which other models were most affected by. The weakest variable revealed by the partial correlations was education level as a demographic predictor – most of the independent variables were unaffected after having controlled for it. This indicates that the level of education is not a factor that precedes the other independent variables, and that there is no unique relationship between an individual’s education level and abortion attitudes on the international level. Controlling for variables representative of empathy, on the other hand, was shown to significantly reduce the correlations that other independent variables shared with the dependent variable, save for

views on premarital sex. The statistically significant variables representing the empathy model, inequality and trust, may be comparatively more significant on the international level than the domestic level because of a higher degree of variability in inequality levels and trust across different nations than across different states of the same nation. Indeed, the range of Gini coefficients on the domestic level is from 0.385 to 0.492, whereas the range on the international level is from 0.24 to 0.49.

Given that the main crux of the argument of this paper is based on the level of support that individuals receive from the state, an analysis to determine which type of government spending has the most influence on predicting abortion attitudes would be important. Several different types of expenditure were considered, including expenditures on disability, family, health, housing, old age, unemployment, education, defense, and the environment. Out of these, bivariate correlation revealed that spendings on disability, family, health, and education have a statistically significant relationship with views on abortion. In this next section, hierarchical multiple regressions are presented to show which type of spending would wield the most influence on abortion attitudes.

The results are shown below:

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.670 ^a	.449	.366	9.7620480
2	.687 ^b	.472	.361	9.8020451

- a. Predictors: (Constant), Education, Health, Disability (% GDP)
- b. Predictors: (Constant), Education, Health, Disability, Family (% GDP)

Table 12: Regression Model Summary

Model	Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.
	B	Std. Error			
1	(Constant)	-15.705	13.456	-1.167	.257
	Disability	1.382	2.198	.113	.829
	Health	1.036	1.697	.105	.510
	Education	8.490	1.870	.604	.3471
2	(Constant)	-15.217	13.521	-1.125	.274
	Disability	.506	2.406	.041	.210
	Health	.516	1.797	.052	.287
	Education	8.172	1.910	.574	.3232
	Family	2.221	2.428	.189	.915

Dependent Variable: Approval of abortion in case of inadequate income (% of respondents)

Table 13: Coefficients of the regression model before and after inclusion of government spending on family

Based on Weeden's theory that people are opposed to abortion on the grounds that it threatens the commitment-oriented reproductive strategy they have chosen, the prediction was that spending dedicated to the family would have the strongest influence in determining abortion attitudes. However, the model summary above shows that adding government spending on family to the aggregate model of the relationship between government spending and abortion attitudes only increased the explanatory power of the variance in abortion attitudes from 44.9% to 47.2%. Furthermore, spending on the family as a variable as compared to the other spending types in the regression model fell below significance, which significantly weakens the main argument of this paper. However, it could be the case that variation on spending on the "family" is not the right type of social spending to consider. A more appropriate type of spending to be comparing may be social spending designed to reduce people's interest in depending on the combined earnings from a marriage. This is because there are instances where policies on family spending are specifically designed to encourage marriage. For example, the Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) in the U.S. created a system where states that reduced out-of-wedlock child-bearing without raising abortion rates qualified for special bonuses (Blank 2002). Possible future research directions would include a more nuanced evaluation of different types of government spending and its effects on people's choices to pursue commitment or promiscuous reproductive strategies.

Spending on education, in the end, was the only type of spending that was statistically significant to the regression model. This is interesting to note, as the partial correlations in Table 4 indicate that the level of education is not a strong predictor of abortion attitudes. This discrepancy between the

strong influence of education spending versus the weaker influence of overall education levels on abortion attitudes could be explained through how “level of education” was defined in this dataset. The level of education in a given population was measured by the proportion of the respondents who had received at least a Bachelor’s degree. It may be the case that a Bachelor’s degree is not particularly meaningful when observing the relationship between education and abortion attitudes; another level of education attainment (e.g. high school diploma) may reveal different patterns of variation, which may then correlate more significantly with abortion attitudes.

Conclusion

Although time-series analysis and simple bivariate correlations between welfare availability and abortion attitudes seemed promising, more rigorous data analysis showed that there is no unique relationship between the strength of the welfare system and abortion attitudes. The inability of this paper to defend its thesis may have been influenced by the number of limitations in its research design. Firstly, data from social surveys available on a state-by-state basis within the United States was very limited. It was therefore difficult to find social surveys with variables that would fit the four explanatory models that this paper aimed to evaluate. Furthermore, using the ISSP 2008 Religion survey to acquire data on differences in abortion attitudes was also a source of weakness in the research design, as the religious nature of the survey may have primed people to respond according to their religious views.

There were also methodological weaknesses related to the idea of causality and attitude formation in the thesis of this paper. This paper attempted to support the possibility of a causal relationship between welfare availability and abortion attitudes. A shortcoming in framing causality in terms of a generic probabilistic account on domestic and international levels of analysis was that it excluded the possibility of the incorporating temporal dynamics into the relationship between welfare and abortion attitudes. That is, it could be the case that a time lag exists between changes in welfare and its effect on abortion attitudes. This possibility was not tested. Furthermore, it was difficult to determine whether an individual’s abortion attitudes were shaped directly from local conditions (i.e. levels of state support) or attitudes were formed based on her own personal beliefs about the local conditions (i.e. her perceptions of levels of state support). This paper assumed that levels of state support and perceptions of levels of state support to be roughly similar figures, but skewed perceptions of welfare availability could very well be possible.

Despite these limitations, there are a number of interesting findings this investigation of abortion attitudes reveals. For example, a common finding in the domestic and international level of analysis was that state expenditures on education proved to be a strong predictor of the abortion attitudes of that region. However, the fact that education spending on the domestic level correlates negatively with abortion attitudes while education spending on the international level correlates positively with abortion attitudes requires further study. Another common finding on both levels of analysis was that the consequentialist model of explaining abortion attitudes was the strongest as compared to demographic predictors, sociocultural differences, and the empathy model. Therefore, although this paper was not able defend its primary thesis that there is a significant relationship between welfare availability and abortion attitudes, it was able to more successfully defend the consequentialist model of explaining abortion attitudes as proposed by Weeden. Another very robust finding on the international level was that views on premarital sex were highly predictive of views on abortion, which suggests that the abortion debate is, indeed, more likely to be related to views on sexuality, rather than religion or fetal personhood, etc.

The support that this paper provides to the idea that the abortion debate is ultimately due to differences in beliefs about sexuality opens up the possibility for further research opportunities. This paper attempted to establish a relationship between abortion and welfare availability. There are a host of other debates on sexuality (e.g. homosexuality, birth control, pornography, masturbation, etc.), the attitudes toward which could be studied in relation to welfare availability.

Bibliography

- "1994 State Expenditure Report." National Association of State Budget Officers. Retrieved from <http://www.nasbo.org/sites/default/files/ER_1994.PDF>
- "Aggregated data" OECD StatExtracts, Retrieved from <<http://stats.oecd.org/Index.aspx?QueryId=4549>>
- "Bowling Alone: Data" The Saguaro Seminar: Civic Engagement in America. Web. 26 Nov 2012. <<http://www.bowlingalone.org/data.htm#>>
- "Christian Church Adherents and Jewish Population, 1990." U.S. Census Bureau. <<http://www.census.gov/compendia/statab/2010/tables/10s0077.xls>>
- "Christian Population as Percentages of Total Population by Country." Pew Research Center's Forum on Religion & Public Life, 19 Dec 2011. <<http://features.pewforum.org/global-christianity/total-population-percentage.php>>.
- "Data on the Economic Status of Women in the States." Institute for Women's Policy Research. <<http://www.iwpr.org/publications/resources/femstats/data-on-the-economic-status-of-women-in-the-states>>
- "The Poverty Measure and AFDC" in Measuring Poverty. U.S. Census. <<http://www.census.gov/hhes/povmeas/methodology/nas/files/afdc.pdf>>.
- "Table 596. Labor Force Participation Rates by Marital Status, Sex, and Age." U.S. Bureau of Labor Statistics. <www.census.gov/compendia/statab/2011/tables/11s0596.xls>.
- "Table S4. Gini Ratios by State: 1969, 1979, 1989, 1999." U.S. Census Bureau. <<http://www.census.gov/hhes/www/income/data/historical/state/state4.html>>
- "Table H-4. Gini Ratios for Households, by Race and Hispanic Origin of Householder: 1967 to 2009." U.S. Census Bureau.
- <http://www.census.gov/hhes/www/income/data/historical/inequality/H04_2009.xls>
- Alesina, A. & Glaeser, E. (2004). *Fighting Poverty in the US and Europe: A World of Difference*. Oxford: Oxford University Press. Print.
- Anderson, R. & Fetner, T. (2008) "Economic Inequality and Intolerance: Attitudes toward Homosexuality in 35 Democracies." *American Journal of Political Science* 52.4, 942-958.
- Blank, R.M. (2002). "Evaluating Welfare Reform in the United States." *Journal of Economic Literature* 40.4, 1105-1166.

- Bolzendahl, C.I. & Myers D.J. (2004). "Feminist Attitudes and Support for Gender Equality: Opinion Change in Women and Men, 1974-1998." *Special Forces* 83.2, 759-790.
- Carter, S.J., Carter, S., & Dodge, J. (2009). "Trends in Abortion Attitudes by Race and Gender: A Reassessment Over a Four-Decade Period." *Journal of Sociological Research* 1.1
- Carmines, E.G. & James A.S. (1980). "The Two Faces of Issue Voting." *American Political Science Review* 74: 78-91.
- Cook, E.A., Jelen, T.G., & Wilcox, C. (1992). *Between Two Absolutes: Public Opinion and the Politics of Abortion*. Boulder: Westview.
- Evans, J. (2002). "Polarization in Abortion Attitudes in U.S. Religious Traditions, 1972-1998." *Sociological Forum* 17.3, 397-422.
- Funk, P. (2005). "Governmental Action, Social Norms, and Criminal Behavior." *Journal of Institutional and Theoretical Economics* 161.3, 522-535.
- Gal, S. & Kligman, G. (2000). *The Politics of Gender after Socialism: A Comparative-Historical Essay*. Princeton: Princeton University Press.
- Granberg, G. & Granberg, B.W. (1980). "Abortion Attitudes, 1965-1980: Trends and Determinants." *Family Planning Perspectives* 12.5, 250-261.
- Grindstaff, L. (1994). "Abortion and the Popular Press: Mapping Media Discourse from Roe to Webster" in *Abortion Politics in the United States and Canada: Studies in Public Opinion*. Westport: Praeger, 57-88.
- Hertog, E. & Iwasawa, M. (2011). "Marriage, Abortion, or Unwed Motherhood? How Women Evaluate Alternative Solutions to Premarital Pregnancies in Japan and the United States." *Journal of Family Issues* 32.12, 1674-1699.
- Hussey, L. (2011). "Is Welfare Pro-Life? Assistance Programs, Abortion, and the Moderating Role of States." *Social Service Review* 85.1, 75-107.
- Jackman, R. (1972). "Political Elites, Mass Publics, and Support for Democratic Principles." *Journal of Politics* 34.4: 753-773.
- Jelen, T.G. & Wilcox, C. (2003). "Causes and Consequences of Public Attitudes toward Abortion: A Review and Research Agenda." *Political Research Quarterly* 56.4, 489-500.
- Jelen, T.G. (1988). "Changes in the Attitudinal Correlates of Opposition to Abortion." *Journal for the Scientific Study of Religion* 27. 211-228.
- Kurzban, Robert; Dukes, Amber & Weeden, Jason (2010). "Sex, drugs and moral goals: reproductive strategies and views about recreational drugs." *Proceedings of the Royal Society B* 00, 1-8.

McCormick, E.P. (1975). *Attitudes toward Abortion: Experiences of Selected Black and White Women*. Lexington: Lexington Books.

McIntosh, W.A., Alston, L.T., & Alston, J.P. (1979). "The Differential Impact of Religious Preference and Church Attendance on Attitudes toward Abortion." *Review of Religious Research* 20.2, 195-213.

Meyers, M.K., Gornick, J.C., Ross, K.E. (1999). "Public Childcare, Parental Leave, and Employment." In D. Sainsbury (Ed.), *Gender & Welfare State Regimes* (117-147). Oxford: Oxford University Press.

Miller, Warren E., Donald R. Kinder, Steven J. Rosenstone, and the National Election Studies. *NATIONAL ELECTION STUDIES, 1988-1992 Merged Senate File* [dataset]. Ann Arbor, MI: University of Michigan, Center for Political Studies [producer and distributor], 1999.

Mooney, C.Z. & Lee, M.H. (1995). "Legislating morality in the American states: The case of pre-Roe abortion regulation reform." *American Journal of Political Science* 39.3, 599-627.

Nettle, D. (2010). "Dying young and living fast: variation in life history across English neighborhoods." *Behavioral Ecology* 21.2, 387-395.

Reiss, I.L. (1980). "Sexual customs and gender roles in Sweden and America: An analysis and interpretation." In H. Lopata (Ed.), *Research on the interweave of social roles: Women and men*, 191-220. Greenwich: JIA Press.

Saad, L. "'Pro-Choice' Americans at Record-Low 41%." *Gallup Politics*. 23 May 2012. Web. 15 Nov 2012. <<http://www.gallup.com/poll/154838/Pro-Choice-Americans-Record-Low.aspx>>

Saad, L. "Abortion is Threshold Issue for One in Six U.S. Voters" *Gallup Politics*. 4 Oct 2012. Web. <<http://www.gallup.com/poll/157886/abortion-threshold-issue-one-six-voters.aspx>>

Smith, Tom W, Peter Marsden, Michael Hout, and Jibum Kim. *General social surveys, 1972-2010: cumulative codebook* / Principal Investigator, Tom W. Smith; Co-Principal Investigator, Peter V. Marsden; Co-Principal Investigator, Michael Hout. -- Chicago: National Opinion Research Center 2011. 3,610 pp., 28cm. -- (National Data Program for the Social Sciences Series, no. 21).

SSP Research Group (2012): *International Social Survey Programme 2008: Religion III (ISSP 2008)*. GESIS Data Archive, Cologne. ZA4950 Data file Version 2.2.0, doi:10.4232/1.11334

Tribe, L.H. (1990). *Abortion: The Clash of Absolutes*. New York and London: W.W. Norton & Company. Print.

Weeden, J., Cohen, A.B., & Kenrick, D.T. (2007). "Religious Attendance as Reproductive Support." *Evolution and Human Behavior* 29, 327-334.

Weeden, Jason (2003). "Genetic Interests, Life Histories, and Attitudes Towards Abortion" Dissertations available from ProQuest. Paper AAI3087480. <[http:// repository.upenn.edu /dissertations /AAI3087480/](http://repository.upenn.edu/dissertations/AAI3087480/)>

Weiner, B., Osborne, D., & Rudolph, U. (2010). "An Attributional Analysis of Reactions to Poverty: The Political Ideology of the Giver and the Perceived Morality of the Receiver." *Personality and Social Psychology Review* 15.2, 199-213.

Wilcox, C. (1992). "Race, Religion, Region, and Abortion Attitudes." *Sociological Analysis* 53.1, 97-105.

Woodrum, E. & Davison, B.L. (1992). "Reexamination of Religious Influences on Abortion Attitudes." *Review of Religious Resesarch* 33.3, 229-243.

Appendix

Appendix A: Phrasing of questions for survey data used from ANES

Do you think abortions should be legal under all circumstances, only legal under certain circumstances, or never legal under any circumstance?

1. Legal under any circumstances
2. Legal under certain circumstances
3. Never legal
4. Don't know
5. Refused

Some people feel that the government in Washington should make every effort to improve the social and economic positions of blacks. Others feel that the government should not make any special effort to help blacks because they should help themselves.

Where would you place yourself on a scale from one to seven where a measurement of one means you feel the government should make every effort to support blacks and seven means you feel the government should not make any special effort to help blacks because they should help themselves?

1. Government should make every effort to support blacks
2. Government should not make any special effort to help blacks
3. Don't Know
4. Refused
5. Haven't thought much about it

What is the highest diploma or degree you have earned?

00. No high school degree
01. High school degree or equivalent
02. No degree beyond high school

Explaining Abortion Attitudes

03. 2 year technical school
04. 2 year associates degree
05. 4 year Bachelor degree
06. Master's degree
07. Doctorate degree
08. Other
6. Other (_____) (enter description)
98. Don't know
99. Refused

Would you mind telling me your race? Are you white, black, American Indian or Alaskan native, or Pacific Islander?

1. White
2. Black
3. American Indian or Alaskan Native
4. Asian or Pacific Islander
5. Other (Volunteer) (_____) (enter description)
8. Don't know
9. Refused

Appendix B: Questions used for survey data used from ISSP

Do you think it is wrong or not wrong if a man and a woman have sexual relations before marriage?

- Always wrong..... 1
Almost always wrong.....2
Wrong only sometimes.....3
Not wrong at all..... 4
Can't choose..... 8

What about a married person having sexual relations with someone other than his or her husband or wife, is it...

- Always wrong..... 1
Almost always wrong..... 2
Wrong only sometimes..... 3
Not wrong at all..... 4
Can't choose..... 8

And what about sexual relations between two adults of the same sex, is it...

- Always wrong..... 1
Almost always wrong..... 2
Wrong only sometimes.....3
Not wrong at all..... 4
Can't choose..... 8

Do you personally think it is wrong or not wrong for a woman to have an abortion?

a. If there is a strong chance of serious defect in the baby

Always wrong..... 1
Almost always wrong..... 2
Wrong only sometimes.....3
Not wrong at all..... 4
Can't choose..... 8

b. If the family has a very low income and cannot afford any more children

Always wrong..... 1
Almost always wrong..... 2
Wrong only sometimes.....3
Not wrong at all..... 4
Can't choose..... 8

Do you agree or disagree a husband's job is to earn money; a wife's job is to look after the home and family?

Strongly agree
Agree
Neither agree nor disagree
Disagree
Strongly disagree
Can't choose

Generally speaking, would you say that people can be trusted or that you can't be too careful in dealing with people?

People can almost always be trusted 1
People can usually be trusted 2
You usually can't be too careful in dealing with people 3
You almost always can't be too careful in dealing with people 4
Can't choose..... 8

To what extent do you agree or disagree that the government should provide a decent standard of living for the unemployed?

Strongly agree
Agree
Neither agree nor disagree
Disagree
Strongly disagree
Can't choose

Appendix C: Questions used for survey data from GSS

Explaining Abortion Attitudes

Please tell me whether or not you think it should be possible for a pregnant woman to obtain a legal abortion if the woman wants it for any reason?

1. Yes
2. No

Please tell me whether or not you think it should be possible for a pregnant woman to obtain a legal abortion if there is a strong chance of defect in the baby?

1. Yes
2. No

Please tell me whether or not you think it should be possible for a pregnant woman to obtain a legal abortion if the family has a very low income and cannot afford any more children?

1. Yes
2. No

How often do you attend religious services?

- 0 Never
- 1 Less than once a year
- 2 Once a year
- 3 Several times a year
- 4 Once a month
- 5 2-3 times a month
- 6 Nearly every week
- 7 Every week
- 8 More than once a week
- 9 DK, NA

Do you have any college degrees? If YES: What degree or degrees?

- 0 Less than high school
- 1 High school
- 2 Associate/Junior College
- 3 Bachelor's
- 4 Graduate
- 7 Not applicable
- 8 Don't know
- 9 No answer

Do you think it is wrong or not wrong if a man and a woman have sexual relations before marriage?

- 1 Always wrong
- 2 Almost always wrong

3 Wrong only sometimes
4 Not wrong at all
