Personality, Context and Attitudes Towards Gay Rights

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Previous research in political science has explored the relationship between personality dispositions and political behavior and public opinion, but often does not consider how context or the individual in varying situations conditions these effects of personality. In fact personality is often defined as enduring over time and across situations. We argue public opinion on gay rights is shaped by personality within context. We extend previous research by testing how personality traits are conditioned by varying situations, including state residence and interpersonal contact. Personality, and especially the trait Openness to Experience, may predispose individuals to form particular attitudes toward homosexuality, since homosexuality does not confirm to traditional gender beliefs. Results show legal and social context may be more important than personality in predicting opinions on gay and lesbian rights, including adoption rights and civil unions or domestic partnerships. The personality trait of Openness to Experience remains important.

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Recent research in political science has explored the relationship between personality dispositions and political behavior and public opinion (Mondak et al 2010; Mondak and Halperin 2008; Oxley et al 2008), but in doing so has not directly examined how the context in which individuals are situated conditions the effects of personality (see Gerber et al 2010 and Jost, Federico and Napier 2008 for exceptions). This may be in part because personality is usually thought of as enduring over time and across situations (Shackelford and Besser 2007; but see Greenstein [1969] and Mischel [1968] for a counter argument). While others have explored the relationship between personality traits and out-groups more generally, this paper is one of the first to study the effects of personality on attitudes about gay rights (see Shackelford and Besser 2007 for an exception).

In this research we explore the effects of personality on public opinion on a salient moral policy issue: gay and lesbian rights, including adoption rights and civil unions or domestic partnerships. Public opinion on gay rights and same-sex marriage has been found to be distinct compared to mass opinion on other moral issues, and can be influenced by state policy, especially legal restrictions on same-sex marriage often adopted through ballot measures (Donovan, Tolbert and Smith 2008). However, attitudes about gay rights do not reside in the domain of only rational politics, and may be driven in part by emotions and underlying psychological phenomena, such as personality. Personality, and especially the trait Openness to Experience, may predispose individuals to form particular attitudes toward homosexuality, since homosexuality does not confirm to traditional gender beliefs (Haslam and Levy 2006; Shackeldford and Besser 2007). But personality factors may be conditioned by the legal environment and social context in which people live. Teasing out these relationships

is often difficult. We take advantage of the unique variation among the fifty states in policies about same-sex marriage and civil unions to examine how personality dispositions and context affect public opinion on gay rights.

In this paper we combine two unique lines of research—state politics & personality and politics—and explore how the effects of personality on public opinion may be activated or suppressed by certain contexts (e.g., living in a state that recognize same-sex relationship versus those that do not, or knowing someone who is openly gay.) Because public opinion on gay rights and same-sex marriage has been found to be distinct compared to opinions on other moral issues, combined with significant variation in state legal context, makes gay rights an ideal test case for whether the effects of personality are moderated by context.

It may well be that standard public opinion polling fails to get at core attitudes about gay rights, including same-sex marriage, adoption and civil unions. Moreover, there may be many "conflicted" or "cross-pressured" voters on this issue; wishing not to be seen as bigoted yet at the same time subject to social and psychological pressures to maintain "traditional" views on marriage. Even so, approval of same-sex marriage appears to be closing in on a tipping point where nearly half of Americans show some support, and yet survey measures of explicit opinion do not provide much leverage towards understanding why a large percentage of citizens oppose a policy that has no personal implications for their own lives.

The political science literature on opinion on gay rights has generally not considered the role of personality and few have examined implicit or latent attitudes towards gay rights (Kane, Craig and Wald 2004). It seems obvious that opinions on homosexuality must be the product of more than simply "thinking" about the issue. In other realms scholars have found affective or emotional evaluations regularly influence how people think about candidates

(Civettini and Redlawsk 2009; Redlawsk, Civettini, and Lau, 2007; Redlawsk, Tolbert and Franko 2009) and issues (Lodge and Taber, 2000; 2005) and how new information is processed as it is learned during a campaign (Redlawsk 2002). Opinions on gay rights are likely subject to many of the same affective biases found in other areas. Moreover, because attitudes towards gay marriage clearly implicate some level of core values, it may be that opinion is a complex mix of information and personality. Previous research on attitudes about gays and lesbians has focused on the importance of religion, partisanship, and ideology, as well as socioeconomic characteristics (Brewer 2003; Haider-Markel and Josyln 2008; Haider-Markel 2011). We extend the research on public opinion towards gay rights by exploring how underlying personality dimensions shape public opinion, and how attitudes may change in varying situations.

We argue public opinion on gay rights is shaped by personality in context. Context is operationalized in two ways. State context is measured by whether the individual resides in one of five states that had legalized same-sex marriage or civil unions at the time of data collection or in one of the remaining states where same-sex marriage or civil unions was not legal. State laws and policies have been found to have an important educative effect on their citizens, and state policies track closely with state ideology (Erikson, Wright and McIver 1987; Brace et al 2002). Thus states with a population that is more liberal tend to adopt more liberal public policies, and vice versa. Lax and Phillips (2009) find that aggregate state public opinion on same-sex marriage and civil unions is a significant and positive predictor of whether a state has adopted "pro-support" policies. Our second contextual measure examines interpersonal interactions, defined by whether an individual knows or has regular contact with someone who is gay or lesbian. We argue individual level factors, such as personality, may interact with state/geographic and interpersonal context to shape public opinion on gay and lesbian rights.

Drawing on a large sample from a 2008 national survey of adults, we measure the relationship between personality dimensions and opinions on whether gay and lesbian couples should adopt children and support for civil unions. We also test how these relationships may change in varying contexts, including residing in a state with policies legalizing same-sex marriage and civil unions, as well as having regular contact with a gay or lesbian co-worker, neighbor, friend, family member or acquaintance. What previous research (Mondak et al 2010) has attributed to a universal relationship between personality traits and public opinion may in fact be restricted to certain situations or contexts. We thus explore a classic nature versus nurture dynamic. Results suggest that state and social context may be equally, if not more, important than personality in predicting opinions on gay and lesbian rights.

Multivariate analysis of the large sample survey data show the effect of personality on attitudes towards gay rights is not universal, but conditioned by context. While the effects of personality vary by trait, in some cases contexts (state residence and knowing someone who is gay or lesbian) trump the effects of personality. Some Big 5 personality traits do predict support or opposition to civil unions (but not adoption rights), but only in states that place the greatest restrictions on gay rights and for individuals who do not have contact with a gay or lesbian individual.

This paper proceeds as follows. First we briefly review the literature on personality and attitudes to determine its potential role in expression of attitudes toward gay right. We then consider the effects of state and interpersonal context on public opinion, and how personality may be conditioned by state residence. Most of what we know has been collected through relatively standard public opinion polling. We consider the state of public opinion on gay

rights in America in the early 21st century in part three. In part four we report on our data, analysis and results. We conclude by suggesting that public opinion on the issue of gay rights is shaped by standard demographic and attitudinal factors, state and social context, and underlying personality dimensions. Without all three factors, we have an incomplete understanding of public opinion on gay rights. This is one of the first studies to situate personality dimensions in context to understand their effects on public opinion.

1. Personality Factors

In the last few years research in political science has explored the relationship between personality and attitudes and political behavior (for just a few of the many studies see Jost et al 2009; Verhulst et al 2009; Mondak et al 2010; Mondak and Halperin 2008; Carney et al 2008; Oxley et al 2008). Research from social psychology and the study of personality and political science and public opinion have begun to converge. There have been few studies, however, linking personality traits with attitudes about gays or lesbians (see Shackelford and Besser 2007) and no studies have explored how this relationship may be modified by state legal or social context.

Personality is comprised of a collection of traits or dimensions that are thought to remain stable over time, and are present at different levels across individuals. Although social psychologists use a range of different measures, a common measure of personality is the Ten-Item Personality Inventory (TIPI) or the "Big Five" or "Five Factor Model" (FFM). The TIPI is widely recognized and applied to taxonomies examining different outcomes such as job performance, socialization and education (McCrae and John 1992; McCrae and Cost 1987, 2003; Goldberg 1990, 1992, 1993; Gosling 2003; Carney et al 2008; Digman 1997; Barrick and Mount 1991; Van Hiel et al 2000). In the TIPI, two survey questions are used to measure each

of the five underlying dimensions of personality, including: Extroversion (reserved/quiet, enthusiastic/extroversion), Agreeableness (critical/quarrelsome, sympathetic/warm), Openness to Experience (conventional/uncreative, open to new experiences/complex), Emotional Stability (anxious/easily upset, calm/emotionally stable) and Conscientiousness (careless, dependable/self-disciplined). Respondents are asked to rate themselves on a 7-point scale from disagree strongly to agree strongly for each of the 10 questions used to describe themselves. Extraversion represents the tendency to be sociable and to experience positive affect or emotion. Agreeableness represents the tendency to be interpersonally pleasant. Conscientiousness measures task-oriented characteristics such as being dependable, responsible, and orderly. Openness to Experience reflects a broad range of factors such as unconventional values, aesthetics sensitivity and the need for variety.

Given existing research (McCrae 1996; Shackelford and Besser 2007; Haslam and Levy 2006; Van Hiel et al 2000; Verhulst et al 2010) we would expect that the personality trait of Openness to Experience is associated with increased tolerance towards others, including those with a different sexual orientation (Shackelford and Besser 2007). Individuals scoring high on Openness to Experience should be more likely to favor gay adoption, civil unions and gay marriage. Costa and Widiger (1994) define Openness to Experience as involving "the active seeking and appreciation of experiences for their own sake. Open individuals are curious, imaginative, and willing to entertain novel ideas and unconventional values; they experience the whole gamut of emotions more vividly than do closed individuals" (pg 3). Closed individuals tend to hold traditional beliefs and attitudes, which we argue can extend to gender roles.

2. State Context

Individuals live in political environments; one of which is the fifty American states. The states vary widely in laws protecting gays and lesbian rights. In 2008, three states banned same-sex marriage by ballot initiatives, including California, Arizona, Florida, and four states have since legalized the practice (Pew 2009; Abrajano 2010; Lewis 2003; Egan and Sherrill 2009); yet in 2012 the court overturned California's ban on same-sex marriage. In the 2004 presidential election, thirteen states had laws on the ballot (initiatives or referendums) banning same-sex marriage; every ballot measure was approved by the voters (Donovan, Tolbert and Smith 2008; Campbell and Monson 2008). Same sex-marriage again dominated some November 2009 elections, when Maine voters passed a measure banning same-sex marriage, and Washington voters approved Referendum 71, which extended benefits, but not marriage, to same-sex couples. The total number of states that have passed constitutional amendments to ban same-sex marriage is twenty-nine. In 2009 Iowa's Supreme Court ruled that the state's constitution guarantees gays and lesbians the right to wed, with Connecticut's court issuing a similar ruling in May 2008. In 2009 the Vermont legislature legalized same-sex marriage; the first time gay marriage was legalized as the result of a statute rather than a court ruling. By the end of May 2009, two other state legislatures, Maine and New Hampshire, followed suit, bringing the total number of states that allow same-sex marriage to six. In 2009, Washington State became the first state to give legal rights to civil union couples via a ballot initiative, while a few years earlier New Jersey's legislature recognized civil unions in response to a state Supreme Court ruling ordering equal recognition of same-sex relationships. Clearly the state vary widely in laws granting gays and lesbians marriage or domestic partnership

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¹ The vote in California, on a ballot measure known as Proposition 8, was particularly salient because it overturned a May 2008 California Supreme Court ruling legalizing same-sex marriage.

rights.

A new study (Rice 2009) finds that public perceptions of gay rights are shaped by state context, and are influenced by the policy positions of one's state. Using American National Election Study (ANES) panel survey data from 2000-2004, changes in public opinion on gay rights is modeled as a function of individual characteristics and state characteristics as a multilevel growth model. Merging the individual level survey data with state contextual data creates a closer reflection of reality than relying on individual or aggregate state level data alone. While five states (Massachusetts, Connecticut, Iowa, Vermont and Maine) allow legalized marriage between for gay and lesbian couples, additional states, including California, Oregon, Washington and New Jersey, recognize civil unions or domestic partnerships for same-sex couples. Rice (2009) creates an index ranging from 0-5 to measure policies protective of the gay community, including gay marriage, civil unions, gay adoption, discrimination protection, and hate crime protection. In 2000, the first panel wave, 37 states had no protective policies in place for the gay community. By 2004, 17 of these states had at least one policy. The outcome variable is a feeling thermometer (0-100) in each wave of the ANES study, where 0 indicates very negative feelings toward the gay community and 100 very positive feelings. Results show if a state has favorable policies toward the gay community, citizens within that state hold more favorable attitudes toward gay rights, controlling for other factors (though not personality factors.) The results suggest state context matters, and may have a nontrivial influence on citizen attitudes toward gay rights. The finding is consistent with a long history of research in subnational politics that has shown state ideology is associated with general policy liberalism of the states (Wright, Erikson and McIver 1987; Brace et al 2002; Lax and Phillips 2009).

3. Public Opinion on Gay Rights

Gay rights has broadly been understood in term of "moral values" used most recently in Bush's 2004 presidential campaign (Campbell and Monson 2008; Hillygus and Shields 2005; see also Mooney and Lee 1995; 2000). In the aggregate, Americans continue to oppose legalizing marriage for gay and lesbian couples, and this was particularly evident in the 2004 elections when thirteen states adopted same-sex marriage bans through referenda or ballot initiatives. Research suggests ballot measures banning same sex marriage may have primed some voters to favor the Republican presidential candidate George W. Bush (Donovan, Tolbert and Smith 2008; Campell and Monson 2008). This research finds the saliency of marriage was attenuated in the states where the issue was put to a popular vote, compared to other states. Similarly, attitudes toward gay rights in general have also been shown to effect voting in candidate races (see Kane, Craig and Wald 2004). Donovan and colleagues also find opinions on gay rights and same-sex marriage is distinct compared to mass opinion on other moral issues. Almost a decade after the 2004 elections, the issue of gay rights and same-sex marriage remains a highly salient and controversial in American politics. The result is a fairly voluminous literature, which is only touched upon below.

Public opinion towards gay rights has changed over the last two decades (Brewer 2008; Avery et al 2007; Herek 2000). While attitudes toward legalized gay marriage in American have been shifting, a slim majority of Americans when asked in public opinion surveys continues to oppose same-sex marriage, but at the same time supports civil unions for gays and lesbian couples (Pew 2009, 2011). Some contend this change in attitudes is the result of positive mass media coverage. As is expected, the more negative individuals feel about homosexuals in general, the less supportive they are of gay rights (Brewer 2003).

Brewer and Wilcox (2005) monitor polling trends using Pew and Gallup, and conclude that national surveys show consistent opposition to same-sex marriage, but a weakening opposition to civil unions (see also Lewis and Gosset 2008). Tracking opinion over twenty years across four different polls, Lewis and Gossett (2008) find a very weak upward trend in support, with support dipping each time a controversial judicial decision was made. Those most likely to favor same sex marriage, not surprisingly, include Democrats, liberals, women, the young, better educated and secular individuals (Brewer 2008), with ideology and age the two most important predictors (Lewis and Gossett 2008). Religious individuals are less likely to favor gay marriage, as are men and African Americans. National survey data reveal significant polarization on this morality policy issue, with ideological liberals 27 points more likely than conservatives to favor legalized gay marriage. In terms of opinion change, liberals, individuals with gay friends, and the non-religious had the largest net "acceptance" change (Lewis and Gossett 2008).

The work of these scholars builds on a rich body of literature examining the issue of gay rights, focusing both on opinion formation (Lewis 2003; Lewis 2005; Egan and Sherill 2005; Haider-Markel 2010; Haider-Markel and Josyln 2008; Egan and Sherrill 2008; Lewis and Gossett 2008; Brewer 2002, 2003, 2008, Brewer and Wilcox 2005) and the reasons leading states to adopt constitutional amendments banning same sex marriage (Nicholson-Crotty 2006; Bowler and Donovan 2004; Haider-Markel 2001; Haider-Markel and Meier 1996; Haider-Markel, Querze and Lindaman 2007). Previous research has identified several individual level predictors of attitudes towards homosexuality, including gender, attitudes towards sexuality, age, education, income, partisanship, ideology, religion and knowing a homosexual person (see Brewer 2003, Weishut 2000 for a review; Haider-Markel and Joslyn 2008) Negative

attitudes toward gay rights have historically been linked to a conservative ideology (Brewer 2003; Ficarrotto 1990; Herek and Capitanio 1999).

In an innovative study using attribution theory, Haider-Markel and Joslyn (2008) find that positive feelings towards gays and lesbians, support for gay civil rights, civil unions, and same-sex marriage are strongly determined by a genetic attribution for homosexuality. If the cause of homosexuality is perceived as controllable--learned, environmental, or an individual choice-- negative affect toward homosexuals and lower support for gay rights politics is found. The authors find religion, ideology and experience shapes attributions. Here we extend the argument of these authors by measuring actual personality traits as a predictor of opinions on gay rights.

Some scholars use framing experiments to study attitudes about same-sex marriage. These scholars find increased political knowledge dampens the framing or priming effects (Brewer 2002 2003), consistent with previous literature (Druckman et al 2004; Donovan, Tolbert and Smith 2008). Brewer (2002) simulates media exposure to gay rights in a laboratory experiment. The results show that participants who received an "equality" frame were particularly likely to explain their views on gay rights in terms of equality and that participants who received a "morality" frame were particularly likely to cast their opinions in the language of morality. Residing in a state context with legalized civil unions/gay marriage, may be a real world example of the equality frame. However, Brewer's results show that exposure to the "morality" frame interfered with the impact of the "equality" frame, suggesting that the presence of alternative frames can dampen framing effects.

While the literature has greatly expanded our understanding of public opinion about homosexuality in the United States, this study is unique in combining the three key factors that interact: personality, state legal environment, and interpersonal contact.

Hypotheses

While the literature has identified many characteristics associated with support for gay rights, previous research rarely considers the psychological dimension or state context. Of the five main personality traits identified by researchers, Extroversion, Agreeableness, Openness to Experience, Emotional Stability, and Conscientiousness, we expect that Openness to Experience is likely to have the most important effect on support for pro-gay policies.

Openness to Experience should predispose an individual to exhibit increased tolerance towards others, including those with different sexual orientation. This leads to our first hypotheses:

H1: Individuals scoring high on the personality dimension of Openness to Experience should be more likely to favor civil unions and adoption rights for gays and lesbians.

We further expect environmental contexts to matter with regard to opinion on gay rights policies are legal and interpersonal. As expected from previous research, an individual's state of residence may affect their views on gay rights policies. Residing in a state with pro-gay policies is likely to positively affect an individual's opinion on such policies. This leads to our second and third hypotheses:

H2: Residing in a state with pro-gay policies is likely to positively affect an individual's support for gay rights.

H3: Interpersonal contact with gay or lesbian people is likely to positively affect an individual's support for gay rights.

We further expect that personality traits will be conditioned by an individual's environment. In fact, the importance of personality traits in determining opinion on public policy is likely to be diminished—context may overwhelm the importance of personality. Yet, the flip side is also equally plausible—a personality trait like Openness to Experience may reemerge as an important predictor of opinion when an individual resides in a state without pro-gay policies. We also know that contact and interaction with gay and lesbian people conditions an individual's views on gay rights policies. Again, personality traits may be less (more) important than the interpersonal context when an individual (does not) know and interacts with gay and lesbian people. The interaction of personality and context are the basis for our fourth and fifth hypotheses.

H4: The personality trait of Openness to Experience is more (less) likely to express itself in favor of civil unions and adoption for gays and lesbians in state contexts that generally oppose (support) such policies.

H5: The personality trait of Openness to Experience is more (less) likely to express itself in favor of civil unions and adoption for gays and lesbians when individuals have had less (more) interpersonal contact with gays and lesbians.

Data and Methods

To examine the role of personality and context in attitudes towards gay rights and same-sex relationships, we took advantage of the Cooperative Campaign Analysis Project (CCAP), a large-sample survey of 20,000 respondents in the field during the 2008 election

cycle (Jackman and Vavreck 2009).² While the CCAP did not ask respondents about same-sex marriage specifically, it did include two question of interest here, that generally track with the issue of same-sex marriage. Pew surveys (2010) show support for gay adoption and same-sex marriage are highly correlated. In the baseline survey, fielded in December 2007 and January 2008, respondents were asked:

Do you favor allowing civil unions for gay and lesbian couples? These would give them many of the same rights as married couples.

- <1> Strongly favor
- <2> Somewhat favor
- <3> Somewhat oppose
- <4> Strongly oppose
- <5> I'm not sure, I haven't thought much about this

For our analysis, we drop those who answered "not sure" and we collapse the two favor categories and the two oppose categories into a dichotomous favor/oppose variable. A second question, on support for allowing gays and lesbians to adopt, was asked in late October/early November 2008:

Do you think gay or lesbian couples should be legally permitted to adopt children?

- <1> Yes, gay and lesbian couples should be permitted to adopt children
- <2> No, gays and lesbian couples should not be permitted to adopt children

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² The Cooperative Campaign Analysis Project (CCAP) (Jackman and Vavreck 2009) is a collaborative effort to produce a six-wave panel study conducted on the Internet. This sample is constructed using a technique called sample matching (Vavreck and Rivers 2008) in which a list of all U.S. citizens from the U.S. Census American Community Survey is used to generate a set of demographic, political and behavioral characteristics that should be mirrored in the survey sample. Then, using a matching algorithm, the researchers select respondents who most closely resemble the census data from a pool of opt-in participants. The sample is stratified to ensure large samples within states. See Jackman and Vavreck (2010) for a description of the sample. More information regarding sample matching is available at http://web.mit.edu/polisci/portl/cces/material/sample_matching.pdf. The models are estimated using survey weights. Using this same technique, the 2006 Cooperative Congressional Election Survey (CCES) produced more precise estimates than more conventional probability designs such as random digit dialed (RDD) phone surveys (Vavreck and Rivers 2008).

Respondents who skipped this question were prompted to answer by indicating which way they "lean" on the issue even if they are not sure. Only a small percentage of all respondents (1.2%) were prompted this way. We do not include those responding to this prompt in our analysis since we are not convinced those responses are any more than responding to the pressure to come up with an answer. Including them makes no substantive difference in our results. These two variables form the dependent variables for our analyses, and we examine each one separately, though they are highly correlated (r=.697, p<.001).

Independent variables include our measures of personality traits taken from the Ten Item Personality Index (TIPI) which is a reliable indicator of the Big 5 personality traits as discussed above: openness, conscientiousness, agreeableness, extroversion, and stability. We expect personality traits to influence preferences for same sex relationships for the reasons we gave earlier. But we don't expect them to work in a vacuum. Indeed, we anticipate that environmental and situational factors will interact with personality to predict the outcome variables. Thus we include a number of these variables.

First, we measure the extent to which respondents interact with gays or lesbians. The CCAP measure is a simple dichotomous variable, asking whether the respondent often "sees or interacts with people you know to be gay or lesbian." The variable is coded "1" for yes, and "0" for no. We anticipate that having contact with gays and lesbians is related to being more supportive of civil unions and gay adoption.

We also include an indicator of the legal status of gay and lesbian relationships in the state in which the respondent resides. Because the survey was in the field in late 2007 and throughout 2008, we identify states based on their existing laws as of early 2008. States are divided into two groups. The first are states where gay marriage or civil unions are not legal,

including those with defense of marriage acts (DOMA) whether in statute or the state constitution. Second are the five states that had legalized gay marriage (Massachusetts) and civil unions but not gay marriage (Connecticut, New Hampshire, New Jersey, and Vermont) as of early 2008. For descriptive analysis, we further divide the first group into those that are part of the south (the 11 states of the Confederacy) and those that are not.

We also include standard political and socio-economic variables in our models, including ideology and partisanship. Education is predicted to increase support, while older respondents are expected to be less supportive. Research finds African Americans are less supportive of gay rights, so we have included race and ethnicity measures (black, Latino) (Abrajano 2010; Egan and Sherill 2005). We also include control variables for gender (male), marital status (married), and income, imputed to limit lost cases and measured on a 5-point scale. Finally, we expect religion to play an important role in attitudes towards civil unions and gay adoption. Because denominational issues can result in unclear coding of religion—for example is a particular denomination "evangelical," liberal, or something else—we chose to use frequency of attendance at religious services (religiosity) to measure religious effects. Those who attend most often are typically members of born-again or evangelical denominations, but even when they are not, we expect those who attend services most often to be most conservative in their attitudes towards gay rights issues. Frequency of church attendance is measured on a 6-point scale from never (1) to more than once a week (6).

For both civil unions and gay adoption, we estimate logistic regression models, predicting the likelihood of supporting each. We initially estimate models including all of our predictors as main effects only. Such an analysis suggests that personality, and other factors all have direct and independent effects on the dependent variables (hypothesis 1). To this

model of personality traits and control variables, we add controls for state context and interpersonal contact, and the interaction of the two contextual factors. This helps us measure the relative importance of psychological factors compared to context (hypotheses 2 & 3).

Hypotheses 4 & 5 suggest personality may be conditioned by contextual factors. We can do this one of two ways. First, we can enter interaction terms into a single large model, so that we include an interaction effect for each of the effects we want to test. Because we have five personality measures, and two contexts to test (contact and state legal status) this would result in a large and unwieldy model requiring three-way interactions. So we have taken the second path, in which we sub-sample by our contextual variables and examine the results for each context independently of the other. This provides the equivalent of interaction terms while leaving our models more interpretable. Because of the very large sample survey, our still have a large number of cases.

Results

Before turning to the logit models, it is useful to examine the marginal results in the dataset for both dependent variables. Table 1 presents the percentage of Americans who support gay adoption and civil unions by state context on the column and whether the respondent knows a gay person on the row. These percentages are after removing all respondents who did not have a preference on the particular item being asked. Thus while we present the percentage supporting, the percentage opposing each is simply 100 minus the number we report.

Table 1 suggests that we should expect contextual effects in our multivariate models.

Both the state legal environment and contact with gay and lesbian people matters in attitudes towards both gay adoption and civil unions. Support for gay adoption is 31 to 37 points higher

among those reporting that they have contact with people they know to be gay or lesbian than among those who do not. Support for civil unions shows a similar effect, with a 29 to 36 percentage point difference. Differences by state legal context are not as stark, but they appear to be present as well. For both gay adoption and civil unions, support is lowest in states where gay marriage and civil unions are not legal and reach the highest point in states with legal recognition of same sex relationships. In fact, support for civil unions for individuals without contact with a gay or lesbian person, is 27 percentage points higher in states where gay marriage/civil unions are legal compared to Southern states where gay marriage/civil unions are not legal.

[Insert Table 1 about Here]

These results are a first indication that the two specific contexts we are testing—state legal environment and contact with gay and lesbian people play important roles in attitudes toward gay rights. But our argument is that both these contextual variables and respondent's personalities play independent and interacting roles in the expression of attitudes towards civil unions and gay adoption. To test this we need a multivariate analysis.

Gay Adoption

Tables 2 presents the multivariate results predicting support for gay adoption. The first column shows a single model for adoption rights including all of our respondents as main effects, including the five measures of personality (but omitting context). The model in column 2 is identical, but includes variables for state context, interpersonal contact, and the interaction of the two. When personality factors are included without context, as expected individuals that score high on Openness to Experience are more supportive of gay adoption, holding all other factors constant (column 1). The substantive effect is fairly large. Holding

other variables at mean values, an individual scoring the lowest on the Openness trait has a .53 probability of supporting allowing gays and lesbians to adopt children; an individual scoring the highest on openness has a .63 probability of favoring this gay right, a .10 probability difference. This is a fairly significant substantive effect compared to recent research. The only other personality trait to reach statistic significance is conscientiousness, with a negative effect. Those who are higher in conscientiousness (more dependable and less careless) are less supportive of gay adoption, all else equal.

We find that nearly all our political and SES variables have effects on support for gay rights in the expected direction, expect for Hispanic ethnicity which is not-significant (see Abrajano 2010 for a related finding). Individuals with a conservative ideology and Republicans are less supportive, as are older people, blacks, those who are married, and those who are high in religiosity (see Brewer 2003). Consistent with previous research, higher income and more education predict greater support for adoption rights.

Model 2 in Table 2 adds in our covariates for state context, contact and the interaction of the two. The significant relationship between the personality trait and Openness to Experience disappears when controlling for context. The base term for interpersonal contact with gays or lesbians remains positive and statistically significant, but because this is an interaction model, probability simulations are necessary to understand the substantive effects. Figure 1 graphs the probability of supporting adoption rights varying state and interpersonal context, with all other variables held constant at mean values, including personality traits. The results show context is important in opinions on gay rights. Individuals who do not know gay or lesbian people, and reside in a state where gay marriage or civil unions are not legal have only a .45 probability of favoring gay adoption, and the 95 percent confidence interval is

narrow. A modal individual who does not key a gay person, but lives in a state that has legalized civil unions or gay marriage has a .51 probability of favoring adoption rights. Thus state context alone is associated with a modest .06 change in the probability of favoring gay adoption.

Interpersonal contact is more powerful. An individual residing in a state that does not allow legalized gay marriage/civil unions, but knows a gay person had a .70 probability of favoring adoption rights, a .25 increase from the baseline (See Figure 1). Combined, there is even greater effect. An individual who knows gays or lesbians and resides in a state with legalized same-sex unions has almost a .80 probability of favoring gay adoption, a .40 change from the baseline. From these simulations it is clear that context and contact are powerful predictors of opinions on gay rights, and more so than personality traits, even Open to Experience.

[Insert Table 2 about Here]

But of course the analysis in Table 1 does not include the interaction of context, contact and personality. Given the difficulty of three way interactions, Table 3 stratifies the sample on our two key variables, the state legal environment and contact with gays or lesbians. Since we have two state environments and two contact levels, there are four columns, showing the equivalent of running a single model with both contextual terms interacting with each of the other predictors and with each other.

When we control for varying contexts, personality factors play a limited role in attitudes towards gay adoption in Table 3. Across all of the contexts, we find virtually no personality effects. What little impact we see is overridden by having had contact with gays and lesbians. The personality measures are never significant in the contact context. Among

those who have had no contact, some personality traits do seem to play a role, but the results are different in the two state legal environments. Conscientiousness is negatively correlated with support in states where gay marriage/civil unions are not legal, while agreeableness is negatively correlated with support in legalized states. In any case, it appears that attitudes towards gay adoption are in some way different from what we expected given the existing literature on personality that suggests Openness to Experience should predict support for gay rights issues (Shackelford and Besser 2007; Haslam and Levy 2006). Perhaps the fact that gay adoption implicates children in the assessment of its appropriateness may have something to do with this; as we shall see attitudes towards civil unions are, at least in part, conditioned on Openness to Experience.

Civil Unions

Tables 4 and 5 repeat the above analyses for civil unions. Even though support for gay adoption and civil unions are highly correlated, there are interesting and important differences in what predicts mass opinion. Table 4, model 1 presents the results of a single model including all personality factors and all respondents in the sample, but omitting the context variables. Model 2 adds in the variables measuring state context, contact and the interaction term. As with adoption rights, all of the political and SES predictors are significant except Latino ethnicity, and high levels of religious service attendance predict less support for civil unions.

Unlike adoption, support for civil unions is predicated in part by four of the five personality traits, with only agreeableness showing no statistical effect. And the effects remain, even after controlling for state and interpersonal context. Openness to Experience and Emotional Stability are positively related to support for civil unions, as predicted by

previous research (Shackelford and Besser 2007), while conscientiousness and extraversion are negatively related, as they were in the initial gay adoption model. Again, we see individuals with more reserved personalities more likely to support gay rights, as well as those who are less conscientiousness. Figure 2 graphs the probability of favoring civil unions varying Openness to Experience from minimum to maximum values; there is a .20 change in the probability of favoring civil unions over the range of the variable, controlling for context, other demographic factors, ideology and partisanship. This is a large substantive effect for a personality trait.

[Insert Table 4 about Here]

Our two key contextual variables—interpersonal contact and state legal environment - are both positively related to support for civil unions, and the interaction term of state and interpersonal context is also significant. Figure 3 graphs the probability of favoring civil unions, varying state context and contact. With all other factors held constant, an individual residing a state without civil unions or gay marriage who doesn't have contact with gays or lesbians has a .45 probability of favoring civil unions. This is comparable to gay adoption. But state context has a much larger independent effect on civil unions than gay adoption. Residing in a state with legalized marriage or civil unions, increases support to .68, even among individuals who do not personally have contact with gays or lesbians; a .23 change from the baseline. Having contact with gays or lesbians, but not living in a gay friendly state increases support for civil unions to .70, a .25 increase from the baseline. Residing in a gay friendly state and having interpersonal contact increases support for civil unions even further to .75. Thus we see both state context and interpersonal contact having strong effects of public opinion on gay rights. This suggests state policies are important in shaping public opinion.

As with the previous analysis of gay adoption, we split (or subsample) our sample by our two contextual variables and present those results in the remainder of Table 5. Both state legal context and contact with gays and lesbians appears to play a significant role in conditioning the effects of both personality traits as well as most of the SES/political predictors. Four of the Big 5 personality traits are significantly related to support for civil unions in states that ban same-sex marriage/civil unions, but *only* for those who have no contact with gay or lesbian people. In the absence of context informing opinions on gay rights, personality matters in shaping public opinion. Openness to Experience and Stability increase support for civil unions, while conscientiousness and extraversion all lower support in this context only (no contact with gays and lesbians). In states that ban same-sex marriage/civil unions, but the respondent has contact with a gay or lesbian, the effect is found for Openness to Experience (positively related) and conscientiousness (again, negatively related). In no other context are their any visible personality trait effects. *There are no personality effects for individuals residing in states where gay marriage/civil unions are legal*.

[Insert Table 5 about Here]

The results suggest the effects of personality traits on opinions towards civil unions are essentially washed out by state legal environment and interpersonal contact with gay and lesbians. Personality may shape attitudes towards gays, but only in contexts void of information about gays and lesbians.

In states not allowing gay marriage or civil unions, personality traits along with SES and political variables, predict support for civil unions among those who do not have contact with anyone they know to be gay or lesbian. But contact with gays and lesbians reduces the effects of many of these variables within these states, leaving only one personality trait

Openness to Experience playing a role, along with some of the SES/political variables, religiosity, and cosmopolitanism. The importance of Openness to Experience is consistent with published research (Shackelford and Besser 2007). Across contexts, religiosity, ideology, partisanship, income, being African American, and (in the case of having no contact and living in state not banning gay marriage, being male) predict the probability of support for civil unions.

In states where gay marriage or civil unions are legally recognized, few of our predictors make any difference, although our ability to classify cases and the pseudo r-square measure are both at their highest in these data. State context matters consistent with Rice (2009). For those who live in these states and have no contact with gays and lesbians, attitudes are predicted only by ideology (negative), religiosity (negative), and cosmopolitanism (positive). For those with contact, attitudes for these respondents are predicted by ideology (negative), partisanship (negative), religiosity (negative), and being African American (negative).

Table 6 gives a quick look at the personality traits that are significant at the p<.05 level for each of the analyses in summary table. This makes clear how the contextual effects of state legal environment and contact with gay or lesbian people condition what personality effects there are. Rather than think of personality traits as given and immutable, always exerting their influence on attitudes, these data suggest that the effects are much more nuanced and subject to context, at least for these two attitudes.

[Insert Table 6 about Here]

Discussion and Conclusion

It has become commonplace for those who study personality dispositions, regardless of academic discipline, to recognize that personality cannot be studied in isolation from the

environmental context within which the individual is embedded. However, political science has a discipline has been slow in analyzing personality traits in situation or context. This study suggests analyzing the person in the situation is the most appropriate way to understand the way that opinions and attitudes are formed. Our study reinforces the importance of situating the individual in her/his environmental context. Personality clearly matters more in some contexts than others. In particular, personality traits like Openness to Experience matter most in contexts that are hostile to pro-gay policies like civil unions and adoption and for those that do not have interpersonal contact with gays or lesbians. Those personality traits are swamped by geographic contexts in which pro-gay policies prevail or interpersonal contexts in which the individual knows gay and lesbian people.

We also find both state context measured by legal civil unions/gay marriage and interpersonal contact, as well as their interaction, have strong and independent effects on increasing support for gay rights policies. These contextual effects may be larger than previously understood. If an individual has contact with gays and lesbians and resides in a state with pro-gay policies, they have an 80 percent probability of supporting gay adoption and a 75 percent probability of favoring civil unions, compared to a similarly situated individual residing in a state with policies hostile to gays and without interpersonal contact, in which they have only a 45 percent chance of favoring either policy. In comparison, the maximum independent effect of Openness to Experience is a 20 percentage point change in favoring civil unions controlling for other factors (and Openness is not significant in predicting adoption rights when controlling for context). Thus context can exert an independent effect on support for pro-gay rights of nearly double that of personality alone.

Rather than being a universal effect found across the population, we find the personality trait of Openness to Experience is conditioned by context, including where individuals live and who they interact with. Without exploring how the environment conditions and interacts with personality, the previous research provides an incomplete explanation. We find that while certain of the Big 5 personality traits predict attitudes towards civil unions (and much less so towards gay adoption) interacting these traits with the legal environment of the state the respondent lives in paints a different story. For residents of states that do not allow legalized gay marriage or civil unions, knowing someone who is gay or lesbian nearly eliminates the effects of personality traits, with the exception Openness to Experience and Conscientiousness. For those living in states with legalized gay marriage or civil union, personality traits play little role in attitudes towards either gay adoption or civil unions.

Many years ago, Fred Greenstein in his book *Personality and Politics* (1969), argued that the personality of political leaders cannot be examined fruitfully within a vacuum that ignores the effects of the environment (what he called "situation") in which the leaders operate. He argued that while personality may have powerful effects on behaviors, including decision making and interactions with other players in the political environment, it was almost certainly conditioned in important ways by the situation in which leaders found themselves. One could neither drop any personality in (say) the Cuban Missile Crisis and get the same outcome as occurred with John F. Kennedy and Nikita Khrushchev as the key players, nor could one assume that in any given situation constraints were so influential that the leaders' personalities did *not* matter. Instead, he argued, personality and situation interacted with each other to determine the choices made. We argue that this same effect exists for average

citizens, and that while personality traits—especially in this case Openness to Experience undoubtedly play a role in attitudes, so does the environmental context in which citizens find themselves as they ponder the political questions of the day.

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Table 1: Marginal Results on Support for Gay Adoption and Civil Unions

Support for Gay Adoption (Don't Know is dropped)

	Gay Marriage/CU Not legal		Gay Marriage/CU Legal	Diff	
	South	Non-South			
Contact with Gay Person	64% (1897)	73% (4576)	79% (345)	+6-15	
No Contact	33% (1598)	36% (3370)	44% (201)	+8-11	

N in parentheses; weighted results

Support for Civil Unions (Don't Know is dropped)

	Gay Marriage/CU Not legal		Gay Marriage/CU Legal	Diff
	South	Non-South		
Contact with Gay Person	63% (2156)	71% (5232)	76% (383)	+5-13
No Contact	28% (1726)	34% (3119)	55% (214)	+21-27

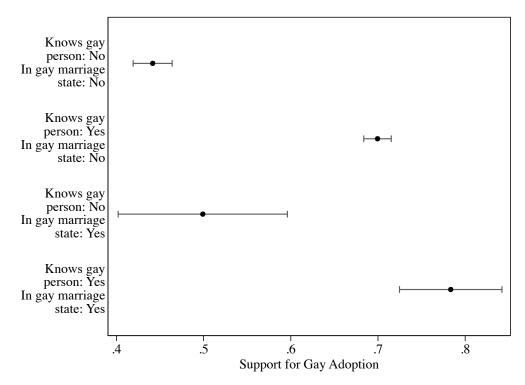
N in parentheses; weighted results

Table 2: Support for Gay Adoption With and Without State & Interpersonal Context

Table 2: Support for Gay Ac	Model 1:	Model 2
	Personality Only	with Context
	1 ersonanty Omy	with Context
Personality Dispositions		
Openness to Experience	.111***	.046
1	(.024)	(.027)
Emotional Stability	.029	.026
V	(.023)	(.026)
Conscientiousness	082***	081**
	(.024)	(.027)
Agreeableness	.040	.027
	(.029)	(.032)
Extraversion	032	083*
	(.033)	(.037)
Context		
Contact with Gay Person	-	1.115***
		(.062)
Resides in State with Gay		.049
Marriage or Civil Unions	-	(.217)
0 0 V 0		0.0=
State Context X Contact	-	.067
		(.287)
Control Variables	500***	= × 0 + + +
Ideology	733***	750***
D . ID	(.033)	(.037)
Party ID	223***	209***
E1 .:	(.015)	(.017)
Education	.305***	.275***
Amain Vanna	(.027) 014***	(.030) 010***
Age in Years		
Income Level	(.002) .150***	(.002) .083***
income Level	(.023)	(.027)
Black	596***	561***
Diack	(.085)	(.094)
Hispanic	.150	.089
mspame	(.103)	(.117)
Male	399***	344***
THE CONTRACT OF THE CONTRACT O	(.057)	(.063)
Married	321***	181**
	(.060)	(.068)
Religiosity	333***	332***
	(.017)	(.019)
Constant	3.960***	3.900***
	(.254)	(.286)
Nagelkerke R Square	.470	.513
Correctly Classified		
Correctly Classifica	77.3%	79.1%

Cases are weighted. Unstandardized logistic regression coefficients with standard errors in parentheses. Dependent variable is support or opposition to allowing gays and lesbians to adopt children. *** p<.01 **p<.01 *p<.05





Note: Dots are points estimates based on logit coefficients reported in column 2 of Table 2, with other variables held constant at mean values. Bars represent the 95 percent confidence interval around the point estimate.

Table 3: Support for Gay Adoption by State Context and Contact (Subsample Models)

State Legal Context		e/Civil Union Legal	Gay Marriage or Civil Union Legal		
Contact with Gay/	No Contact	Contact	No Contact	Contact	
Lesbian People	10 Contact	Contact	110 Contact	Contact	
nessian reopie					
Personality Dispositions					
Openness to Experience	.006	.075**	.071	.036	
o p	(.041)	(.038)	(.233)	(.211)	
Emotional Stability	.008	.024	.273	.025	
v	(.040)	(.036)	(.211)	(.177)	
Conscientiousness	154***	029	.131	139	
	(.042)	(.037)	(.246)	(.192)	
Agreeableness	.106*	024	412	.008	
	(.051)	(.043)	(.279)	(.215)	
Extraversion	076	085	385	033	
	(.058)	(.050)	(.315)	(.253)	
Control Variables		, ,		, ,	
Ideology	691***	765***	-1.309***	-1.223***	
	(.059)	(.051)	(.373)	(.329)	
Party ID	179***	244***	030	205	
	(.026)	(.024)	(.173)	(.135)	
Education	.351***	.217***	.055	.335	
	(.046)	(.042)	(.236)	(.194)	
Age in Years	008**	012***	011	.006	
	.(003)	(.003)	(.018)	(.017)	
Income Level	.056	.102**	.199	.376	
	.(040)	(.035)	(.230)	(.195)	
Black	647***	510***	.345	-1.580*	
	(.152)	(.128)	(.785)	(.696)	
Hispanic	.460*	158	721	.672	
	(.180)	(.154)	(1.446)	(1.181)	
Male	502***	240**	-1.281**	.276	
	(.100)	(.086)	(.559)	(.423)	
Married	048	279**	.068	920	
	(.104)	(.095)	(.617)	(.514)	
Religiosity	361***	316***	314*	302*	
	(.029)	(.027)	(.157)	(.143)	
Constant	3.672***	5.231***	6.453**	5.187*	
	(.435)	(.403)	(2.618)	(2.180)	
Nagelkerke R Square	.385	.454	.468	.493	
Correctly Classified	77.4%	80.5%	79.4%	85.6%	
N=	3191	4488	141	243	

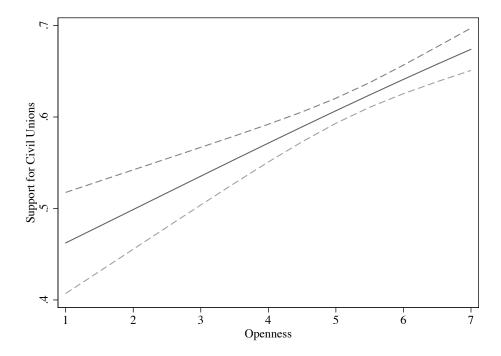
Cases are weighted. Unstandardized logistic regression coefficients with standard errors in parentheses. Dependent variable is support or opposition to allowing gays and lesbians to adopt children. *** p<.01 **p<.01 *p<.05

Table 4: Support for Civil Unions With and Without State & Interpersonal Context

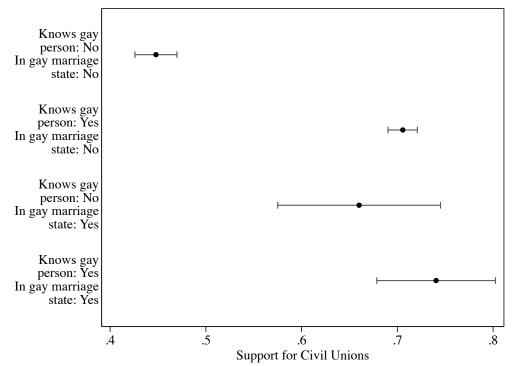
Table 4: Support for Civil	Model 1:	Model 2	
	Personality Only	with Context	
	1 ersonanty Omy	with Context	
Personality Dispositions			
Openness to Experience	.192***	.133***	
openiess to Experience	(.023)	(.027)	
Emotional Stability	.089***	.089***	
	(.022)	(.025)	
Conscientiousness	129***	132***	
	(.023)	(.026)	
Agreeableness	023	017	
C	(.027)	(.031)	
Extraversion	064*	076*	
	(.030)	(.035)	
Context	, ,	, ,	
Contact with Gay Person	-	1.126***	
•		(.060)	
Resides in State with Gay	-	.967***	
Marriage or Civil Unions		(.060)	
State Context X Contact	-	843**	
		(.275)	
Control Variables			
Ideology	714***	722***	
	(.030)	(.036)	
Party ID	225***	207***	
	(.014)	(.017)	
Education	.266***	.214***	
. 37	(.024)	(.028)	
Age in Years	008***	008***	
T T 1	(.002)	(.002)	
Income Level	.153***	.115***	
DI I	(.021)	(.025)	
Black	960***	937*** (.091)	
II:anania	(.077) .028	069	
Hispanic	.028	.110	
Male	183**	123*	
Male	(.053)	(.061)	
Married	348***	277***	
MATICA	(.056)	(.066)	
Religiosity	388***	378***	
Trongroup,	(.016)	.018	
Constant	3.858***	3.650***	
Sometime	(.233)	.273	
Nagelkerke R Square	.477	.519	
Correctly Classified	77.7%	79.4%	
N=	10848	8802	
C '1 1 1 1	11 '.'	0002	

Cases are weighted. Unstandardized logistic regression coefficients with standard errors in parentheses. Dependent variable is support or opposition to civil unions. *** p<.01 **p<.01 *p<.05

Figure 2: Probability of Supporting Civil Unions, varying Personality Trait of Openness to Experience, Controlling for State & Interpersonal Context







Note: Dots are points estimates based on logit coefficients reported in column 2 of Table 4, with other variables held constant at mean values. Bars represent the 95 percent confidence interval around the point estimate.

Table 5: Support for Civil Union by State Context and Contact (Subsample Models)

State Legal Context	Gay Marriage/Civil Unio Not Legal		Gay Marriage or Civil Union Legal		
Contact with Gay/ Lesbian People	No Contact	Contact	No Contact	Contact	
Personality Dispositions					
Openness to Experience	.125**	.128***	.338	.077	
	(.041)	(.037)	(.217)	(.194)	
Emotional Stability	.158***	.043	018	191	
·	(.039)	(.035)	(.197)	(.170)	
Conscientiousness	163***	107**	053	352*	
	(.041)	(.036)	(.210)	(.179)	
Agreeableness	081	.022	315	.271	
	(.049)	(.042)	(.249)	(.193)	
Extraversion	209***	.020	077	.000	
	.055	(.048)	(.273)	(.224)	
Control Variables		, ,	, ,		
Ideology	698***	737***	722*	772**	
	(.058)	(.048)	(.287)	(.249)	
Party ID	155***	249***	156	294*	
	(.026)	(.023)	(.153)	(.123)	
Education	.220***	.222***	.202	.047	
	(.043)	(.040)	(.224)	(.176)	
Age in Years	004	010***	.000	.004	
	(.003)	(.003)	(.017)	(.015)	
Income Level	.123**	.104**	.019	.369*	
	(.038)	(.034)	(.205)	(.177)	
Black	619***	-1.136***	784	-1.614**	
	(.145)	(.122)	(.755)	(.560)	
Hispanic	.053	050	427	919	
	(.182)	(.145)	(1.039)	(.696)	
Male	376***	.077	211	359	
	(.096)	(.084)	(.540)	(.384)	
Married	132	413***	328	.130	
	(.100)	(.092)	(.556)	(.454)	
Religiosity	394***	375***	634***	283*	
	(.028)	(.026)	(.151)	(.127)	
Constant	3.819***	4.706***	5.840**	5.461**	
	(.421)	(.380)	(2.131)	(1.949)	
Nagelkerke R Square	.381	.468	.461	.427	
Correctly Classified	77.1%	80.7%	78.4%	83.6%	
N=	3431	4821	141	266	

Cases are weighted. Unstandardized logistic regression coefficients with standard errors in parentheses. Dependent variable is support or opposition to civil unions. *** p<.01 **p<.05

Table 6: Summary of Significant Personality Effects on Support for Gay Adoption and Civil Unions

	All Respondents					
	Adoj	otion	Civil Unions			
	Personality	Personality +	Personality	Personality +		
		Context		Context		
OPENNESS	+		+	+		
EMOTIONAL STABILITY			+	+		
CONSCIOUSNESS	-	-	-	-		
AGREEABLENESS		-	-	-		
EXTRAVERSION						

Entries are significant at p<.05

	Adoption				Civil Union			
	Gm/CU I	Not Legal	GM/CU Legal		Gm/CU Not Legal		GM/CU Legal	
	No	Contact	No	Contact	No	Contact	No	Contact
	Contact		Contact		Contact		Contact	
OPENNESS STABILITY		+			+ +	+		
CONSCIOUSNESS	-				-	-		-
AGREEABLENESS EXTRAVERSION					-			

Entries are significant at p<.05