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# HOW THE CLIMATE OF OPINION IN STATES AND COUNTRIES INFLUENCES GAY RIGHTS

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John Poe, Student

Dr. Mark Peffley, Major Professor

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HOW THE CLIMATE OF OPINION IN STATES AND COUNTRIES INFLUENCES  
GAY RIGHTS

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DISSERTATION

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A dissertation submitted in partial fulfillment of the  
requirements for the degree of Doctor of Philosophy in the  
College of Arts & Sciences  
at the University of Kentucky

By

John Poe

Director: Dr. Mark Peffley, Professor of Political Science

Lexington, KY

2017

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## ABSTRACT OF DISSERTATION

### HOW THE CLIMATE OF OPINION IN STATES AND COUNTRIES INFLUENCES GAY RIGHTS

This dissertation examines attitudes on same-sex marriage and how personal predispositions toward support and the climate of opinion interact to help create attitudes. Over the past few decades, support for gay rights has increased dramatically in the United States and many other countries around the world. I argue that, while the set of basic personal determinants of attitudes toward homosexuality and gay rights stays roughly the same, the impact of such determinants changes over time and space. The framework used in this dissertation draws on attitudinal and political psychology, political sociology and theories of contextual effects. I argue that over the course of their lives, people develop an overall propensity to tolerate or approve of homosexuality and support gay rights based on their political and social characteristics, such as religiosity, partisan or ideological identities, personality characteristics and various demographic characteristics (e.g., education, race, gender and age). The influence of these predispositions on gay rights attitudes is moderated by the political and social environments in which people live. Even among people whose predispositions push them consistently toward support for gay rights, if they live in a homophobic environment, support for gay rights will be attenuated compared to a similar individual living in a more socially tolerant environment.

Keywords: gay rights, political psychology, political science, identity, homophobia,  
climates of opinion

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HOW THE CLIMATE OF OPINION IN STATES AND COUNTRIES INFLUENCES  
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## Chapter 1: Introduction

This dissertation is comprised of a set of three essays on the relationship between individuals and the environment in which they live. Specifically, I look at attitudes on same-sex marriage and how personal predispositions toward support and the climate of opinion interact to produce issue positions. While each essay is based on an overarching attitudinal theory of context effects the chapters are designed to be independent of one another. They use different measures, have different settings, and are intended to stand alone as eventual journal articles.

Research on public support for LGBT rights has proliferated in the last few decades (Fording and Poe 2014), identifying major individual-level characteristics and environmental forces responsible for stability and change in support for gay rights issues. As I elaborate more fully below, thanks to a growing body of work on the antecedents of individuals' attitudes toward homosexuality and gay rights issues, we know that several personal characteristics are among the "usual suspects" found to influence attitudes toward homosexuality and gay rights generally. Levels of education and religiosity are among the most important predictors of support for gay rights (Loftus 2001, Olson, Cadge et al. 2006, Herek and McLemore 2013, van den Akker, van der Ploeg et al. 2013). An individual's age and gender also tend to matter a great deal (Loftus 2001, Olson, Cadge et al. 2006, Herek and McLemore 2013, van den Akker, van der Ploeg et al. 2013). And identifying oneself as a conservative (Poteat and Mereish 2012) or a Republican (Brewer 2008, Fetner 2008, Hetherington and Weiler 2009), as well as holding a more authoritarian worldview (Hetherington and Weiler 2009) are often associated with higher levels of homophobia and opposition to gay rights policies. When considered together,

these personal characteristics collectively shape an individual's overall predisposition to favor or oppose gay rights issues.

However, we also know that these individual-level determinants do not tell the whole story of public support for gay rights. For the most part, the basic set of determinants tend to be roughly consistent across different times and places; yet, over the past few decades, support for gay rights has increased dramatically in the United States and many other countries around the world. Some studies estimate that as much as half of the increase in support is due to attitude change among individuals (Lewis and Edwards 2011), making it difficult to imagine how changing individual-level characteristics in things like ideology or religiosity could account for such change. I argue that, while the set of basic determinants of attitudes toward homosexuality and gay rights stays roughly the same, the impact of such determinants changes over time and space.

Prior research in the United States has shown that support for gay rights increased over time because the national political environment changed in the way elites presented their views on the issue and how the media framed such issues (Brewer 2003, Brewer 2003, Brewer 2008). Importantly, when gay rights groups and policy stands were incorporated into the coalition of the Democratic Party in the 1990s and 2000s, partisan divisions on issues like same-sex marriage changed dramatically. The visibility of gay politicians and media figures--both real and fictitious--helped to normalize homosexuality in American life. Personal relationships with openly LGB individuals also helped to change homosexuality from an abstraction to living, breathing human beings for many people (Lewis 2011).

Past research showed that the impact of ideology, partisanship, and religiosity on attitudes towards gay rights all became more pronounced because people became more polarized along these lines. As the information environment changed within the United States—as it became acceptable to have pro-gay rights views—the general public’s views began to separate more along ideological, partisan, and religious grounds. It was the interplay of people’s personal characteristics within a changing environment that explains the evolution of mass opinion. Changes in the environment made it more socially acceptable for people who were otherwise inclined to support minority groups, sexual autonomy, and privacy rights to do so on gay rights issues. Therefore, a strict focus on either individual characteristics or environmental forces cannot fully account for change in public support for gay rights issues. To fully understand change and stability in individuals’ support, the two forces—individuals’ predispositions and environmental forces—must be combined in a single approach.

More generally, religiosity, ideology, education, gender, and partisanship have all influenced support for gay rights, but their importance has varied across time and place. The various ways that people’s beliefs, identities and social characteristics influence support for gay rights have shown to be flexible and often fluid, prompting an important question, how can the power of individual bases of gay rights support be so variable? This dissertation seeks to answer this question by providing an integrated model of attitude formation and change that takes into account both personal predispositions and environmental influences.

Most previous research on the variability of gay rights attitudes has focused on national-level trends in the United States (Brewer 2008, Garretson 2009, Baunach 2012).

Because of the limited context that most researchers have studied, we have an incomplete understanding of the way psychological and environmental mechanisms operate in different settings. There are several unanswered questions about how different political and social environments structure attitudes about gay rights. By focusing on how people's predispositions toward attitudes on same-sex unions vary across different types of political and social environments, it is possible to obtain a much richer understanding of the conditions under which change is more or less likely.

The framework used in this dissertation draws on attitudinal and political psychology, political sociology and theories of contextual effects. I argue that over the course of their lives, people develop an overall propensity to tolerate or approve of homosexuality and support gay rights based on their political and social predispositions, such as religiosity, partisan or ideological identities, personality characteristics and various demographic characteristics (e.g., education, race, gender and age). The influence of these predispositions on gay rights attitudes is moderated by the political and social environments in which people live. Even among people whose predispositions push them consistently toward support for gay rights, if they live in a homophobic environment, support for gay rights will be attenuated compared to a similar individual living in a more socially tolerant environment.

For the purpose of this research, the most important characteristic of the environment is the climate of opinion with respect to tolerance of homosexuality and support for gay rights. Although there are potentially an infinite number of levels of analysis at which the climate of opinion could be measured--from interpersonal networks all the way to international systems, I focus on the climate of opinion across American

states and nation-states, as they are the most commonly studied political boundaries in political science research.<sup>1</sup> In the first empirical chapter (Chapter Three), I use cross-sectional surveys in 18 countries in the Americas in 2010 to examine how the climate of opinion at the country-level moderates the influence of predispositions on support for same sex marriage. In the second empirical chapter (Chapter Four), I use cross-sectional survey data within the U.S. states to investigate how the climate of opinion in smaller, and arguably less variable, geographic areas moderates the effects of predispositions on approval of same sex marriage. And finally, in the third empirical chapter (Chapter Five), I use panel re-interview survey data to examine the degree to which changes in the climate of opinion in which individuals live lead to changes in their support for gay marriage over time.

The general theoretical framework outlined in the current chapter motivates several hypotheses that are tested in slightly different ways in the three empirical essays that follow. The first major hypothesis (Hypothesis 1 below) is that the information environment—i.e., the climate of opinion on homosexuality or same-sex marriage— influences people’s attitudes on same-sex marriage even after accounting for a host of personal characteristics (e.g., like religiosity, ideology, gender, and age). Given the different levels of analysis presented in each essay (e.g., countries and states), it is not

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<sup>1</sup> There are two primary reasons for the choices of states and nation-states as units of analysis. The first and most practical is that data are available at those levels of analysis and alternate choices (like, for instance, social network) simply do not exist to the knowledge of this author. The second reason is that these are important political boundaries that hold significant cultural and policy importance. American states provide a theoretically appropriate aggregate level of analysis on policy grounds within the United States because states are the governments within which gay rights policies have traditionally been adjudicated. National boundaries are likewise natural levels of aggregation because they are the level at which gay rights policies are often decided and their political, legal, and cultural variation matters for influencing attitudes on gay rights. It is entirely possible that other, partially overlapping, units of aggregation could also make sense but as data for these boundaries is not readily available the question is moot.

automatically obvious that the climate of opinion should influence people even after controlling for their personal characteristics.

The next hypothesis (Hypothesis 2) tests the interaction between context and individual characteristics in shaping attitudes on same-sex marriage. Specifically, the strength and precision with which individual characteristics influence their support for gay rights will depend on the degree to which people's predispositions align with their environment. The environment in which people are living works to moderate the impact of dispositional characteristics themselves on attitudes. People whose predispositions "match" their environment will be more internally consistent in their support for gay rights and will hold more extreme policy preferences than similarly predisposed individuals in other contexts. For example, people living in environments that conflict with their predispositions will, on average, hold less extreme positions because they are more likely to be ambivalent. In other words, because they possess competing considerations on gay rights issues, such individuals' views on gay marriage are likely to be more heterogeneous than individuals whose predispositions align with the information environment.<sup>2</sup> People predisposed against homophobia who are living in a tolerant or pro-gay rights environment will be more consistent and extreme in their support for same-sex marriage than they would be if they lived in a more homophobic context. The hypotheses are stated more formally below.

***Hypothesis 1: Context Matters.***

- *The context, i.e., the level of homophobia in the climate of opinion in which an individual lives, moves individuals' support for gay rights in a similar direction, even after controlling for individual-level predictors.*

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<sup>2</sup> By effectively, I mean that the end result is as if they were attempting to balance across competing considerations consciously. The underlying cognitive process is mostly unconscious and is discussed below.

***Hypothesis 2: Context and Individual Characteristics Interact.***

- *Different contexts have different effects on different people. Specifically, the degree to which an individual's predispositions align with the level of homophobia in the environment can affect an individual's support for same sex marriage in two ways.*

***Hypothesis 2a:***

- *The influence of predispositions on support for same sex marriage will be **stronger** when an individual's predispositions align with the climate of opinion.*

***Hypothesis 2b:***

- *In addition, the environment affects the **precision** of the impact of predispositions on support for same sex marriage. Individuals whose predispositions align with the environment will have more similar attitudes on same sex marriage, whereas those who do not align will have more variable attitudes on same sex marriage.*

In the next chapter, I develop a more general model of attitude formation and change that helps to explain how the climate of opinion influences support for same sex marriage. This theory is intended as a foundation for the following empirical essays. Although the analyses do not provide a comprehensive test of all aspects of the theory, it is my hope that the theory will guide my future research agenda.

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## Chapter 2: Theoretical Framework

### *Toward a General Attitudinal Model in Political Psychology*

An attitude is an evaluation of an object of thought that is often conceptualized as an expression of favor or disfavor toward a person, place, thing, or event (Bohner and Dickel 2011). Theories of attitude structure and change range from static constructs of true attitudes (in the “file drawer” model) to constructionist views of attitudes as temporary mental objects (Fabrigar, MacDonald et al. 2005). Adherents of the true attitude model argue that attitudes are global evaluations that people can access from memory. True attitudes are generally seen as stable and evidence of attitudinal inconsistencies tends to be viewed as being due to the vagaries of language and measurement error (Achen 1975).

Constructionists, on the other hand, argue that attitudes are formed and revised as needed, with few attitudes set in stone. The process of attitude formation proceeds when an event triggers an evaluative effort calling for a superficial search of considerations in associative memory to construct an attitude (Anderson 1983, Read and Miller 1998), where a “consideration is defined as a reason for favoring one side of an issue rather than another” (Zaller and Feldman 1992, 585). Constructionist perspectives include both Zaller and Feldman’s (1992) theory of the survey response or Receive-Accept-Sample model, as well as Lodge and Taber’s (2013) view that attitudes are more stable and durable constructs that are then subsequently updated. While there is still significant debate, the dominant framework for understanding attitudes within political psychology

since the 1990s is the constructionist paradigm (Zaller 1992, Zaller and Feldman 1992, Lodge and Taber 2013).<sup>3</sup>

One of the key components of constructionist theories of attitudes is the idea of ambivalence--that “people possess opposing considerations on most issues...that might lead them to decide the issue either way” (Zaller and Feldman 1992, 585). When a consistent and one-sided set of considerations is activated, a person’s attitude will be stronger and more stable (Petty and Krosnick 1995). Ambivalence is critical to the constructionist view of attitudes because the prevalence of pro- or anti-gay messages in the environment can influence the salience of different considerations, and thus can influence the weight or importance of the considerations used to form or revise one’s attitudes (Zaller and Feldman 1992, Fabrigar, MacDonald et al. 2005).

In order to understand the process of attitude formation and change in more detail, it is helpful to understand how different considerations can be activated. Considerations are triggered by an event that prompts an evaluative response. However, different sets of considerations may be activated, depending on an individual’s predispositions and the environment in which the individual is situated. In other words, in addition to the inconsistencies in individuals’ predispositions that give rise to ambivalence, the environment can also influence the degree of ambivalence because of the activation of conflicting considerations.

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<sup>3</sup> This is not to imply that other theories of attitude formation, structure, and change do not exist within the psychological literature or have not been used within the field of political science. However, it is clear that consideration-based models of attitudes constitute the prevailing view of attitudes in political psychology research, and any model of political attitudes must confront it directly. Zaller’s *Nature and Origins of Mass Opinion* (1992) for instance, has over 7700 citations as of 2016 and is typically used as the baseline citation for attitudinal models in much of political behavior research.

Figure 1 displays the theoretical model depicting the process of attitude formation and change that will be used in this dissertation to guide the formation of hypotheses and interpret empirical findings. Any given test of this theory may include different observed characteristics (indicated by squares at the bottom of the figure) as antecedents than the ones presented in Figure 1. The figure is intended to allow the reader to understand the broader general framework from which specific applications and tests may be drawn. The model is an elaboration of existing constructionist models (see Zaller & Feldman 1992, Lodge & Taber 2013, Figures 1.4 and 2.1) that depicts unmeasured considerations being influenced by various contextual effects and personal characteristics drawn from the literature. While this figure should not be viewed as a complete list of all sources of considerations, it does contain many typically relevant ones for studying issues of morality and questions related to LGBT rights.

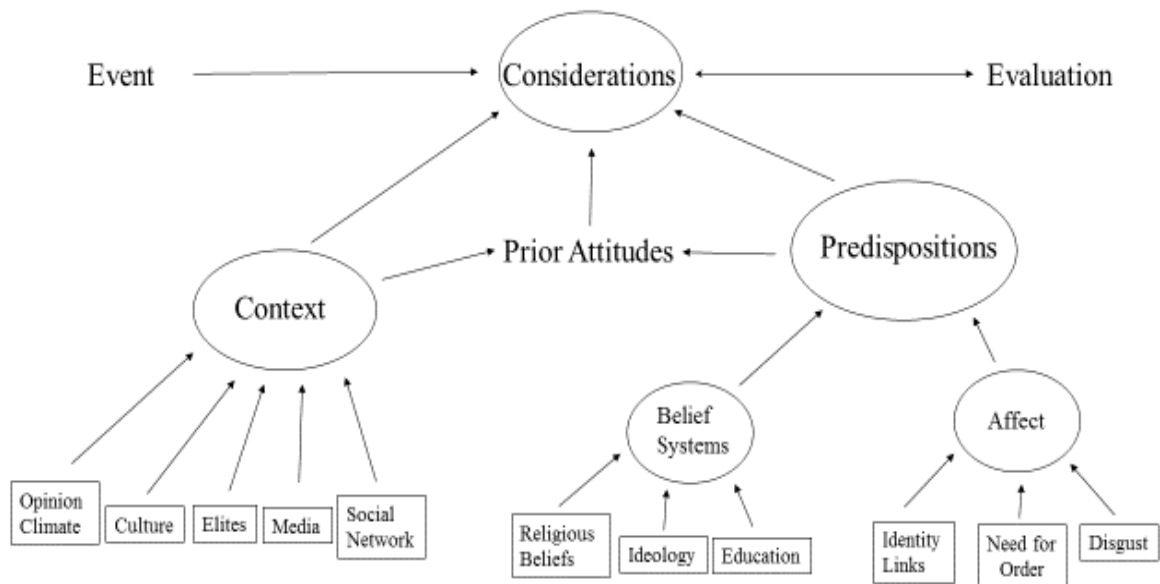
Specifically, Figure 2.1 is a theoretical path diagram illustrating how an event triggers the evaluation process by prompting people to search for available considerations relating to an attitude object (Anderson 1983, Zaller and Feldman 1992).<sup>4</sup> The considerations that are activated are shaped by a person's predispositions and the environment. Contextual effects can arise from any number of environmental sources, such as the climate of opinion, culture, elite leadership, media effects, or social networks. These effects combine into a general environmental influence that activates certain sets of considerations in relation to an attitude object.

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<sup>4</sup> The process of triggering considerations is based on associative memory and relies on the theory of spreading activation (Anderson 1983) whereby an external stimulus—e.g. a question, idea, or priming event of some kind—will create a network response within the brain triggering similar or presumably related considerations subconsciously. This activation follows general patterns dictated by the structure of neural connections in the brain but is also subject to random variation.

For illustrative purposes, predispositions in Figure 1 are distinguished by their sources as either based on beliefs (characterized in the figure as a belief system) or affect in order to maintain consistency with similar depictions in prior work (Taber and Lodge 2013, Figure 1.4). The figure is designed purely for the purpose of illustrating the underlying theoretical process; these predispositions could arise from processes not captured in the figure, such as past socialization, experiences, and personality.

Figure 2.1: A Theoretical Model of Attitude Formation and Change



### *Understanding Predispositions*

In the Figure, personal predispositions that give rise to certain sets of considerations are based on belief systems and emotional reactions. Belief systems are ways in which we organize information into a coherent framework for understanding the world (Converse 1964). They consist of interrelated idea elements and associations that allow the categorization and simplification of information that in the political world help us to understand potentially complex issues in different policy domains (Leblanc and Merrin 1977, Tarman and Sears 2005, Goren 2012). People have multiple overlapping and reinforcing belief systems—religious, economic, political, and social to name a few—that they use under different circumstances. These might include—for example—a religious/ethical belief system, an ideological (left-right) belief system, a belief system organized around fundamental norms of fairness and reciprocity, and one around concepts like democracy, civil liberties, and political tolerance. Overlapping belief systems are often organized hierarchically, from abstract to specific idea elements (Peffley and Hurwitz 1985, Goren 2012).

In addition to using sets of interrelated beliefs, people use emotional responses and affect toward attitude objects to make evaluations (Lodge and Taber 2013). When someone is prompted to form an attitude, the first stage of this process is a subconscious search for affect relating to an attitude object (Kahneman 2011, Lodge and Taber 2013). Emotional reactions color both the search for, and activation of other considerations and they can do so both systematically—that is, guided by certain predispositions—or randomly—i.e., due to regular fluctuations in mood or priming effects. One of the most powerful considerations in this broad class of factors are social identities (e.g. racial,

gender, or partisan). When people feel an emotional connection between themselves and an attitude object they have a powerful, often subconscious, motivating force to form an attitude with directional properties in support of their group.

The types of sources for the activation of considerations are complex and often interwoven in a way that makes studies on the structure of attitudes (e.g. Zaller 1992, Lodge and Taber 2013) inherently difficult. Religious and partisan considerations, for example, are usually structured as parts of belief systems which may or may not be well integrated and coherent for any given person (Converse 1964, Hurwitz and Peffley 1987, Goren 2012). These considerations are also related strongly to people's identities in such a way as to trigger an emotional impulse even absent any kind of ideological content (Druckman 2012, Lodge and Taber 2013). The fact that a single consideration can act as part of a belief system and as an identity link that triggers a mostly emotional response belies a clear conceptual distinction that we might want to use in theories of attitudes. The nuances important to understanding distinctions among the types of considerations that people use to build attitudes are important for attitudinal and political psychology.

However, they are less important in this particular work because the primary focus of this dissertation is in studying the product of considerations from differing sources—predispositional and environmentally activated—on the development, intensity, and ambiguity of attitudes. It is important for this work to understand which kinds of characteristics matter for building personal predispositions toward considerations. Future work should elaborate on distinctions between belief system-based, affect-based, and belief system-affect hybrid considerations on the strength of predispositions in the face of conflicting environments.

For attitudes on gay rights, there exists a significant body of research on the kinds of considerations that tend to matter (Zaller 1992, Loftus 2001, Haider-Markel and Joslyn 2008, Lewis 2009, Herek and McLemore 2013, Flores 2015), and a solid theory of how particular considerations may be triggered by predispositional characteristics (Herek and McLemore 2013). Attitudes on gay rights have the benefit of a common set of issue frames across much of the world (e.g. sexual impropriety, sin, minority rights, and privacy rights). These issue frames also show a common trend over the past thirty years, where many cultures once viewed homosexuality as sinful, detrimental, and shameful and began transitioning to more positive views over time (Adam, Duyvendak et al. 1999, Encarnacion 2011, Kuyper, Iedema et al. 2013).

Identifying as religious, and especially being fundamentalist or evangelical, often leads one to anti-gay religious considerations (Smith and Johnson 2010, Ellison, Acevedo et al. 2011, Herek and McLemore 2013).<sup>5</sup> This is likely because specific tenants of fundamentalist and evangelical religious beliefs about sexual propriety. However, it also has to do with elite leadership among religious groups that have campaigned against homosexuality and gay rights since the early 1970s (Fetner 2008, Stein 2012). Leadership in the Mormon church (Fleischer 2010, Gordon and Gillespie 2012), the Catholic church (Corrales 2010, Andía, Bonilla et al. 2012), and various evangelical and fundamentalist organizations (Gallagher and Bull 2001, Stone 2012) have all led active campaigns against gay rights across the world both inside and outside of churches.

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<sup>5</sup> In different studies and contexts religiosity is measured in different ways. Some measures that have been shown to matter in understanding attitudes on gay rights are regular church attendance, views on the infallibility of religious texts, views on the importance of religious beliefs or god in everyday life, frequency of prayers, and frequency with which individuals read religious texts. In existent research this typically points to evangelical and fundamentalist Christians but also applies to fundamentalist or traditional Muslims, traditional Catholics, Mormons, and many other religious groups. Individuals who hold “mainline” Christian views tend to have more positive attitudes about homosexuality and gay rights.

Being less educated—at least in western society—also tends to correspond with lower political tolerance of minorities (Bobo and Licari 1989, Knudsen 1995) and a particular unwillingness to tolerate homosexuality and gay rights (Loftus 2001, Baunach 2012). This is thought to result from a shift in the kinds of values and priorities that formal western education instills in students on the values of minority protections and political freedoms (Golebiowska 1995). The specific underlying mechanisms for the impact of education on attitudes toward homosexuality and gay rights are not particularly well understood and several competing theories exist (Ohlander, Batalova et al. 2005). What has been demonstrated unequivocally is that, in most modern contexts, more formal education translates to higher levels of expressed support for gay rights.

Being a Republican or Democrat in the United States over the last two decades has meant that people have had very distinct sets of elite signals about the importance and desirability of gay LGBT rights—especially same-sex marriage (Zaller 1992, Gallagher and Bull 2001, Fetner 2008, Lodge and Taber 2013).<sup>6</sup> While both Republicans and Democrats were more or less uniformly against gay rights through the 1980s, the Democratic Party eventually developed a large constituency of gay rights activists that began gaining national policy footholds (Sweeney 1999, O'Leary 2002). These activists eventually led the party to strongly pro-gay rights issue positions (McThomas and Buchanan 2012, Stewart-Winter 2016). A significant body of research within political science has shown that elite partisan signaling can have strong effects on the types of positions people take as they want to maintain good standing within their party (Mondak, Lewis et al. 2004, Noel 2014).

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<sup>6</sup> Zaller's (1992) and subsequent work heavily emphasized the connection between elite partisan leadership and considerations though his subsequent work has put more emphasis on other sources (Zaller 2012).



Likewise, identifying as ideologically conservative in modern America, particularly socially conservative, tends to be associated with a lack of tolerance toward minority groups, prejudice toward sexual minorities, less willingness to upend social conventions, and increased authoritarianism (Herek 2009, Hetherington and Weiler 2009, Poteat and Mereish 2012, Poteat and Mereish 2012). Authoritarianism and conservatism are not identical as Hetherington and Weiler (2009) make clear.<sup>7</sup> Modern American conservatism tends to overlap with authoritarian issue positions on many social issues—especially gay rights issues—where positions on sexual immorality and a lack of support for minority groups are intertwined. Research suggests that these identifications are important both because they are associated with other predispositions (e.g., values, authoritarianism) that lead to opposition to gay rights and because individuals with stronger identifications rely on cues from like-minded elites.

### *Understanding Environmental Context Effects*

While people clearly hold certain predispositions that reduce or increase support for gay rights, the political and social environment also influences the mix of considerations that are likely to be brought to mind. The information environment works to create a context in which people form their attitudes based on their predispositions. Generally speaking, “context” includes a number of factors outside the individual (in the environment), including culture, elite leadership, media influence and social network interactions. This dissertation is concerned specifically with context as indicated by the

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<sup>7</sup> In their 2009 book, they state that “those who score high in authoritarianism have 1) a greater need for order and, conversely, less tolerance for confusion or ambiguity, and 2) a propensity to rely on established authorities to provide that order.” (p 59). Hetherington and Weiler (2009, 39) discuss how conservatism and authoritarianism overlap on social issues—with gay rights as a particular example—and differ on economic issues and on the proper scope of government.

climate of opinion as measured by the level of homophobia in a state or a country. The climate of opinion can be viewed as the end product of many of the aforementioned environmental influences (e.g., culture, elite leadership, media influence and social network interactions) and serves as a general indicator of the likelihood of an individual encountering certain messages in a state or country. General contextual measures like climate of opinion or culture allow researchers to study how a wide variety of interrelated factors influence attitudes (Converse 1964, Goren 2012, Noel 2014). Other contextual effects no doubt exist but are beyond the scope of this dissertation. The climate of opinion is an important indicator of the likelihood of encountering certain messages in a state or country.

In extremely one-sided environments—that is, environments where there is only one socially acceptable position on an issue—the influence of the climate of opinion is quite clear. As the level of homophobia within a society rises, the level of homophobic rhetoric and position-taking from elites and the negativity in media framing also increases. (McClosky and Zaller 1984). When the climate is overwhelmingly negative, media and political elite signals often creates a reinforcing spiral of silence (Noelle-Neumann 1974). In two-sided environments where the climate of opinion is less lopsided the media is likely to frame an issue as contentious, and elites will attempt to direct their partisan or ideological supporters to specific competing sides. These competing frames help regular people form attitudes that are more in line with their predispositions by giving them a wider range of acceptable positions to take (Chong and Druckman 2013).

Traditional context effects research has argued that local information flow patterns in an area led to differences in the attitudes and behaviors of people within those

communities (Books and Prysby 1988). By pulling information and elite leadership from similar or identical local sources you essentially limit the information environment so that it appears that opinion in an area is one sided. This basic argument can easily be extended to incorporate most research on media effects studied by political communication scholars (Chong and Druckman 2007) and elite opinion leadership (Zaller 1992, Noel 2013). Research has shown that factors like newspaper consumption influence individual-level policy attitudes by decreasing the variance in attitudes—presumably by increasing and stabilizing the number of considerations that regular readers use to form attitudes (Johnson and Kellstedt 2014).

Contextual effects literature also references a more nebulous phenomenon where people absorb information from their community or culture that pushes them to activate certain considerations without it being directed or mediated through traditional opinion channels like the media or direct elite appeals. People have a tendency to conform to community norms or to express views that they feel are socially acceptable to avoid potential social sanctions (Gibson 2008). People are aware of the climate of opinion in a particular area without ever being told directly what they should think about a given issue. Merely knowing your location and experiencing your surroundings provides clues about the political and social environment that can influence one's attitudes and behaviors (Rutchick 2010). Seeing hundreds of churches in a town, billboards with religious language, and hearing religious messages as you switch radio stations in the car will prime you to think about religious considerations. These religious considerations are related to the climate of opinion because we view religiosity as tied to homosexuality.

Alternatively, mediated contact—the process by which people feel like they get to know others through the media—can provide information about others people they would otherwise not interact with and cause opinion change (Riggle, Ellis et al. 1996, Garretson 2014). Getting to know gay and lesbian characters through television and movies makes an impact on many people by humanizing homosexuals. Watching documentaries on hate crime victims, HIV/AIDS, and children pushed through reparative therapy induces sympathy, compassion, freedom, and fairness related considerations in people who might otherwise only see sexual minorities as abstractions. This is especially the case in one sided highly homophobic environments where most people do not realize that they personally know a sexual minority.

Another key mechanism for the external activation of considerations is social interaction. Extensive literature has argued that even weak relationships can have impacts on people (Granovetter 1973). Therefore, network theories are often used to explain the general transmission of political and cultural values in heterogeneous populations (Moore and Vanneman 2003, Moore and Ovadia 2006). Social network interactions with people of similar attitudes can help cement existing beliefs, while interactions with people of opposing views can theoretically modify prior attitudes (Huckfeldt and Sprague 1987, Huckfeldt 1995, Mutz 2006). Network based theories have been applied liberally to interactions between LGBT people and others under the contact theory and used to explain significant differences in attitudes on homosexuality and gay rights with some types of personal contact often leading to more positive feelings (Barth and Parry 2009, Lewis 2011, Merino 2013).

External information has the potential to influence people's attitudes whether transmitted through the media, community norms, direct network interaction, or simple observation (Books and Prysby 1988). While this dissertation looks at the influence of the climate of opinion on homosexually somewhat generically different contextual measures operate similarly at a cognitive level by simply activating different considerations in relation to an attitude object.<sup>8</sup> Some considerations will be more effective than others because of emotional resonance or incentives (Eagly and Chaiken 1993, Olson and Kendrick 2011). Sources of information matter because trust in the messenger acts as a mediator for interpretation of new information (Petty and Cacioppo 1986, Chong and Druckman 2007, Bohner and Dickel 2011). But, assuming people receive the message, the underlying contextual mechanism is tangential to the underlying psychological process.

### *The Interplay of Predispositions and Context*

How internally or predispositionally triggered versus externally or environmentally triggered considerations are evaluated in the process of forming an attitude matters when studying the structure, consistency, and resilience of that attitude (Zaller and Feldman 1992, Petty and Krosnick 1995, Lodge and Taber 2013). People who are strongly predisposed to activate certain considerations are less likely to be swayed by countervailing considerations even when they are activated (Skipworth, Garner et al. 2010, Lodge and Taber 2013). Research even shows that people argue against countervailing considerations to protect preexisting ideas and beliefs (Lodge and Taber

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<sup>8</sup> Notice that Figure 2.1 makes no distinction for the type of contextual mechanism that might activate external sources. All considerations are treated as roughly the same in terms of source while preference is given to emotionally salient considerations and prior attitudes.

2013). People with weak predispositions toward an object may use whatever considerations are at hand and most accessible that have been primed by the political or social environment (Zaller and Feldman 1992).

When people have conflicting considerations about an issue they tend toward ambivalence. They can contradict themselves over time because they are attempting to work through competing inclinations or they may simply have weak preferences that are overwhelmed by conditions at the time they are asked about an attitude. In other words, this ambivalence can come either because people are predisposed toward the activation of inconsistent sets of considerations or because their predispositions and environment clash thus activating competing considerations. When people's characteristics predispose them toward a certain issue position and their environment activates opposing considerations they are more likely to be ambivalent about their attitude.

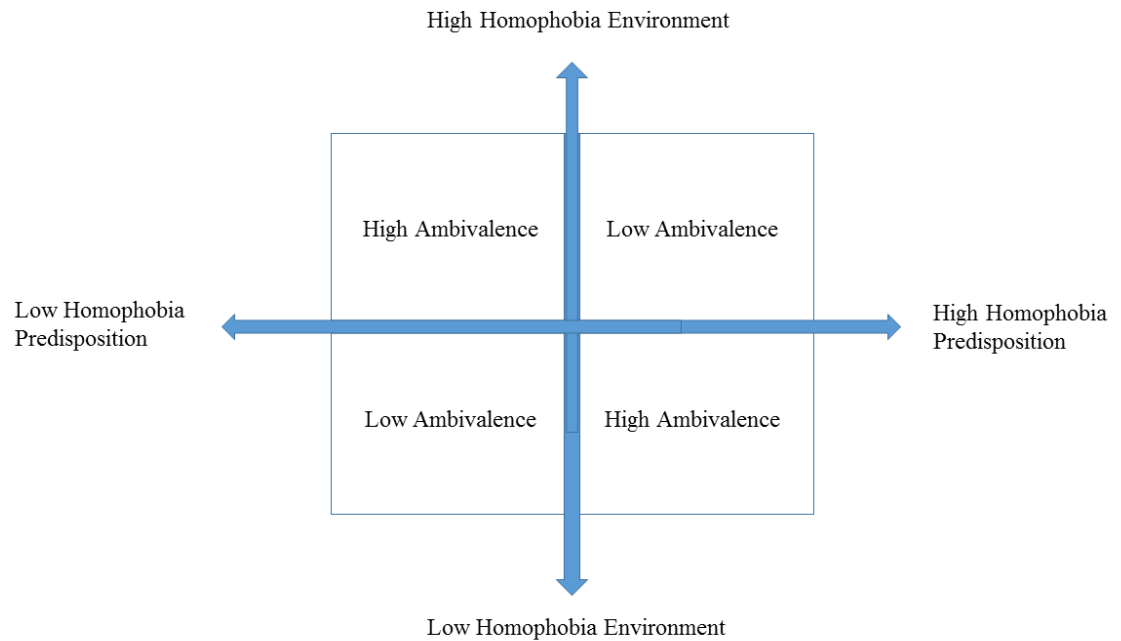
The level of crystallization and attitude importance that an evaluation has received also helps to govern attitude consistency (Petty and Krosnick 1995). In cases where an individual has no strong or consistent criteria to build an evaluation (e.g. a pre-existing attitude or a strong predisposition to create a particular type of attitude) the attitude will likely be fragile, ambivalent, and inconsistent over time based on whatever set of considerations are activated (Zaller and Feldman 1992). Attitude crystallization and attitude importance can help to protect people against opposing considerations triggered by the environment because people will be motivated to argue against them and protect their existing view (Druckman 2012, Lodge and Taber 2013). In cases where someone has a reasonably strong ideological framework, emotional connection, or substantive

knowledge relating to an attitude object, the set of considerations is likely to be more structured and resilient (Lodge and Taber 2013).

Taber and Lodge (2013) argue that considerations based on emotional affect and identity matter the most. Strong emotional attachment to a set of considerations or to a previously arrived at attitude will result in more consistent and stable attitudes (Petty and Krosnick 1995). Zaller and Feldman (1992) argue that externally derived considerations have a strong influence as well—especially when prior attitudes are weak as with most survey questions. While Zaller argued early on that most external considerations came from elite opinion leadership his subsequent work has expanded the scope of potential sources for considerations (Zaller 2012). External considerations can result from survey instruments, media effects, network effects, and general cultural awareness (Huckfeldt and Sprague 1987, Books and Prysby 1988, Zaller 1992, Zaller and Feldman 1992).

Considerations work in largely the same way regardless of whether they are activated via internal predispositions externally via context effects. According to Zaller and Feldman (1992) competing considerations are averaged over to form an evaluation. Conflicting considerations lead to more ambivalent attitudes. Work on attitude strength and crystallization shows that certain types of emotionally salient considerations have a greater impact than others (Petty and Krosnick 1995) but those considerations should be triggered both by predispositions and by context.

Figure 2.2: Attitudes and Ambivalence



Within this framework, both context and predispositions can be seen as latent variables created by a mix of other observed and sometimes unobservable variables that trigger pro, con, or neutral criteria for evaluating an attitude object. Predispositions toward certain considerations can be viewed as “the residue of a lifetime of observation, thought, and experience,” (Carlston 2010) whereas contextual considerations are activated by the outside world. The practical distinction here is that people build certain frameworks for thinking and feeling that are used to build attitudes. While these frameworks may derive from environmental influence they become something that a person carries with them. More directly they can be thought of as weighted averages of



sets of considerations that people are inclined to activate based on who they are and sets of considerations that the broader political and social environment activates.<sup>9</sup>

### ***One Sided Environments and the Moderation of Predispositions***

Critical to understanding the relationship between predispositional characteristics and the environment is that the relationship is probably highly nonlinear. By this I mean that the general competing considerations framework derived from Figure 2.2 is likely to break down so that predispositions simply fail to matter for the vast majority of people in highly one-sided environments. People in many societies (i.e. Pakistan, Uganda, and Jamaica) show very little attitudinal differentiation on gay rights issues because in many countries almost everyone expresses opposition to homosexuality. Being religious or secular, educated or uneducated, liberal or conservative presumably makes very little difference.

This is because the climate of opinion is so universally viewed as hostile that it overwhelms the influence of people's typical predispositions toward minority groups or sexual freedom. Even if the climate of opinion is not actually completely one-sided it might be perceived as such due to the spiral of silence, where individuals who support homosexuality and gay rights suppress their views to avoid ostracism by the majority (Noelle-Neumann and Noelle-Neumann 1993).

People who are typically inclined to be socially and or politically tolerant treat minority groups as if they should have rights were socialized by society to view

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<sup>9</sup> In any given circumstance, some considerations are more important than others in forming or updating an attitude where affect and an emotional connection to a particular consideration are seen as key (Lodge and Taber 2013). While clearly important, I am currently agnostic on the weighting scheme and do not address it.

homosexuality as a criminal sexual perversion and homosexuals as sick and dangerous (Schneider and Ingram 1993). Any considerations based on civil liberties or personal autonomy were simply not activated when one considered this group. The message of social acceptability is essentially one sided and so no competing considerations ever come up (McClosky and Zaller 1984).

When political debate is essentially one-sided it is—in fact—nonpolitical in nature. We can find that while contextual effects might appear to have a large effect that most predispositional characteristics are only weakly related to attitudes. This is because very little differentiates people on one sided issues. There is no interpersonal variance that can be explained by personal characteristics. Therefore, it becomes relatively easy to differentiate environments where preferences appear one-sided because of context (e.g. elite signaling or agenda setting that there is only one right side) and cases where compositional differences make it appear that context matters when it does not.

If the political and social environment has essentially blocked off debate on gay rights so that it is socially unacceptable to hold pro-gay rights views, then very few people will express those views and opponents of gay rights will be inseparable by their personal characteristics. This is the case in countries like Pakistan and Uganda—with two and four percent support for homosexuality in 2013 respectively (Pew 2013). Regardless of how educated, religious, or politically or socially conservative people are in these societies they are still against homosexuality and gay rights. Other countries with low levels of support for gay rights—though probably not that low—still might still have variance among the population due to differences in personal characteristics like education, religiosity, or conservatism.

This implies a tautology where, since nearly everyone is against homosexuality, environmental measures of homophobia would be near their limits. Understanding causation becomes difficult at best because there is no variability to explain.<sup>10</sup> The ability of an environment to suppress variation on predispositional characteristics in one-sided environments can be seen today in a number of countries across the world (e.g. Uganda, Pakistan). This makes the relationship between context and predispositional characteristics for structuring considerations even more complex and necessitates cross-cultural analysis to help differentiate when and how the factors interrelate.

### ***Theoretical Implications***

In two-sided environments people use sets of considerations triggered by personal predispositions and their environment. These considerations can point in similar directions reinforcing one another or in opposing directions. This can happen because predispositions activate competing considerations, because the environment activates competing considerations, because both predispositions and the environment activate competing considerations, or because predispositions and the environment activate consistent considerations but those consistent sets are in opposition.

These opposing considerations can influence the level of support for gay rights issues as well as the variance in support on gay rights issues. The environment can help structure how predispositions influence attitudes and vice versa. In one sided environments, the effect of predispositional characteristics may be muted or insignificant. The relative influence of internal to external sources varies based on how strongly the

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<sup>10</sup> Even when consensus opinion is merely extremely one sided instead of totally homogeneous we run into difficulties because people may censor themselves under public pressure.

considerations they trigger resonate. People with strong predispositions will be less influenced by external sources of considerations. The effect of these sources and the types of considerations they trigger varies based on the level of resultant ambivalence that they induce. When external and internal sources of considerations reinforce one another they reduce ambivalence. When they point in conflicting directions they can increase ambivalence and thus the variability in attitudes.

These hypotheses might imply that all people react consistently to context by moving toward the climate of opinion. This may or may not be true. Individuals who are predisposed to agree with their context may have their views reinforced or exaggerated while individuals who are predisposed against their context might be unmoved. Alternatively, there may be floor effects so that individuals who agree with their environment cannot move farther towards their environment and so are unaffected. Individuals whose predispositions push them in a different direction from the environment may bend towards the environment as my theory would imply or they may argue against the opposing considerations and grow even stronger in their view as Taber and Lodge (2013) might predict. In other words, we may see asymmetric reactions to the environment depending on the strength of a person's predispositions.

An important omission from this framework is the lack of attention to perception of contextual signals. The environment can activate considerations in some people while completely or partially failing to reach others because of heterogeneous perception. This is an important theoretical mediator of the moderating effect of context on the predisposition to attitude link. Without significant experimental study, it is difficult to know when and if people fail to perceive a given contextual signal making it extremely

difficult to study using observational survey data. While omitting an important mediating factor is generally not ideal it is necessary for practical purposes of completing a dissertation.

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### Chapter 3: Gay Rights Attitudes in the Americas

This chapter examines how citizens' support for same-sex marriage policy is influenced by their country's climate of opinion on homosexuality—as measured by the level of social tolerance toward homosexual behavior at the country level. Specifically, I investigate the ways in which the impact of individual-level predictors of support for same-sex marriage—e.g., ideology, religiosity, and education—is moderated by the climate of opinion on homosexuality. I argue that people living in more homophobic countries are less likely to be supportive of same-sex marriage even if they are predisposed towards support based on their religious beliefs, ideology, and education because their environment suppresses these factors.

Abundant research in political science demonstrates that the characteristics of the political and social environment influence individuals' attitudes (see Zaller 1992, Huckfeldt 1995, Chong and Druckman 2007).<sup>11</sup> Arguably, modern comparative politics is based on the idea that national context—and particularly cross-national variability—matter for understanding important political phenomena ranging from ideology to policy beliefs to support for democracy (Fransesze 2007). Much of the research on LGBT politics—typically focused on the United States—has demonstrated that national-level trends and climates of opinion influence support for gay rights (Brewer 2008). Like the United States, Central and Latin American countries have had important and highly contentious experiences with gay rights over the last several decades and provide a

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<sup>11</sup> The information environment is a complex compilation of different sources from social networks, to elite signaling, to the media, to the climate of opinion and occurs at a wide number of levels of analysis simultaneously. For the purposes of this dissertation, the information environment can be conceptualized as including the immediate situational influences impinging on individuals as well as larger geographical areas that define the likelihood of an individual being exposed to various cues and messages, such as the climate of opinion of localities, regions and countries. While this research focuses on the climate of opinion that should not be taken as an indication that other sources are unimportant.

valuable range of cultures, histories, institutions and opinion climates that heavily influence how people attitudes on homosexuality and gay rights. By looking at how religiosity, education, and ideology work differently to explain attitudes on gay rights in different countries, we can expand how we understand these attitudes more generally.

Understanding the differences in the determinants of attitudes across countries can be quite difficult because the antecedents to those predispositions—the values and belief systems that form the bases of attitudes (e.g. ideology, partisanship, religion, and education)—vary across cultures. People are socialized in different ways across different societies with differing racial and ethnic boundaries, political ideologies, party systems, and histories. Many political issues (e.g. drug policy or crime policy) do not travel well across national-boundaries because their predispositional antecedents are specific to contexts.

This is not true of the predispositional antecedents of opinions on homosexuality and gay rights, however, which seem to travel quite well across societies. In fact, the same basic set of antecedents predicts opinions on gay rights issues across much of the world (Parker, Petchesky et al. 2007, Lodola and Corral 2010, Hadler 2012, Kuyper, Iedema et al. 2013, Flores 2015). This is especially true for Central and Latin American countries that share a strong, traditional Catholic influence limiting change on gay rights issues, as well as appeals in favor of LGBT rights based on transnational human rights movements (Encarnacion 2011). Despite wide variation in terms of economic development, inequality, and democratic norms, Central and Latin American countries are broadly similar in the kinds of political, religious, and gender dynamics that influence opinions on gay rights (Reding 2010, Encarnacion 2011, Schulenberg 2012). This means

that predispositions predicting opinions on issues like same-sex marriage can be compared cross-nationally with reasonable confidence that the same sorts of factors matter at the individual-level across countries (e.g., Lodola and Corral 2010).

In the following sections, I first outline a general theory of attitude formation drawn from political psychology that predicts attitudes on gay rights from individual-level predispositions and a country's information environment. I then discuss the climate of opinion on homosexuality across Central and Latin American countries. Finally, I discuss the theoretical role of climate of opinion in moderating the effects of individual-level predispositions such as religiosity, education, and ideology on support for same-sex marriage. My basic argument is that these kinds of personal characteristics shape an individuals' overall predisposition to support or oppose gay rights and their effects can be suppressed or magnified by the wider environment--i.e., the climate of opinion.

Past research finds that predispositional influences such as increased education, liberal party affiliation, and lower levels of religiosity tend to increase support for same-sex marriage (Lodola and Corral 2010). However, I find that the effects of some predispositional characteristics change significantly across countries based on the national climate of opinion. I measure the climate of opinion on homosexuality as the average level of tolerance toward homosexuality for each of eighteen Central and Latin American countries aggregated from a single individual-level measure about the social acceptability of homosexuality. This allows me to show that, while support does generally increase as you would expect with increased education and liberalism, it does so at different rates based on a country's climate of opinion.



Education and left-party affiliation influence attitudes differently in homophobic versus non-homophobic environments. In countries with lower levels of homophobia, more educated or left-wing individuals are more favorable toward same-sex marriage than countries with higher levels of homophobia. In high homophobic countries, there is virtually no difference in an individual's support for same-sex marriage across levels of education or party. Educational and ideological considerations that are predictive in other countries are not being activated (or are being overridden) in homophobic environments, suggesting that higher levels of public hostility toward homosexuality are suppressing the effects of these predictors.

### *A General Theory of Attitudes, Predispositions, and Context*

Most research on attitudes toward same-sex marriage in political science has typically looked at how dispositional characteristics like gender, race, age, and education influence attitudes or support for policy. While we only typically have measurements of dispositional characteristics and support for same-sex marriage (plus various contextual variables) as a practical matter, attitude theory provides important guidance on how individuals' predispositions differentially influence their support for same-sex marriage in different settings. Political psychologists often define attitudes as evaluations of objects based on considerations—concepts, ideas, or feelings—related to an attitude object that serve as reasons for favoring one side of an issue versus another (Zaller 1992, Zaller and Feldman 1992, Lodge and Taber 2013).<sup>12</sup> These evaluations are

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<sup>12</sup> This is not to imply that other theories of attitude formation, structure, and change do not exist within the psychological literature or have not been used within the field of political science. However, the consideration-based models of attitudes overwhelmingly dominate the political psychology literature to the point where any model of political attitudes must deal directly with it. Zaller's *Nature and Origins of Mass*

typically formed by averaging over salient considerations cued by some stimulus or event.

Considerations are structured and activated by a person's characteristics, culture, and social network, and there is a lot of evidence on what types of considerations are often used for attitudes on homosexuality and gay rights within the United States and Europe (Zaller 1992, Loftus 2001, Haider-Markel and Joslyn 2008, Lewis 2009, Herek and McLemore 2013, Flores 2015) as well as solid theory about how they may be shaped by predispositional characteristics (Herek and McLemore 2013). Concepts like sin, immoral sexual behavior, gender identity and norms, and political and social tolerance are all known to be important for people in shaping attitudes about homosexuality and gay rights.<sup>13</sup>

Ample research has documented that belonging to fundamentalist or evangelical religious groups often leads individuals to hold anti-gay, religiously-themed attitudes (Smith and Johnson 2010, Ellison, Acevedo et al. 2011, Herek and McLemore 2013). While research has focused on evangelical and fundamentalist denominations and belief systems in the United States, the more general proposition that religiosity increases opposition to gay rights should hold for any religious denomination or beliefs that disapproves of homosexual behavior.<sup>14</sup> This very clearly extends to Catholicism,

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Opinion for instance, has over 7700 citations as of 2016 and is typically used as the baseline citation for attitudinal models in much of political behavior research.

<sup>13</sup> It should be made clear that there are differences between considerations—which are the building blocks of attitudes—the latent predispositions which inform the activation of those considerations and the personal characteristics which combine to form predispositions. Given data limitations and the inability to look directly into the minds of survey respondents, considerations must be taken as theoretical objects. Only the environment and personal characteristics—the antecedents to predispositions—can be readily measured and those only imperfectly.

<sup>14</sup> Religiosity should be defined as generally as possible here with respect to religious traditions that have typically opposed homosexuality. Different factors (e.g. regular church attendance, belief in a specific

although research has shown that Catholics in the United States tend to be less extreme in their views of homosexuality than members of other conservative religious groups (Ellison, Acevedo et al. 2011). The Catholic Church, like many other religious organizations, has openly campaigned against expanding gay rights and has opposed same-sex marriage (Beirich, Schlatter et al. 2013, Schmitt, Euchner et al. 2013). This means that Catholics are influenced by their religion through both opinion leadership from the Church hierarchy and through socialization that instills concerns over sexual impropriety and nontraditional families (Corrales 2010).

Formal education has also been shown to be an important predictor of support for gay rights across a wide variety of contexts (Lodola and Corral 2010, Baunach 2012, Kuyper, Iedema et al. 2013). Being less educated—at least in western society—corresponds with lower political tolerance of minorities (Bobo and Licari 1989, Knudsen 1995) and an unwillingness to support or tolerate homosexuality and gay rights (Loftus 2001, Baunach 2012). Such associations are traceable to the lower cognitive sophistication among the less educated (Andersen and Fetner 2008).

Ideological conservatism, authoritarianism, and support for right-wing parties are also strong predictors of homophobia and opposition to gay rights policies. Within the United States there is considerable evidence that these factors are strongly associated with opposition to same-sex marriage even after controlling for religion and education (Hetherington and Weiler 2009, Poteat and Mereish 2012, Poteat and Mereish 2012, Herek and McLemore 2013).

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religious teaching, or emotional connection to the religious group or figure) matter more or less depending on a particular religious group. Regular church attendance is, for instance, a signal of strong evangelical belief but it is not automatically relevant to cultural ties to the religious tradition.

Ideological groups and political parties provide important cues to their supporters about their stands on gay rights issues. Whether support is measured as identification with parties or ideological groups or simply represent a standing decision to support the group electorally, the most general tendency is for supporters of the Right to oppose gay rights issues. Parties and ideological groups on the Right tend to support traditions, oppose change and hold existing and longstanding social institutions in high regard (Federico 2015). This tendency is not universal, however, because due to historical happenstance, some parties in some countries on the left oppose gay rights while some on the right support them.

Conservatism, while much more variable in its definition, should still theoretically predict homophobic sentiment because it is generally understood as a justification for the status quo (Muller 1997). However, party affiliation and policy preferences tend to be much more variable in nature. The conservative party within the United States has typically been the less favorable of the two parties since the early 1990s but this dynamic is not necessarily the case across all countries because political ideology does not line up with religion and views on minority rights in the same way everywhere. Understanding how and why some left parties are anti-gay rights while some right-wing parties embrace those issues is still an active area of research but the variability in these dynamics can provide important channels to separate political, religious, and social identities (O'Leary 2002, Fetner 2008, Schulenberg 2012).

While education, religion, and ideology all clearly influence attitudes in an intuitive way by activating relevant considerations, factors like gender and age have similar—though perhaps less obvious—impacts on attitudes due to socialization and

other sorts of effects (Herek 2002, Andersen and Fetner 2008). Age has been shown to influence people through both cohort effects—or the effect of coming of age and going through life at a particular point in time (Garretson 2014), and life-cycle effects, or the changing effects of age as individuals pass through different milestones in life (Visser and Krosnick 1998, Hellevik 2002). Being male has been shown to negatively impact attitudes on homosexuality in a wide variety of contexts, largely due to differential gender socialization and norms surrounding masculinity (Herek 2002, Balzer and Jacobs 2011, Herek and McLemore 2013). This is especially likely to be true in many Latin American cultures that emphasize masculinity and machismo to reinforce gender and sexual stereotypes (Herek and McLemore 2013).

These characteristics can reinforce one another by moving individuals in the same direction toward support or opposition to gay rights issues, or they can create ambivalence by moving people in opposing directions due to conflicting considerations. However, considerations are often placed in people's minds by their culture and society in addition to being driven by personal predispositions. The environment helps to structure our understanding of how political and social concepts interrelate so that particular considerations may appear relevant in one culture and be deemed irrelevant in another (Converse 1964, Goren 2012, Noel 2014).

### *Context across the Americas*

As stated previously, one significant limitation of most research on attitudes toward gay rights is the limited number of different information environments that have been studied. Overwhelmingly, attitudes on homosexuality and gay rights have been studied in the United States, with studies of European countries a distant second. The

primary benefit of studying multiple countries across the Americas is the wide range of different climates of opinion that influence homosexuality, while at the same time the countries tend to share broadly similar historical and religious traditions. The percentage of the public that supports gay rights in some Latin American countries is quite low--below 20% (e.g., El Salvador and The Dominican Republic), while support for issues like same-sex marriage in other Latin American countries is much higher—above 60% (e.g., Argentina and Uruguay).

This variability is important because countries with more extreme or one-sided climates of opinion are more likely to register fewer differences in the population as a function of personal predispositions. Factors like education, ideology, and religious belief will simply matter less in distinguishing people on their support for gay rights if the climate of opinion deems support for such rights unacceptable (Noelle-Neumann 1974, McClosky and Zaller 1984).<sup>15</sup> The more divided a country is at the national level, the greater the likelihood individual preferences will be dictated by personal predispositions. Presumably, since people are at least aware of opposing sides of gay rights issues and a widespread consensus on gay rights issues does not exist, citizens are more likely to adopt positions on such issues that are consistent with their predispositions.

Many competing theories exist in comparative politics that pit social movement activism (Encarnacion 2011, Shaffer 2012), culture (Welzel and Inglehart 2014), democratization (Encarnacion 2011), and development (Andersen and Fetner 2008) against one another to help explain differences in political behavior and public opinion.

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<sup>15</sup> This should not be taken to imply that it is impossible to have extreme beliefs that conflict with the broad climate of opinion. These occur often. Climate of opinion is unlikely to completely shut down support for gay rights issues even in extremely negative environments.

Effects at the country-level like the structure of political ideology, the importance of and nature of religion, and the value of civil liberties and rights for minorities can be especially difficult to disentangle because they tend to overlap in a relatively small number of countries and change slowly over time. These questions have been of paramount importance in much of comparative politics and evidence from the literature says that each of these factors is likely important in explaining why, how, and when a given country will be tolerant of homosexuality.<sup>16</sup>

One underlying assumption in this chapter is that the broad climate of opinion toward homosexuality at the national-level can also reflect various other aspects of the political and social environment in a country that influence individual attitudes on homosexuality and gay rights. Factors like national religiosity, education rates, trust in democratic institutions, political tolerance, culture, development, and social movement or interest group activity together shape the general climate of social tolerance toward homosexuality and gay rights. The general climate of opinion on homosexuality serves as an amalgamation of unmeasured national-level factors and cross-level forces like opinion leadership and media influences.<sup>17</sup>

The climate of opinion in a country can influence individuals' support for gay rights in several ways. On the one hand, it can frame and prime certain types of considerations. It is quite clear from the American context, for example, that a shift in the framing of gay rights issues from sin and morality to equality and fairness led to an

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<sup>16</sup> This work differs from much of comparative political behavior because I am primarily concerned with the effect of the aggregate climate of homophobia on individuals' policy attitudes and not what drives the country-level differences themselves. While that is in and of itself a fascinating topic it is beyond the scope of this work and so only of secondary interest.

<sup>17</sup> Climate should not be understood by this as only being important for attitudes on gay rights. The climate of opinion should influence a large variety of attitudes.

increase in support for gay rights (Brewer 2007). Other research demonstrates how priming people to think about gay rights can activate certain considerations and in the process, lower or elevate support for gay rights. When people are primed to think about religious considerations, their support for gay rights declines (Rutchick 2010), but priming empathy by using co-identities with gays and lesbians (e.g. sports fans, co-partisans, co-religionists) can raise support for gay rights (Harrison and Michelson 2017).

In places where homophobia is pervasive and extreme—as it was in 1950s America or is now in modern Jamaica<sup>18</sup>—we can understand the climate of opinion to be essentially one-sided on issues of gay rights (McClosky and Zaller 1984). Alternatively, we can envision certain places, if not yet entire countries, where expressions of homophobia are so taboo that the climate of opinion is one-sided in favor of gay rights. In either of these cases, because there is only one socially acceptable opinion on gay marriage, frank discussion and deliberation is impeded. The minority that does disagree is disinclined to do so publicly, which increases the perception that there is no dissent (Noelle-Neumann 1974).<sup>19</sup>

In countries where the climate of opinion is more variable—i.e., where there is more than one socially acceptable position on whether homosexuality is right or wrong, opinions on gay rights will be more variable as well. In more one-sided environments, predispositions matter less because there is simply less variability in attitudes. But in two-sided environments, people begin to differentiate themselves based on their personal

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<sup>18</sup> As of 2010 only 3.5% of people in Jamaica supported same-sex marriage.

<sup>19</sup> To a certain degree this is a feedback loop where people do not disagree which produces an environment where no one disagrees which in turn suppresses the tendency to disagree. Disruption of this feedback loop comes when a subpopulation begins to change based on, for example, elite leadership driven by social movement activity.



predispositions. People will—because of their belief systems, personalities, education, or past socialization—have varying attitudes on gay rights and the acceptability of homosexuality (McClosky and Zaller 1984). By virtue of having multiple sides of an issue as publicly acceptable, elite leadership and partisanship can lead to increasing polarization on the issue so that certain predispositional antecedents (like ideology and partisanship, for instance) may become even more predictive of attitudes as people line up with their leaders (Lodge and Taber 2013).

### ***The Interplay of Context and Predispositions***

The climate of opinion in a country helps to shape individuals' attitudes on gay rights by altering the basic acceptability of issues like gay marriage. More specifically, the average level of social tolerance for homosexuality in a given country will impact individual-level support for same-sex marriage even after accounting for the major individual-level factors discussed in the literature that typically drive attitudes on gay rights.<sup>20</sup>

**H1:** Attitudes are directly influenced by the climate of opinion on gay rights

Hypothesis 1 is a simple and direct test of the impact of national-level homophobia on individual-level support for same-sex marriage. This is perhaps the most

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<sup>20</sup> This basic argument is not without its detractors as many social scientists might believe attitudes are stable or at least durable enough to be robust against different environments (Achen 1975). A common complaint against research on context effects is that it is often an artifact of composition whereby geographic differences in attitudes are the product of differences in individual predispositions and not some environmental effect. A comparative cross-national analysis of attitudes is an excellent test of this claim. People might relocate from a rural to urban area or even across a country to sort themselves into a more appropriate community but they are unlikely to leave their country. This means that contextual artifacts from human agency are likely to be the weakest at the national-level which provides a valuable test case for the idea that context does impact attitudes and not merely while providing the least plausible test that attitudes dictate context.

fundamental and basic test of my overarching theory but by no means is it the most critical. Beyond the basic idea that context matters I argue that the climate of homophobia has both direct and indirect effects on attitudes toward same-sex marriage policy.

While the basic effect of context on attitudes is a necessary condition for my theory, it is not a sufficient test of the theory's key components. I also argue that context conditions how people think about issues like same-sex marriage in more complex ways than just pushing the average level of support one way or the other. Context should also moderate the influence of predispositions on support for same-sex marriage. This can be most clearly seen in the framework of one-sided vs two-sided environments where the former tend to suppress or discourage the expression of minority views even among individuals predisposed to hold such views (see Noelle-Neumann 1974, McClosky and Zaller 1984).

**H2:** In countries where the climate of opinion is more one-sided and homophobic (e.g., Guatemala), the impact of personal predispositions on support for same-sex marriage will be weaker compared with countries where the climate of opinion is more evenly divided between pro and con views (e.g., Argentina) because, as explained above, the expression of minority views in homophobic environments tends to be suppressed by a climate of intolerance.

Hypothesis 2 is a test of the idea that one-sided homophobic environments will suppress the influence of predispositions on gay rights issues. Because in the contemporary context, one-sided environments on gay rights issues are likely to be homophobic environments, while two-sided environments contain a mix of homophobic and tolerant sentiments, this argument becomes more understandable. In extremely homophobic environments, individuals who are generally predisposed to support such

things as minority group rights, sexual autonomy, equality under the law, or a right to privacy will end up expressing less support for gay rights than they would in a country with a more two-sided environment. If Hypothesis 1 is confirmed, we can also extend Hypothesis 2 by gauging the moderating impact of the climate of opinion on the three major predispositional characteristics in the analysis.

**H2a:** The effect of religiosity on gay rights attitudes will be weaker in countries where the climate of opinion about homosexuality is more negative (homophobic)

**H2b:** The effect of ideology on gay rights attitudes will be weaker in countries where the climate of opinion about homosexuality is more negative (homophobic)

**H2c:** The effect of education on gay rights attitudes will be weaker in countries where the climate of opinion about homosexuality is more negative (homophobic)

Although the literature on homophobia and LGBT rights referenced earlier has shown many important characteristics can influence attitudes, I have selected three of the strongest predictors of attitudes on gay rights within the LGBT politics literature: religiosity, ideology, and education.<sup>21</sup> Lower religiosity, leftward ideological beliefs, and higher levels of relative education should tend to lead to increased support for same-sex marriage regardless of context. But in more homophobic societies these predispositional effects should matter less.

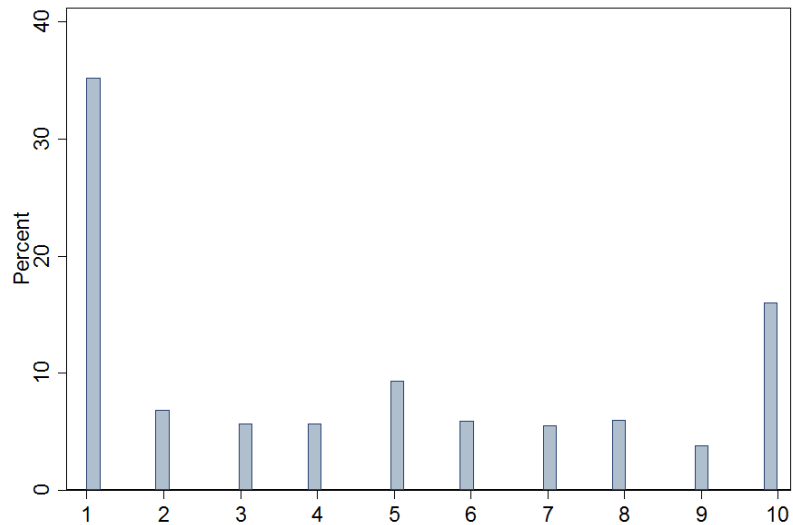
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<sup>21</sup> Other personal characteristics like age, gender, and race could also matter and would provide additional expansions of this test. However, it is impractical to create hypothesis tests for every variable of interest that the literature has shown to matter in this case and then subsequently present their results. Because of this, I chose three different factors that are known to have some of the strongest effects that were also included in the LAPOP survey.

### *Design, Data, and Analysis*

For this analysis, I estimate a multilevel model for eighteen countries in the Americas to test hypotheses 1 and 2 (see Appendix A for details on countries).<sup>22</sup> My dependent variable is a ten-point scale (1-10) of support for same-sex marriage drawn from the *AmericasBarometer* in 2010. This continuous measure offers respondents a much wider range of response options to express their level of support than more typical measures dichotomous measures that ask respondents whether they support same-sex marriage or not, thus permitting the estimation of simpler linear models than is often the case. Figure 3.1 below shows the general distribution of support for same-sex marriage averaged over all 18 countries, while Figure 3.2 provides a windowpane plot of distributions for each of the countries. Lower values indicate lower levels of support for same-sex marriage.

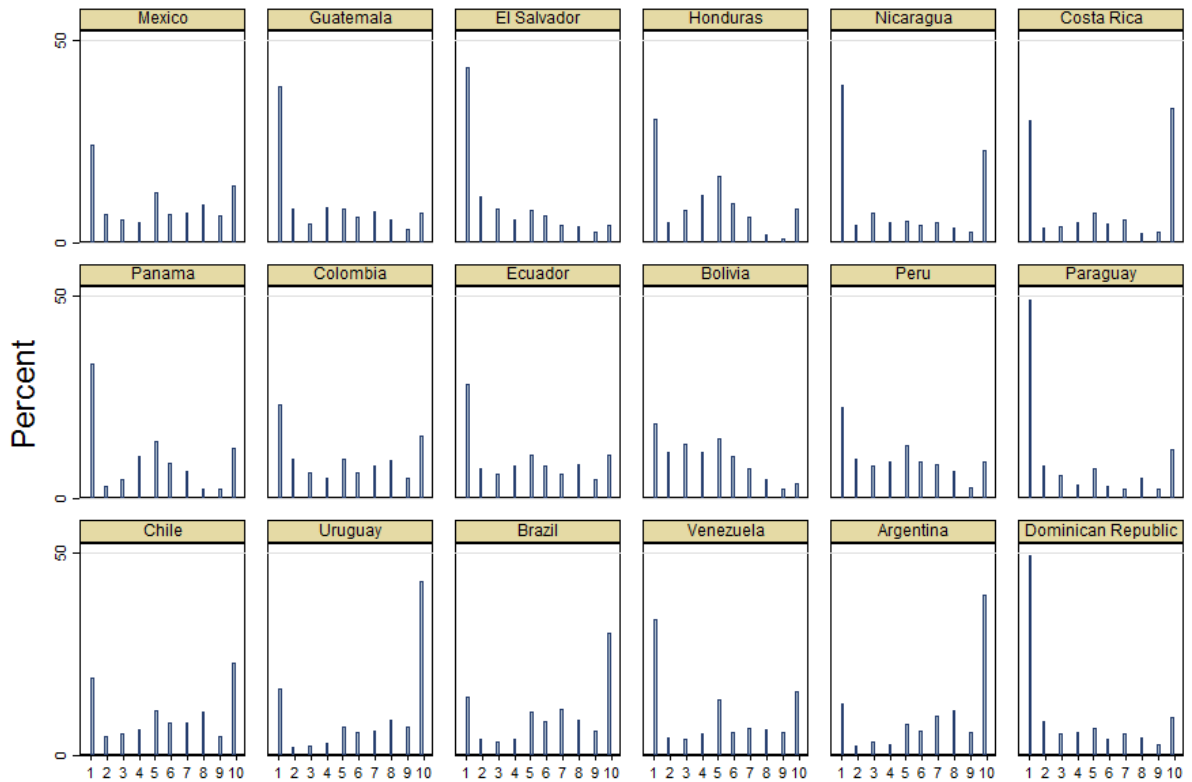
Figure 3.1: Distribution of Attitudes on Same-Sex Marriage



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<sup>22</sup> Additional tests were run with the addition of the United States and Canada. However, including these countries requires model specification changes for religiosity variables. Given the fact that religiosity is necessary for hypothesis 2 the choice was made to omit the two countries in favor of more robust hypothesis testing.

Figure 3.2 Distribution of Attitudes on Same-Sex Marriage by Country



I use hierarchical linear models suggested in most multilevel literature (e.g. Snijders and Bosker 2011, Baltagi 2013, Enders 2013, Hoffman 2015). Model 1 is a simple random intercept model with unstructured errors designed to provide a baseline comparison. Models 2 and 3 use an identical structure but also include three cross-level interactions between climate of opinion, on the one hand, and education, religiosity and party/ideology, on the other, to specifically test Hypothesis 2. Model 3 includes random slopes for most of the individual-level variables involved in the cross-level interactions to reduce random effects endogeneity bias (Snijders and Bosker 2011).<sup>23</sup>

<sup>23</sup> Random effects endogeneity bias is the correlation between a random effect and an individual-level (or any lower level) variable within a model. If improperly managed, this results in biased level-1 coefficients because the effect of X on Y is inconsistent across groups. Random coefficients were not applied to denomination because doing so in the full model causes irreconcilable non-convergence due to perfect

Individual-level education was measured on a four-point scale, indicating no formal education (coded 0), primary education (1), secondary education (2), and higher education (3) and is treated as a continuous variable to make the interpretation more parsimonious.<sup>24</sup> Given the fact that average-level of education does not matter in alternative models (see appendix for details) the results can be interpreted as relative education within a country and not as raw years in school. This specification is of some theoretical benefit because of debate within political science on the degree to which relative versus raw education matters for certain outcomes (see Nie, Junn et al. 1996). By including both relative and average-level of education in the model we can separate the effects somewhat.

Because partisanship and ideology have a complex relationship across countries I cannot include specific measures of party and political ideology.<sup>25</sup> I include a combined party/ideology variable asking about support for a left/right party on a 1-10 scale from more conservative to more liberal. I also include three variables for religion. Religious service attendance—ranging from “more than weekly” to “never”—and the respondent’s assessment of the personal importance of religion in their life—ranging from “extremely important” to “not at all”. Religious denomination is indicated with a series of indicator variables for denomination, with Catholic as the omitted category because it is the largest group.

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identifiability. In other words, there are not enough countries to include random coefficients on all cross-level interactions simultaneously. Significant additional testing was done to show model robustness when random coefficients are applied via sequential modeling with likelihood ratio tests.

<sup>24</sup> Alternative categorical coding scheme was tested showing some nonlinear effects of education however the differences were relatively minor and did not influence the outcome of hypothesis tests.

<sup>25</sup> In many countries, party and ideology are confounded and are not separable with existing survey items.

The results of the individual-level model are consistent with existing work on support for gay rights based on samples from the United States and Europe. Model 1 in Table 3.1 shows individual-level effects for my core set of personal predispositional characteristics and control variables. Models 2 and 3 are not directly comparable with most existing research because they include cross-level interactions of certain variables with country-level climate of opinion.

Research shows that being female, having greater relative levels of formal education, being less religious, and being more liberal/belonging to a left leaning party all predict heightened support for gay rights generally and same-sex marriage specifically. As with research from other countries, Catholics are more supportive of same-sex marriage than other conservative religious groups but not as supportive as atheists. Being in an urban environment, and being from a generally larger community also predict higher support for same-sex marriage, consistent with existing research.

Table 3.1: Support for Same-Sex Marriage in the Americas

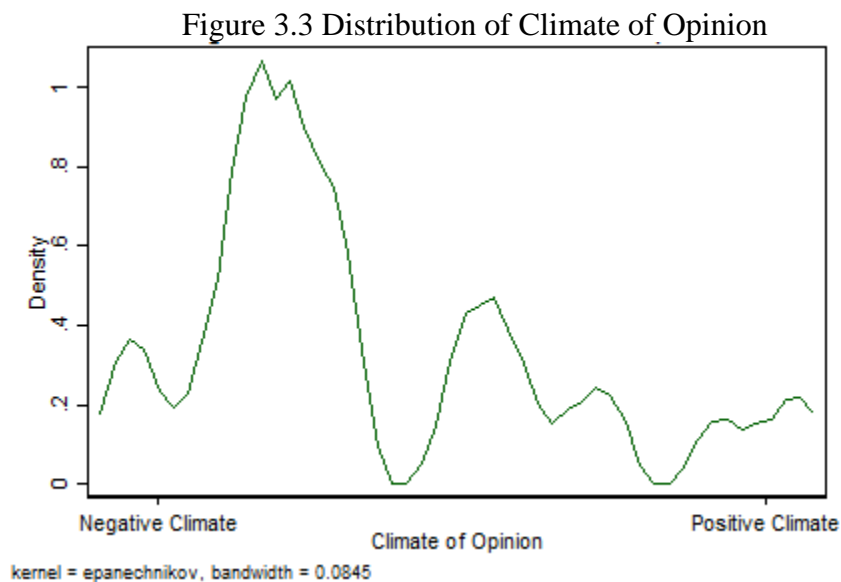
|                                      | Reference Model     | Cross-Level Model   | Full Model          |
|--------------------------------------|---------------------|---------------------|---------------------|
| Education                            | 0.583**<br>(0.029)  | -0.330*<br>(0.164)  | -0.291<br>(0.279)   |
| Ideology/Party (Right-Left)          | 0.021*<br>(0.008)   | -0.315**<br>(0.052) | -0.361**<br>(0.099) |
| Religious Attendance                 | 0.143**<br>(0.021)  | 0.161<br>(0.107)    | 0.165<br>(0.134)    |
| Importance of Religion               | 0.130**<br>(0.029)  | 0.117**<br>(0.029)  | 0.111**<br>(0.029)  |
| Attend Religious Meetings            | 0.051**<br>(0.020)  | 0.047*<br>(0.020)   | 0.048*<br>(0.020)   |
| Denomination (Reference is Catholic) |                     |                     |                     |
| Mainline                             | -0.380**<br>(0.089) | -0.675<br>(0.594)   | -0.618<br>(0.593)   |
| Evangelical                          | -0.647**<br>(0.062) | 0.057<br>(0.412)    | 0.127<br>(0.412)    |
| Mormon                               | -0.863**<br>(0.204) | -0.106<br>(1.197)   | -0.152<br>(1.196)   |
| Atheist/Unaffiliated                 | 0.171*<br>(0.080)   | 0.040<br>(0.399)    | 0.174<br>(0.403)    |
| Other                                | 0.273<br>(0.188)    | -1.213<br>(1.145)   | -1.289<br>(1.144)   |
| Urban/Rural                          | 0.136<br>(0.071)    | 0.168*<br>(0.071)   | 0.177*<br>(0.071)   |
| Size of place                        | -0.125**<br>(0.021) | -0.121**<br>(0.021) | -0.117**<br>(0.021) |
| Age                                  | -0.106**<br>(0.014) | -0.106**<br>(0.014) | -0.106**<br>(0.014) |
| Female                               | 0.404**<br>(0.041)  | 0.399**<br>(0.041)  | 0.392**<br>(0.041)  |
| Observations                         | 23,548              | 23,548              | 23,548              |
| Number of groups                     | 18                  | 18                  | 18                  |

This table shows results of model comparisons for individual-level effects in a set of multilevel models. The dependent variable in each model is support for same-sex marriage scaled from 1-10. The first or reference model only includes variables at level 1 and 2 with no cross-level variables or random coefficients. Model 2 includes cross-level interactions displayed in Table 1b. Model 3 includes both cross-level interactions and random coefficients shown in table 1c \*p<.05 \*\*p<.01

For Hypothesis 1 (testing the effect of country-level climate of opinion on homosexuality), my primary independent variable is a country-level measure of the climate of opinion toward homosexuality based on individual-level survey data on the social acceptability of homosexuality. For this measure, I aggregated individual-level



responses (on a 1-10 scale) to a question about a respondent's view of homosexuality as being socially acceptable.<sup>26</sup> These responses were weighted to provide nationally representative averages of the level of homophobia within a country where higher values imply a *more positive* climate. The individual-level question was drawn primarily from the *LatinoBarometer*.<sup>27</sup> The range of the aggregated climate of opinion variable is 3.34 to 6.11 with a mean of 4.3 and a standard deviation of .739.



The country-level results from Table 3.2 are presented below.<sup>28</sup> Because climate of opinion is interacted with individual-level variables in Models 2 and 3 the constituent terms are uninterpretable by themselves (Franzese and Kam 2009). However, judging by the cross-level interactions the results are clearly consistent with H1; a country's climate

<sup>26</sup> Population weights were provided by the survey and unaltered. Using population weights did not seem to alter substantive results as compared to simply using aggregates.

<sup>27</sup> I used countries that were in both *World Values Survey* and *LatinoBarometer* to compare across measures as a general validity check. Thankfully both individual-level questions were structured similarly. Model results presented use only the *LatinoBarometer* estimates.

<sup>28</sup> Group mean centered results are presented in Appendix B. As they are necessarily included for appropriate model specification but do not directly test any hypotheses I will not discuss their results in the body of this chapter unless otherwise asked to do so.

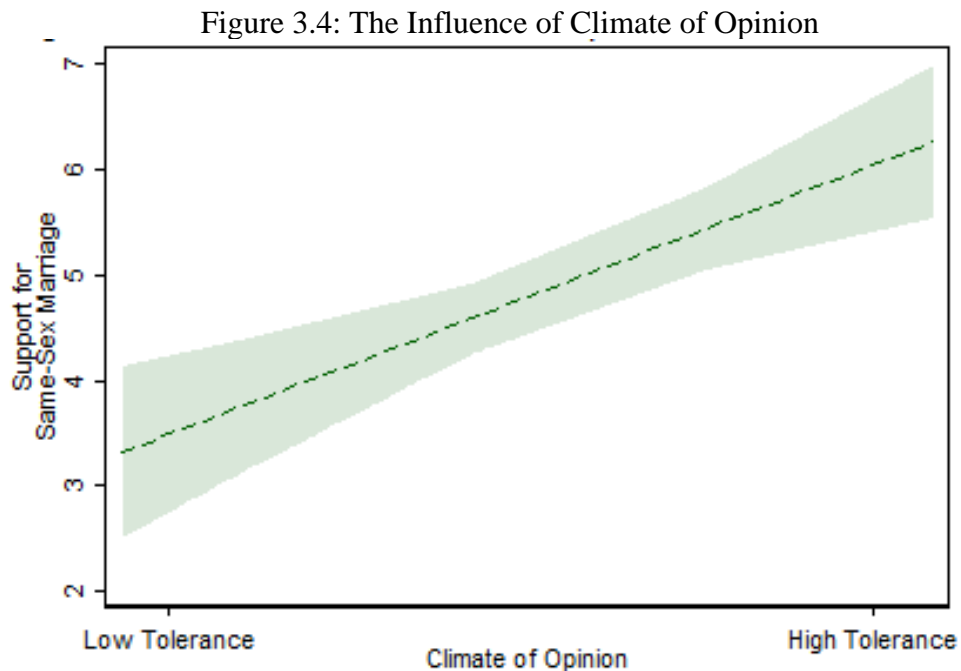
of opinion on homosexuality has a strong impact on citizens' support for same-sex marriage at the individual-level. In the reference model (Model 1), the results show that a higher level of national support for homosexuality is associated with more support for same-sex marriage at the individual level. As the national level of tolerance for homosexuality increases by one point, there is a corresponding nearly half a point increase in individual-level support for same-sex marriage, controlling for a variety of micro- and macro-level variables.

Table 3.2: Support for Same-Sex Marriage in the Americas

|   | Reference Model     | Cross-Level Model   | Full Model          |
|---|---------------------|---------------------|---------------------|
| <i>Country-Level Factors</i>                |                     |                     |                     |
| Social Expenditure 2008 as share of GDP     | 0.391**<br>(0.106)  | 0.364**<br>(0.106)  | 0.150<br>(0.137)    |
| GDP growth rate 2009                        | -0.019<br>(0.043)   | -0.022<br>(0.043)   | 0.003<br>(0.056)    |
| Education Index                             | 2.623<br>(2.696)    | 2.990<br>(2.695)    | 5.818<br>(3.467)    |
| Religion fractionalization index            | 0.711<br>(1.199)    | 0.936<br>(1.198)    | 2.926<br>(1.547)    |
| Public education expenditure as % of GDP    | -0.108<br>(0.109)   | -0.094<br>(0.109)   | 0.117<br>(0.140)    |
| National Homophobia                         | 0.438*<br>(0.202)   | -0.373<br>(0.236)   | -0.512<br>(0.278)   |
| <i>Cross-Level Variables</i>                |                     |                     |                     |
| Education X Climate of Opinion              |                     | 0.209**<br>(0.037)  | 0.202**<br>(0.063)  |
| Party/Ideology X Climate of Opinion         |                     | 0.077**<br>(0.012)  | 0.089**<br>(0.022)  |
| Religious Attendance X Climate of Opinion   |                     | -0.004<br>(0.024)   | -0.004<br>(0.030)   |
| Importance of Religion X Climate of Opinion |                     | 0.069<br>(0.138)    | 0.054<br>(0.138)    |
| Denomination (Reference is Catholic)        |                     | -0.167              | -0.185              |
| Mainline X Climate of Opinion               |                     | (0.097)             | (0.097)             |
| Evangelical X Climate of Opinion            |                     | -0.166<br>(0.269)   | -0.160<br>(0.269)   |
| Mormon X Climate of Opinion                 |                     | 0.020<br>(0.084)    | -0.013<br>(0.085)   |
| Atheist/Unaffiliated X Climate of Opinion   |                     | 0.301<br>(0.237)    | 0.315<br>(0.236)    |
| Constant                                    | -1.758<br>(1.983)   | 1.384<br>(2.043)    | -1.213<br>(2.550)   |
| <i>Variance Components</i>                  |                     |                     |                     |
| Random Intercept                            | -0.823**<br>(0.173) | -0.824**<br>(0.173) | -1.808**<br>(0.242) |
| Residual Variance                           | 1.119**<br>(0.005)  | 1.117**<br>(0.005)  | -2.810**<br>(0.241) |
| Education RC                                |                     |                     | -2.856**<br>(0.380) |
| Party/Ideology RC                           |                     |                     | -0.688**<br>(0.227) |
| Religious Attendance RC                     |                     |                     | 1.115**<br>(0.005)  |
| Observations                                | 23,548              | 23,548              | 23,548              |
| Number of groups                            | 18                  | 18                  | 18                  |

This table shows results of model comparisons for individual-level effects in a set of multilevel models. The dependent variable in each model is support for same-sex marriage scaled from 1-10. The first or reference model only includes variables at level 1 and 2 with no cross-level variables or random coefficients. Model 2 includes cross-level interactions displayed in Table 1b. Model 3 includes both cross-level interactions and random coefficients shown in table 1c \*p<.05 \*\*p<.01

Figure 3.4 shows the marginal effect of tolerance for homosexuality (climate of opinion) on support for same-sex marriage as estimated from Model 1—without any cross-level effects or random coefficients. Low tolerance is estimated at the 5<sup>th</sup> percentile of support for homosexuality—approximately that of Honduras—while high tolerance is estimated at the 95<sup>th</sup> percentile—that of Uruguay. The graph shows that individual-level support for same sex marriage is higher in countries where social tolerance for homosexuality is also higher, while also accounting for standard individual-level factors that are known to drive support for gay rights.



In addition to the different results for climate of opinion, the other country-level results provide interesting insights into the different dynamics at the individual and national levels. While these results are not important for any hypotheses in this chapter, they are important for understanding these models more generally. It is important to look somewhat skeptically at country-level variables in a multilevel analysis because of the

small number of countries and the lack of variability across countries on some aggregate measures. This is often referred to as the between effects problem and results in differing robustness of inferences based on the sample size of the unit of analysis in question. This problem is particularly salient in this analysis given the number of country-level variables that are primarily in the model as controls for their individual-level analogues. Some of these results can be difficult to properly interpret because of multicollinearity and a lack of variability within the small number of countries.<sup>29</sup>

Hypothesis 2 is a test of cross-level interactions between individual-level variables and the country-level climate of opinion. We can invoke the logic of one or two-sided opinion on homosexuality at the national level to test the expectation that context will overwhelm predispositions in one-sided environments but not in two-sided environments. By limiting the unit of analysis to the national-level we get a range of climates that tilt toward one-sided homophobia on one end and a two-sided debate on the other.<sup>30</sup> We can find significant variability in public support for gay rights and tolerance toward homosexuality across the Americas. In 2010, support for same-sex marriage ranged from a low of 3.5% in Jamaica to a high of 58% in Argentina, with other countries spread across the intervening values.

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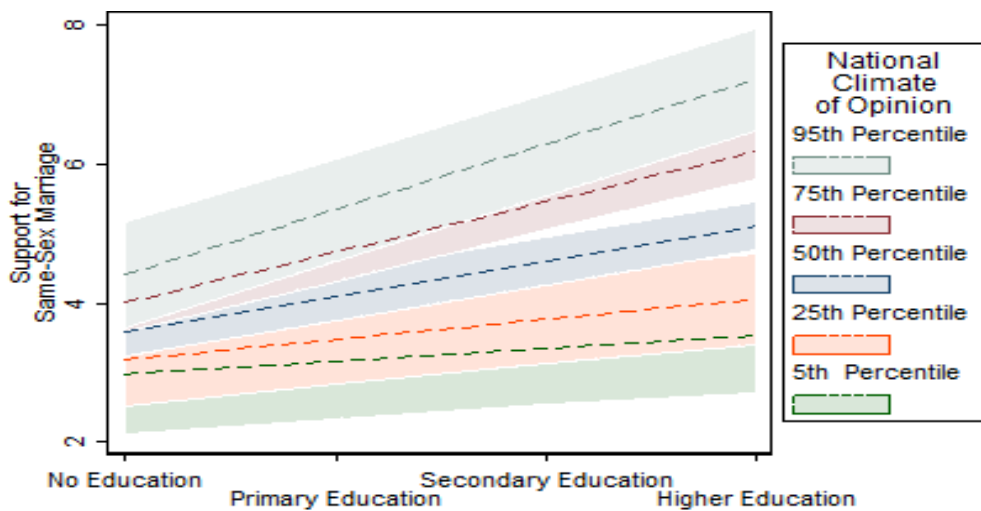
<sup>29</sup> It is important to note that the between effects problem occurs regardless of model specification in most comparative cross-national studies. It is a function of sample size at level-2. Group mean centering (the inclusion of the groups more than the re-centering strategy) simply highlights the problem and makes it clearer to the applied researcher.

<sup>30</sup> Because no country within the Americas falls at what we would call one-sidedly anti-homophobic, we can make a simplifying assumption that the interaction between context and the environment is linear in nature. In other words, if there is a one-sided climate it occurs when homophobia is high and social tolerance of homosexuality is low. If the range of available countries included some where the level of social tolerance for homosexuality was in the mid-90s then we might expect to see a curvilinear relationship where the effects of personal characteristics do not matter as much at either low or high levels of homophobia but do matter at intervening levels where polarization occurs.

Table 3.2 shows the cross-level interactions, random coefficients, and other error components within the models. It appears that Hypothesis 2 is partially substantiated by the results of the cross-level interactions on education and ideology. Both individual-level education and party/ideological preference appear to be moderated by the climate of opinion so that their effects get stronger in more positive (i.e., less lopsidedly homophobic) environments. However, none of the religiosity measures appear to have varying effects because of the climate of opinion or other omitted country-level factors.

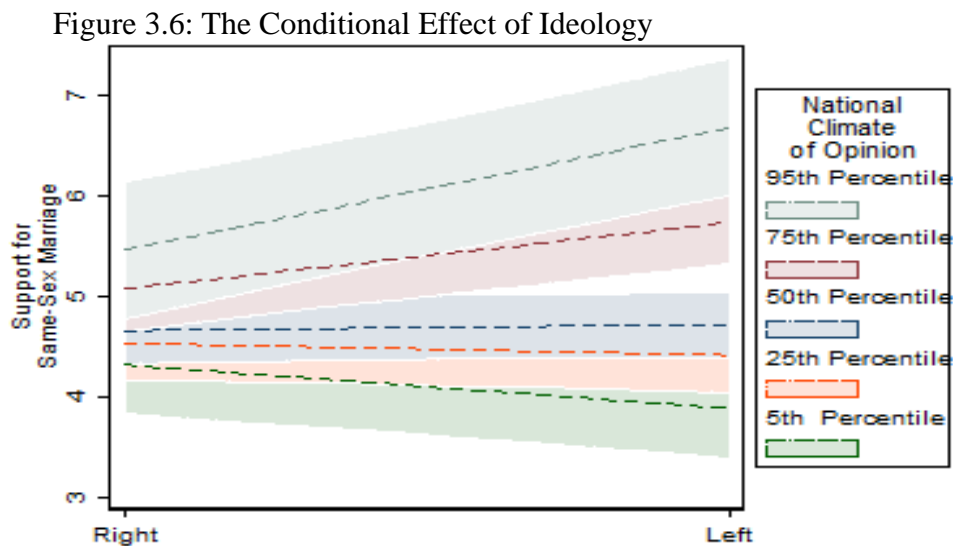
To make interpretation more intuitive, Figure 3.5 shows the varying effects of education by level in different climates of homophobia. The scale goes from the countries at the 95<sup>th</sup> percentile (e.g. Uruguay and Argentina) to the 5<sup>th</sup> percentile of social tolerance (e.g. Honduras and Paraguay). In more socially tolerant countries we see higher base levels of support for same-sex marriage across all categories of education. There is also very clearly a difference in the slope for raw education across the range of climates of opinion as we look from the least to most educated individuals.

Figure 3.5: The Conditional Effect of Education



As with the effect of education, the effect of leftist partisan/ideological affiliation seems to increase in more positive climates, per Table 3.2. Both Models 2 and 3 show that the effect of partisanship/ideology changes moving from more homophobic to less homophobic countries. To make this connection more concrete, as with education, Figure 3.6 shows the varying effects of a shift from right-leaning to left-leaning in different climates of opinion.

Once again, in more socially tolerant countries we see higher base levels of support for same-sex marriage across all categories of the ideological divide. Even more than with education we see very different slopes in different environments as we shift from right to left. In the most homophobic countries it appears that going from right leaning to left leaning produces a slightly negative effect where people get less supportive of same-sex marriage. The effect of ideology is otherwise flat up through the 50<sup>th</sup> percentile of environments (e.g. Bolivia which has a 4.16). We only begin to see a positive relationship between Right-Left identification and support for same-sex marriage in countries with a more mixed climate of opinion.



The conditional effect of religiosity on attitudes toward same-sex marriage is perhaps the most surprising finding—or rather, the null finding—presented here. Unlike with education and party/ideology in this study and religiosity in past work there seems to be little evidence in support of Hypothesis 2a that the effect of religiosity would be conditional on the level of homophobia represented by a low score on climate of opinion. Cross-level interactions were tested on the importance of religion, religious attendance, and religious denomination. None of these showed significant effects like those of education and ideology.

To demonstrate this more clearly, Figures 3.7 and 3.8 illustrate the cross-level interaction between climate of opinion and importance of religion (3.7) and religious attendance (3.8). The cross-level interaction for denomination was too complex to display using marginal effects plots given that it is modeled categorically. These figures tell a very different story about the effects of religiosity on attitudes toward same-sex marriage than expected. For both the importance of religion and the frequency of religious attendance, we see average differences in the intercept of support as a function of the climate of opinion, like the other predispositional variables. People in more tolerant climates are more supportive of same-sex marriage, on average, regardless of their scores on these two measures of religiosity. However, shifts from the least to most religious on these variables show very similar effects across environments; the climate of opinion does not appear to moderate the effect of religiosity.



Figure 3.7: Importance of Religion

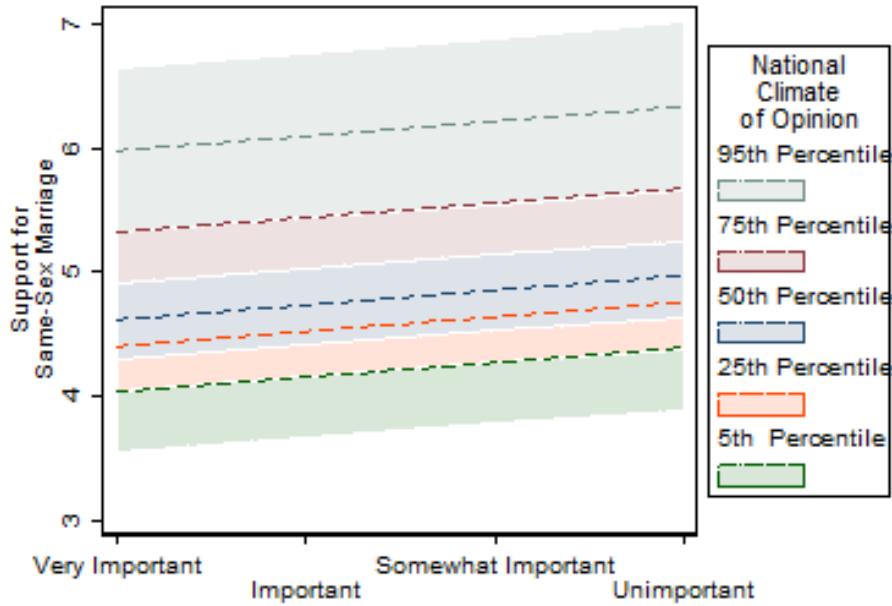
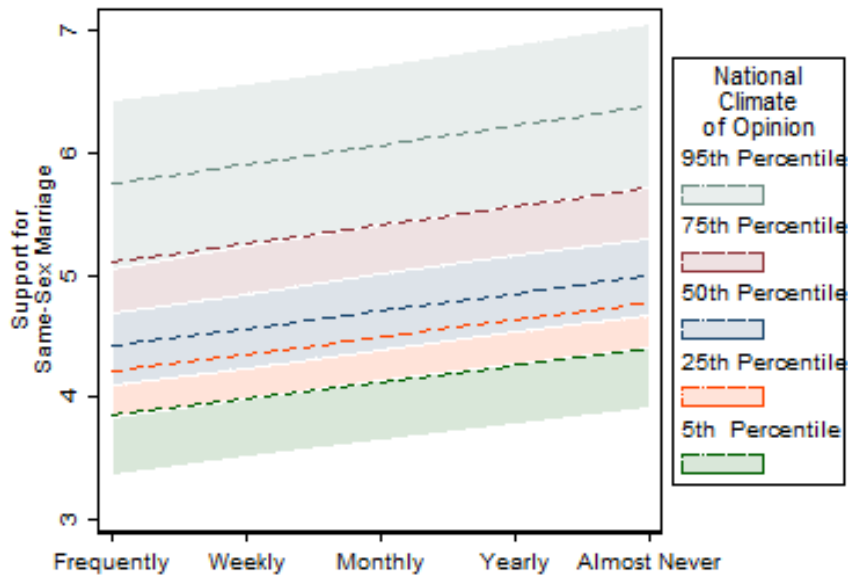


Figure 3.8 Religious Attendance



While explaining an unexpected null result is inherently difficult, it is possible to use attitudinal theory to gain some insights. Religiosity variables like importance of religion, religious attendance, and denomination were expected to affect attitudes on gay rights in the first place because religiously themed considerations tend to trigger anti-gay

attitudes and lead to less support for policy preferences. Given that those considerations are nearly universal to conservative religious groups because of their doctrine it makes sense that religious people would be primed to think about them on a consistent basis. It is plausible that the gap between religious and irreligious people is based on a much lower level of contextual effect – i.e. network effects. By attending church and holding religious belief as important people are primed to use religiously themed considerations regardless of the broader political and cultural environment. The baseline level of tolerance within a country may be different but apparently, the gap between religious and irreligious people stays relatively consistent.

### ***Discussion & Conclusion***

The findings above demonstrate that new work on LGBT politics must examine a wider array of countries and societies in order to effectively understand how individuals' personal predispositions shape support issues in different information environments. Predispositions toward gay rights—as driven by personal characteristics—have a conditional effect on actual levels of support. Until we look at the bases of attitudes across a much wider variety of places—places with different histories, institutions, culture, and levels of development—we can only make an educated guess at how people's predispositions translate to actual policy attitudes. We cannot assume that individual-level characteristics will work in the same ways in different societies—they do not with ideology and education in this study—and we cannot assume that they do not—as with religiosity.

We need to study people in a wider range of contexts to understand the complex ways in which the environment influences how people think and form attitudes. So far,

the vast majority of public opinion research on attitudes toward gays and lesbians and LGBT policy has taken place in the context of the western advanced democracies of Europe and North America. This tells us a lot about the nature of gay rights attitudes in advanced industrialized countries. Very little work has been done on the determinants of attitudes toward gay rights in Latin America (see Lodola and Corral 2010) and virtually no work has examined Asia or Africa. These societies are important because different levels of development, religious belief, and political and social norms and institutions are crucial to the formation of attitudes. Attitudes do not exist in isolation.

Overall, there is significant evidence supporting both the idea of a contextual effect of the climate of opinion and the idea that climate moderates individual-level predispositions. This research has important implications for the study of attitudes across different climates of opinion. Comparative politics researchers should be weary of cross-cultural studies of attitudes without thinking about potential moderating cross-level relationships like those seen here. Even basic random intercept models fail to properly capture how differently people think in different countries as a function of something like the climate of opinion.

This research also has important implications for attitudes on gay rights. Past research on gay rights in the United States shows that the determinants of attitudes has shifted over time. This work can now be fit into a larger context of changing climates of opinion. The basic determinants of support for gay rights are clearly heavily conditioned on the environments in which people live.

That this moderating effect holds for both education and ideology implies that these variables are connected to somewhat malleable belief systems. The fact that the

connection between religiosity and support for same-sex marriage stays relatively consistent across the Americas is both unexpected and quite interesting. This relationship diverges from past research on both the United States and Europe suggesting similar moderating effects.

More work is necessary to tease out exactly why religiosity is stable but factors like education and ideology are not. It may be the case that the variables used to capture religiosity are insufficient for Latin American countries because religiosity functions differently there than in the United States and Europe. The overwhelming dominance of Catholicism and the weak intersection between religiosity and ideology may provide a clue.

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#### Chapter 4: Same-Sex Relationship Attitudes in the United States

This chapter examines the interrelationship between American's predispositions toward support for same-sex relationships (both marriage and civil unions) and their state's climate of opinion as measured by the average level of social tolerance for homosexuality within a given state circa 2008. Specifically, I investigate how individual-level predispositions translate into different propensities toward types of recognition depending on the type of environment within which one is operating. I argue that people living in more homophobic states are less likely to support recognition generally but are also less likely to support marriage over civil unions. I also argue that being in a climate of opinion that contradicts your predispositions will lead to increased ambivalence and a wider variance in attitudes about gay rights among otherwise similar people.

Public opinion on gay rights has undergone incredible changes over the past four decades. Not only have we seen shifts in public support for gay rights issues but changes in the fundamental determinants of support for gay rights policies (Brewer 2008). Religious belief, political ideology, education, and partisanship have all influenced attitudes on gay rights to different degrees and in different ways at different times. The ways in which people's beliefs, attachments, and characteristics relate to attitudes on gay rights have shown to be flexible and fluid. In some places and times things like religious belief, ideology, and education matter less for understanding attitudes on gay rights than others. How can the individual bases of attitudes be so variable?

Previous work has shown that attitudes changed over time because the political environment itself underwent shifts in how leaders viewed homosexuality and gay rights and how the media presented those issues (Brewer 2003, Brewer 2003, Brewer 2008).

The inclusion of gay rights groups and issues as part of the Democratic coalition in the 1990s and 2000s dramatically changed the partisan nature of questions like same-sex marriage. The visibility of gay politicians and media figures (both real and fictitious) helped to normalize homosexuality in American life. Personal relationships with openly LGB individuals also helped to change abstractions about homosexuality into living breathing human beings for many people (Lewis 2011).

These explanations of how public opinion on gay rights changed over time are compelling but must be expanded if we are to truly understand why people hold the attitudes that they do. Past research has only scratched the surface on how the psychological and environmental mechanisms behind changes in the underlying causes of support for gay rights operate. We are left with open questions about how differences in the political environment structure differences in attitudes about gay rights. Understanding how attitudes changed over time in the United States is but the first step to understanding what causes variability in attitudes on gay rights more broadly. By focusing on how people's predispositions toward attitudes on same-sex unions vary across different types of political environments it is possible to get a much broader picture of why people hold the beliefs that they hold.

I argue that the political environment structures how we evaluate issues like same-sex marriage by framing them as going with certain considerations and priming certain sets of considerations. In this way, differences in context have a similar structural influence on attitudes as we saw with national-level changes in the political environment on gay rights. Different environments make people view issues in different ways by

moderating the connection between their fundamental predispositions and their ultimate attitudes.

### *Predispositions and Personal Characteristics*

Massive amounts of research in the social and behavioral sciences argues that attitudes are derived from the development and activation of considerations (Zaller 1992, Zaller and Feldman 1992, Druckman and Lupia 2000, Druckman 2001, Lodge and Taber 2013). Scholars argue that these considerations can range from preexisting attitudes or feelings about the subject to unrelated factors already on a person's mind to their general emotional state.<sup>31</sup> Different people hold different types of considerations based on their beliefs, personalities, and experiences. Most of the personal characteristics we use to understand and predict behavior can best be thought of as representing coherent predispositions toward thinking about the world in particular ways and employing a consistent set of considerations.

Religion and ideology influence people's attitudes by helping them to organize those attitudes and considerations under broader belief systems (Converse 1964). Religious people are more likely to think in terms of religious considerations when making evaluations. The likelihood of religious considerations being triggered by a policy question is higher for more religious individuals regardless of the policy but it is especially greater on issues of morality and sexual propriety. Evangelical Protestants have traditionally held the most conservative and consistent attitudes about homosexuality because they relate directly to important theological considerations

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<sup>31</sup> While there is debate in the broader literature on the precise scope of the term "considerations" I employ it in the broadest sense as any mental object that can be used to evaluate an issue like same-sex marriage.

(Wilcox and Norrander 2002, Brewer and Wilcox 2005, Olson, Cadge et al. 2006, Whitehead 2010).

Increased education leads to more social tolerance toward homosexuality and greater support for the social and political rights of sexual minorities. This general tendency has been shown to apply in study after study on attitudes toward homosexuality in general (e.g. Loftus 2001, Andersen and Fetner 2008) and same-sex marriage in particular (e.g. Moskowitz, Rieger et al. 2010, Becker 2012). Higher levels of education have repeatedly shown to correlate with higher levels of social and political tolerance toward outgroups—likely because of a direct influence of the prioritization of tolerance as a social value in western education (Bobo and Licari 1989, Golebiowska 1995, Lewis 2003, Moore and Ovidia 2006). Higher education works to instill values that protect individual liberties and prize social freedom in people.

Partisan affiliation alters the relevant mix of considerations people might to use include the policy preferences of their “team”. Partisan identity can create an emotional connection between groups that fosters positive feelings toward co-partisans and translates into policy support (Transue 2007, Lodge and Taber 2013, Huddy, Mason et al. 2015). Either an individual is nudged into conforming their attitudes to their existing party or their attitude is already so strong that it helps to shape their party affiliation itself. One important reason for changes in attitudes on gay rights along partisan lines has been the emergence of the gay rights movement as an important player in Democratic politics. This has led many Democratic voters to be more sympathetic to gay rights issues generally (Layman 2001).



Race is also a strong predictor of attitudes on gay rights precisely because racial context structures considerations on a wide variety of issues. Research on differences in attitudes on gay rights between whites and blacks shows that African Americans hold more negative views toward homosexuality generally and gay rights in particular (see Loftus 2001, Lewis 2003) However, African Americans—especially those from older generations—were more likely in the 1990s to support laws that banned workplace and housing discrimination for gays and lesbians than were whites (Lewis 2003). This is thought to be a direct consequence of the experience of similar types of employment discrimination against blacks that many still remembered.

Perhaps one of the largest findings in the literature on attitudes toward gay rights is that of the importance of attribution of the cause of homosexuality. Haider-Markel and Joslyn (2008) and Lewis (2009) find that an individual's belief in the nature and causes of homosexuality—as natural or a choice—has an overwhelming influence on their subsequent gay rights policy attitudes. This is very likely because the considerations that are activated when one views homosexuality as a choice are very different from those used when one views it as natural.

These personal characteristics and many others help to structure personal predispositions toward attitudes and beliefs. People draw on sets of considerations related to their religion, ideology, education, partisanship, race, and beliefs about groups to build attitudes. But these predispositions do not solely determine people's attitudes. Zaller and Feldman (1992) argue that most people are ambivalent on most issues and can see merit to multiple options. Often, it is unclear—or at the very least not overwhelmingly clear—

to people which considerations should be used to evaluate issues and people take cues from their environment.

We know work on public opinion that—for many policy issues—these predispositions are neither deterministic nor particularly stable (Converse 1964, Bishop, Oldendick et al. 1982, Zaller and Feldman 1992).<sup>32</sup> The mix of considerations used to build an attitude can change quite easily depending on context (Zaller and Feldman 1992). These changes can lead to persistent differences in how people think about issues like gay rights (Brewer 2008). It is the political and social environment that alters or moderates how personal predispositions influence attitudes as we saw with national-level changes in attitudes on gay rights in the 1990s and 2000s.

### ***The Political and Social Environment***

Political scientists now know quite a lot about the personal determinants of attitudes toward homosexuality, LGBT rights, and same-sex marriage—particularly within the United States (see Becker 2014, Flores 2015). Likewise a large number of studies have purported to address how context influences attitudes in one way or another (Brewer 2003, Merino 2013, Ayoub and Garretson 2014, Flores 2014). However, most of this work has failed to tie together the influence of both context and predispositions within a more comprehensive theoretical framework. There is very good reason for this seeming oversight within the literature.

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<sup>32</sup> For many—but not all—policy issues, stable predispositions based on a consistent mix of considerations do not occur. Work by Peffley and Hurwitz (1985) and Goren (2013) shows that people’s attitudes tend to be constrained by their abstract beliefs. However, when individuals cannot easily match their abstract beliefs to a policy or have conflicting relevant beliefs (Zaller and Feldman 1992) or when their attitudes are not particularly well developed or crystalized (Petty and Krosnick 1995) they tend to be less stable.

The truth is that there has been rather broad disagreement over the precise definition of context or the environment for decades with most scholars defining context with whatever unit of measurement they have at hand. (Books and Prysby 1988). Context within the social sciences can be more broadly thought of as the political and social environment and can change both across time and space. The changes that we saw on attitudes toward gay rights over time in the United States are actually a particular example of more common contextual effects. Contextual effects exist when an individual's behavior is influenced by some trait or feature of the social environment or community, even if an individual does not possess that trait (Huckfeldt 1986). As the social and political environment became more tolerant of homosexuality the broader public did as well. In other words, the social or political environment can help shape an individual's behavior, attitudes, and beliefs even if they are predisposed to act or believe differently. Books and Prysby (1988) describe three broad types of causal mechanisms for this process caused by social network interactions, norm conformation, and information consumption patterns.

Social network interactions with people of similar attitudes can help cement existing beliefs, while interactions with people of opposing views can modify prior attitudes (Huckfeldt and Sprague 1987). This type of social network influence has been shown to be one of the most important causes of attitude change on gay rights as sexual minorities have come out of the closet. Significant research has shown that coming out as gay can positively influence members of one's social network (Lewis 2011, Becker 2012, Garner 2013, Merino 2013).

A second contextual mechanism is the tendency for individuals to conform to community norms, an effect that can occur outside of social networks. Fitting social rules by altering your attitudes is a complex process with mixed evidence. Work by Huckfeldt (1984) argues that apparent community-level influence can be best explained by network influence. Social desirability bias even with strangers is an example of an underlying need to conform to perceived social expectations (Krosnick 1999, Berinsky 2002).

A third mechanism arises from the consumption of information. Extensive research on emphasis frames has shown that people often change the types of considerations they use to evaluate an issue or event based on how it is presented (Druckman 2004, Chong and Druckman 2007). Work on framing effects in political science and communication have shown strong and consistent evidence that people are influenced by the ways in which information is presented. Because people in a given community often rely on similar news sources and listen to similar opinion leaders, they are likely to share similar belief patterns and to evaluate issues with similar sets of considerations.

Each of these mechanisms outlines a particular way in which the political and social environment transmits information to people operating within it. But all three work at a more fundamental level by altering the number and types of considerations used by people to make evaluations. Combining research on attitudes with the broader literature on context allows us to create a better model of how the underlying mechanisms outlined by Books and Prysby (1988) really influence people. In particular, understanding that people with different types of predispositions toward attitudes can change other people's minds by changing the types of considerations they employ. When scaling this up to the

level of a social network or community the likelihood that certain sets of considerations will be used is a function of a person's predispositions toward those considerations and their environment's predisposition toward triggering those considerations.

### ***The Moderating Influence of the Political Environment***

The political environment creates links across ideas and concepts in people's minds through interactions, through expectations about community norms, and through the spreading of information. Both context and personal predispositions work similarly to influence on attitude formation by altering the probability that a particular set of considerations will be called upon to create an attitude. Political context alters the relationship between personal predispositions toward attitudes and a person's eventual attitude by altering the mix of considerations that are activated. By framing issues like gay rights as related to particular sets of considerations, or by subsequently priming those considerations for evaluations, the political environment works to moderate the relationship between a person's natural predispositions and their attitudes. In this way, the environment can change people's attitudes and the consistency of those attitudes.

The idea that the political environment matters in explaining attitudes is hardly new, but debates exist about which kinds of contextual characteristics influence which kinds of attitudes and in what ways (Books and Prysby 1988). I argue that the climate of opinion on homosexuality—measured as the percent of the state that expresses support for social tolerance for homosexuality—represents a strong environmental factor driving support for gay rights generally. Further, I argue that the most likely environmental characteristics to influence individuals are the ones that, at the individual-level, most often drive attitudes. Since—unlike aggregate homophobia—these individual-level

drivers shift as a function of context, identification of the right characteristics can often mean shooting at a moving target. However, factors like education, partisanship, ideology, and religiosity have all been shown as widely important individual-level predictors of attitudes on same-sex marriage within the United States and capturing these characteristics in the aggregate should go a long way in helping to understand community-level influences.

In the state of Alabama, 50% of the population is at or below a high school education level. Alabama has a high level of religiosity compared to many other states and the population overwhelmingly politically conservative and Republican. This means that most people in Alabama are predisposed to be against an issue like same-sex marriage based on their own beliefs and personal characteristics. It is more likely in this environment that people who are predisposed to be favorable to same-sex marriage will interact with those who are not than in more liberal, secular, and educated states. It is also clear that social standards and community norms will be based on very religious and conservative considerations in a state like Alabama. Both the urge to conform to these standards and the very knowledge that they exist will alter the kinds of considerations that people use to evaluate issues. Just knowing that you are in Alabama will change how you evaluate gay rights.

Differences in the political and social environment have an important moderating influence on attitudes by changing the types of considerations that people use to evaluate questions like that of relationship recognition for gays and lesbians. People in a religious and conservative state will be constantly primed with religious information from politicians, the news, and regular discussion. This priming will trigger the activation of

religious considerations that may otherwise have not been important to moderate or even liberal people and may lead to an increased preference for civil unions over same-sex marriage or no recognition at all.

I argue that people in states with a low level of social tolerance for homosexuality (Hypothesis 1) politically conservative states (Hypothesis 2), states with a higher percentage of Republicans (Hypothesis 3), states with lower levels of education (Hypothesis 4), and states with a higher proportion of religious conservatives (Hypothesis 5) are less likely to support same-sex unions even when accounting for their own personal predispositions.<sup>33</sup> In particular, I argue that the probability of choosing either civil unions or blanket non-recognition will increase in environments where homophobic considerations are more likely to be activated by outside forces as opposed to personal predispositions.

The precise ways in which the political environment would influence someone's attitudes on same-sex marriage depends on a number of factors. An extremely homophobic environment might amplify the natural inclinations of some people to oppose gay rights and might alternatively suppress the tendencies of others to support gay rights. In some cases extreme, where the political environment provides a virtually one sided message (McClosky and Zaller 1984), this moderating effect could potentially be strong enough to override the connection between personal predispositions and attitudes. It may simply never occur to someone to use notions of political and social tolerance in evaluating gays and lesbians if *everyone* knows that they aren't acceptable. In addition to

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<sup>33</sup> Confirming these basic hypotheses is necessary to assert that these state-level characteristics matter. By capturing aspects of the political environment at the state-level I am establishing an overly difficult test as community effects likely occur—at least partly—at a more local level.

possibly moderating the direction of attitudes, the political environment has the potential to alter attitude strength and consistency as well. People in political and social contexts that reinforce their preexisting inclinations are likely to have stronger, more stable, and more crystalized attitudes than those who live in mixed or opposed environments.

Where my first set of hypotheses tests the impact of the political environment on the direction of attitudes—or the choice between recognition and non-recognition—my last hypothesis tests the influence of the environment on attitude constraint. As the environment introduces new considerations that point to a different attitude than someone’s predispositions people can become ambivalent (Zaller and Feldman 1992). On the other hand, if the environment continually reinforces activation of the same set of considerations that someone is predisposed to use then their attitudes are more likely to become crystalized and stable (Krosnick and Petty 1995). I argue that the variance around predicted attitudes will be lower when personal predispositions match environmental predispositions but that the variance around predicted attitudes will be higher when personal predispositions conflict with the context (Hypothesis 6).

A hypothetical example is helpful here. Assume that two virtually identical people lived in markedly different political and social environments. One lives in an environment that confirms and reinforces her values and beliefs while the other lives in a place where her views are in the minority. When evaluating their views on same-sex marriage I would expect that the attitude of the first person will be more stable over time than the second because her natural inclinations are being reinforced by her environment. By analogy we can extend this to the population of people similar to our hypothetical case. In an environment where people who are predisposed to support gay rights—based



on personal characteristics— are in the majority, I expect their attitudes to be more consistent as a group and have both a higher level of support than they might elsewhere and a smaller variance around that support. In an environment where those predisposed to be supportive of gay rights are in the minority I expect their support to be lower than it would otherwise be but also that the variance around that support to be larger.

### *Data and Measures*

For my outcome and individual-level explanatory variables I use survey data from the National Annenberg Public Policy Center's 2008 online poll. These data have several benefits which make them particularly useful to this study. By choosing studies conducted in 2008 I attempted to balance the need for a high number of respondents and the level of national support for gay rights generally and same-sex marriage more particularly. The 2008 NAES contains almost 21,000 observations and is thus large enough to make reliable inferences about subpopulations like state populations and demographic groups. It also occurs at a time when there is considerable debate over the future of same-sex marriage and both support and opposition are polarized. Had I chosen 2004, the average level of support for same-sex marriage in the United States would have been much lower while in 2012 it would have been higher.<sup>3435</sup>

The wording of the question on recognition of same-sex unions was the deciding factor in selecting the 2008 Annenberg survey. It is important to understand that views on same-sex marriage and civil unions are substantively different in many ways. It is not

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<sup>34</sup> Additional work is necessary to demonstrate how changing temporal context interacts with political and social context. This is carried out in a subsequent chapter of my dissertation.

<sup>35</sup> This has significant implications for the range of plausible predispositions for both people and environments. An ideal sample would contain both people and environments that are uniformly predisposed to support and oppose same-sex relationships. However, the former has never occurred in the united states to date so estimates of the strength of pro recognition environments are likely understated.

simply that civil unions and domestic partnerships are viewed by individuals as an intermediate step between no recognition and full marriage recognition. The 2008 version of the Annenberg survey asks “What is your position on same-sex marriage?” It gives three possible options: “I support full marriage rights,” “I support civil unions or domestic partnerships,” and “I do not support any form of legal recognition.” This question wording allows for a test of my hypotheses across multiple types of recognition as well as non-recognition of relationships.

Despite good theoretical arguments for assuming that non-support, civil unions, and same-sex marriage are ordered categories, they fail in the parallel lines assumption of ordinal logistic regression (Long 1997). Because of this fact, I use a variation on a multinomial model instead (Skrondal and Rabe-Hesketh 2003). I use blanket non-recognition as a base category and compare it to civil unions and same-sex marriage. My analysis uses a mixed effects multinomial logistic regression model with state jackknifed standard errors estimated through Stata 14’s generalized structural equation modeling suite (Van der Leeden, Meijer et al. 2008, Vermnt 2013).

Party identification is coded on a standard seven point scale ranging from strong republican (1) to independent (4) to strong democrat (7). It is treated as continuous for the purposes of this analysis but auxiliary models with categorical response coding not presented showed similar results. Ideology is similarly coded on a seven point scale with extremely conservative (1), moderate (4) and extremely liberal (7). Likewise, this is treated as a continuous variable. Education is also coded on a seven point scale from High school diploma (1) to college degree (4) to doctorate (7). While there is a larger

degree of nonlinearity inherent in educational status than in ideology and partisanship this too is treated as a continuous measure for the purposes of the analysis.

Religiosity is operationalized in two main variables in this analysis. The first is church attendance measured on a scale of 1-6. More than once a week (1), once a week (2), once or twice a month (3), a few times a year (4), Once a year or less (5), or never (6). These responses are treated continuously so that a higher value equals less attendance. The second religion variable is denomination of the respondent. The full religious affiliation variable had 13 categories—some with very few respondents as adherents. These were collapsed into Evangelical, Mainline, Catholic, Mormon, Jewish, Other, and Atheist/Agnostic. This variable is automatically treated as categorical as there is no possible inherent ordering. In all analyses Evangelical was treated as the reference category because past literature would lead us to believe that evangelicals tend to hold the most negative beliefs toward gay rights of any group represented in this survey.

In addition to these standard individual-level variables I also include respondent gender coded with zero as male and one as female. I include continuous age measured from 18 to 110 years old. I also include family income measured with nineteen separate and irregularly sized categories and treated continuously. Finally, I include racial group in this analysis with White, Black, Hispanic, and Other as the relevant groups. White is treated as the reference category because Whites comprise the largest group in the population.

The Annenberg public opinion data were supplemented with data measuring different aspects of state context from a variety of sources. For my measure of climate of opinion I used survey data from the Pew 2008 Religious Landscape Survey. This survey

included an item: Homosexuality is a way of life that should be accepted/discouraged by society with a response option of agree, disagree, or neither/no answer. I used this question in conjunction with multilevel regression and post-stratification to build estimates of the level of social tolerance toward homosexuality within 47 states in the United States (Lax and Phillips 2009, Lax and Phillips 2009, Kestelc, Lax et al. 2010, Lax and Phillips 2013).

Data on religious context were obtained from the Association of Religious Data Archives. I used the Religious Congregations and Membership Study created by the Association of Statisticians of American Religious Bodies in 2010. This is a decennial survey of every major organized religious group in the country containing data on the number of adherents. I include measures of the percentage of the state population that is registered as Evangelical, Mainline Christian, and Catholic calculated by dividing the number of members of a denomination within a state by the state's population.

Data used to assess state educational context are from the 2008 American Community Survey estimates produced by the Census Bureau. In particular, I evaluated the percentage of the state with a high school degree and the percent of the state with a college degree but only include the latter in the analysis presented here as it has appears to have as stronger effect and is more representative of the existing literature.<sup>36</sup> The Berry et al measures of state and citizen ideology were used as well as 2004 state republican presidential vote share in assessing state ideology and partisanship as predictors of individual level opinions.

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<sup>36</sup> Both variables were tested in different models for comparison.

For Hypotheses 1-5<sup>37</sup> I use the mixed effects multinomial model to test the influence of state-level environmental characteristics on individual-level support for civil unions and same-sex marriage compared to blanket non-recognition. Given levels of collinearity for state-level variables and the fact that they occur in only so many combinations it is difficult to directly test directly for cross-level interactions. In auxiliary models—not presented—only party ID seems to vary by state climate of opinion on homosexuality. For Hypothesis 6<sup>38</sup>, I generate predicted probabilities and variances with sets of personal predispositions toward same-sex marriage and civil unions similar to standard propensity scores. I then evaluate the influence of context on the confidence intervals of the predictions.

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<sup>37</sup> I argue that people in more homophobic states (Hypothesis 1) politically conservative states (Hypothesis 2), states with a higher percentage of Republicans (Hypothesis 3), states with lower levels of education (Hypothesis 4), and states with a higher proportion of religious conservatives (Hypothesis 5) are less likely to support same-sex unions even when accounting for their own personal predispositions

<sup>38</sup> I argue that the variance around predicted attitudes will be lower when individual-level characteristics match environmental characteristics in the extreme but that the variance around predicted attitudes will be higher when personal predispositions conflict with the context (Hypothesis 6)

## Findings

**Table 4.1: Preferences for Civil Unions and Same-sex Marriage**

|   | Civil Unions        | Marriage            |
|---|---------------------|---------------------|
| <i>Individual-Level Characteristics</i> |                     |                     |
| Party ID (R-D, 7-Point Scale)           | 0.075**<br>(0.015)  | 0.253**<br>(0.012)  |
| Ideology (C-L, 7-Point Scale)           | 0.271**<br>(0.019)  | 0.712**<br>(0.019)  |
| Female                                  | 0.379**<br>(0.040)  | 0.730**<br>(0.051)  |
| Age                                     | 0.005**<br>(0.001)  | -0.023**<br>(0.002) |
| Household income                        | 0.051**<br>(0.005)  | 0.036**<br>(0.008)  |
| Race (reference is white)               |                     |                     |
| Black                                   | -0.414**<br>(0.068) | -1.248**<br>(0.079) |
| Hispanic                                | -0.106<br>(0.080)   | -0.192<br>(0.110)   |
| Other                                   | -0.537**<br>(0.158) | -0.873**<br>(0.154) |
| Education                               | 0.240**<br>(0.013)  | 0.311**<br>(0.014)  |
| Denomination (reference is Evangelical) |                     |                     |
| Mainline                                | 0.795**<br>(0.050)  | 1.404**<br>(0.080)  |
| Catholic                                | 0.826**<br>(0.046)  | 1.263**<br>(0.098)  |
| Mormon                                  | 0.108<br>(0.079)    | -0.142<br>(0.191)   |
| Jewish                                  | 0.975**<br>(0.132)  | 2.057**<br>(0.158)  |
| Other                                   | 0.397**<br>(0.112)  | 1.670**<br>(0.110)  |
| Atheist or Agnostic                     | 0.357**<br>(0.078)  | 1.272**<br>(0.105)  |
| Attend religious services (More-Less)   | 0.237**<br>(0.013)  | 0.420**<br>(0.018)  |
| States                                  | 47                  | 47                  |
| Observations                            | 22,211              | 22,211              |

This table shows the results of a mixed effects multinomial logits. The response options are: no recognition, preference for civil unions, or preference for same-sex marriage. The reference category in each case is no recognition. Coefficients within a model can only be interpreted as either having a positive or negative influence on the outcome (i.e. more likely or less). Coefficients across models can be compared for size, statistical significance, and direction. Clustered jackknife standard errors are in parentheses. \*\* p<0.01, \* p<0.05

Table 4.1 shows the results of a mixed effects logistic regression with column one as the comparison between non-recognition and civil unions and column two as the

choice between non-recognition and same-sex marriage. Each column can be interpreted as a choice between a particular type of recognition and blanket non-recognition *conditional* on the other type of recognition. In other words, Model 1 shows that liberals were more likely than conservatives to support civil unions and same-sex marriage than non-recognition. However, by comparing coefficient size across the civil union and same-sex marriage columns it is clear that ideology played a greater part in the choice between non-recognition and full marriage than in the choice between non-recognition and civil unions.

Ideology, party, race, education, religious affiliation, and religious attendance all work basically the way that existing literature argues. Conservatives, Republicans, the less educated, and those who are more religious are all more likely to support blanket non-recognition than either of the two types of recognition. However, the difference between non-recognition and civil unions is almost always smaller than that between non-recognition and same-sex marriage. For instance, the coefficient size for the relationship between ideology and the choice between non-recognition and civil unions is .27 whereas the same variable has a coefficient of .71 on the difference between non-recognition and marriage. This means that political ideology has a much greater effect on the choice between non-recognition and marriage than it does non-recognition and civil unions.

Virtually all existing literature argues that increased education correlates with increased support for gay rights in general and same-sex marriage in particular and these findings bear that out. Both support for same-sex marriage and civil unions become more popular relative to blanket non-recognition as people become more educated. The

difference in substantive effect size between the two is relatively small across models but shows that education has a slightly greater impact on the choice between non-recognition and marriage as opposed to non-recognition and civil unions.

Evangelical Christians are the least likely to support either civil unions or same-sex marriage of any denomination. Frequently attending church services decreases the likelihood of support for any recognition of same-sex unions. Notably, the impact of church attendance is significantly associated with lower support for same-sex relationships even when people attend only a few times a year.

Table 4.2: Impact of Context on Preferences for Civil Unions and Same-Sex Marriages

|   | Civil Unions        | Marriage             |
|---|---------------------|----------------------|
| <i>State-Level Characteristics</i>        |                     |                      |
| % of the Population with Bachelors Degree | 4.449**<br>(0.972)  | 4.323**<br>(1.098)   |
| % Evangelical                             | 0.769*<br>(0.299)   | -0.865*<br>(0.332)   |
| % Catholic                                | -0.045<br>(0.173)   | 0.220<br>(0.219)     |
| % Mainline Christian                      | -1.574**<br>(0.369) | -1.694**<br>(0.510)  |
| % Population White                        | 0.383<br>(0.197)    | -0.503<br>(0.283)    |
| Percent Vote for Republican               | 0.003<br>(0.004)    | 0.026**<br>(0.006)   |
| Climate of Opinion (low to high)          | 2.453**<br>(0.577)  | 3.722**<br>(0.734)   |
| Random Intercept for Civil Union Equation | 1.953**<br>(0.309)  | -0.073<br>(0.233)    |
| Random Intercept for Marriage Equation    | -0.849<br>(0.721)   | 2.966**<br>(0.963)   |
| Constant                                  | -7.023**<br>(0.440) | -10.871**<br>(0.682) |
| States                                    | 47                  | 47                   |
| Observations                              | 22,211              | 22,211               |

This table shows the results of a mixed effects multinomial logit. The response options are: no recognition, preference for civil unions, or preference for same-sex marriage. The reference category in each case is no recognition. Coefficients within a model can only be interpreted as either having a positive or negative influence on the outcome (i.e. more likely or less). Coefficients across models can be compared for size, statistical significance, and direction. Clustered jackknife standard errors are in parentheses. \*\* p<0.01, \* p<0.05



As Table 4.2 shows, the political environment—even when measured at the state level—does play an important role in explaining attitudes on marriage and civil unions. However, the results are mixed in terms of what can be said about the specific factors that impact people’s attitudes. The level of education within a state as measured by percent with a bachelor’s degree is highly indicative of support for any recognition over none at all. However, state-level partisanship, as measured by 2004 Republican vote share only appears to matter for the choice of same-sex marriage—and in the wrong direction. According to this model increased vote share for Bush in 2004, conditional on other state-level factors, correlates with increased support for same-sex marriage over no-recognition. We know from the historical ballot initiative results in that year that Republican states tended to be staunchly against same-sex marriage. When changing the list of state-level contextual variables in the model Republican vote share fluctuates from negative to insignificant to positive effects. This implies that the part of aggregate Republican affiliation that is influencing attitudes on same-sex marriage is being driven by the higher rates of religiosity in the GOP.

Given previous literature on the importance of evangelical and fundamentalist beliefs in understanding individual predispositions toward attitudes on same-sex unions it is somewhat startling to find that higher rates of evangelical affiliation lead to higher support for civil unions compared to non-recognition resulting from the number of evangelicals in a state as seen in Table 4.2. We do see differences in support for marriage relative to non-recognition wherein a higher rate of evangelical affiliation leads to a lower level of support for marriage. This implies that people who prefer some recognition might be pushed toward civil unions in states with higher levels of evangelical affiliation.

Climate of opinion has a large surprisingly large and significant effect both on the probability of support for marriage and civil unions over non-recognition given all of the other state-level factors included in the model. This means that in states with lower levels of homophobia individuals within those states—even when accounting for their individual-level characteristics—are more likely to support recognition. Only level of education has a larger average effect on support.

These results lead to mixed success for my first 5 hypotheses. Hypotheses 1 argued that a higher level of homophobia within a state would drive down support for recognition and has support. Partisanship—in Hypothesis 2—was supposed to alter support for relationship recognition. While I found some support for this hypothesis based on a state's support for Bush in 2004 the relationship seems to be mediated by the higher rates of religiosity among Republicans. Once rates of education and religious affiliation are accounted for, Republican vote share matters inconsistently and seems to help increase support for same-sex marriage. Hypothesis 3 and 4 both fare much better in that both state education rates and rates of religious affiliation seem to alter the likelihood of support for relationship recognition even when accounting for personal characteristics.

While it is clear that the environment does seem to moderate the relationship between individual predispositions and people's support for same-sex marriage and civil unions it is not yet clear to what extent this occurs. Given the fact that both individual-level and aggregate factors are likely highly interactive in the real world it becomes difficult to directly test these effects with a single standard model because of collinearity in the mass of interaction terms. For this reason, I use a global test of the impact of state-level context on the propensity of support for relationship recognition.

Hypothesis 6 tests the influence of the environment on attitude constraint to help understand how the political environment changes variation in attitudes and not just the direction. Here, the I argue that the standard errors for predictions will increase or decrease in size as a function of context. The variance around predicted attitudes will be lower when individual-level characteristics match environmental characteristics in the extreme but that the variance around predicted attitudes will be higher when personal predispositions conflict with the context. This is because being in an environment that conflicts with your predispositions should increase the number of considerations you use to make evaluations and insure that the considerations conflict and thus produce some ambivalence. Living in an environment that matches your predispositions will help reinforce the consistency with which you use a particular set of considerations and thus help crystalize our attitude.

Table 4.3: Predicted Probabilities as a Function of Predispositions and Context

| Predisposition/Environment | Civil Unions | SD Civil Unions | Same-Sex Marriage | SD Same-Sex Marriage |
|----------------------------|--------------|-----------------|-------------------|----------------------|
| Pro/Pro                    | 0.7784206    | 0.1077686       | 0.9600631         | 0.0394238            |
| Pro/Average                | 0.7172723    | 0.1280495       | 0.9208856         | 0.0714607            |
| Pro/Anti                   | 0.5939209    | 0.1718754       | 0.7499136         | 0.1877183            |
| Average/Pro                | 0.4258172    | 0.1484678       | 0.2992173         | 0.1562351            |
| Average/Average            | 0.3473699    | 0.1463956       | 0.1857721         | 0.1288268            |
| Average/Anti               | 0.2369151    | 0.1411792       | 0.0543731         | 0.0645432            |
| Anti/Pro                   | 0.0543731    | 0.0645432       | 0.0039041         | 0.0048895            |
| Anti/Average               | 0.0964345    | 0.0692598       | 0.0012342         | 0.0018502            |
| Anti/Anti                  | 0.0519782    | 0.0494785       | 0.0000929         | 0.000206             |

Table 2 shows predicted probabilities and their standard errors for combinations of traits to create pro, average, and anti gay predispositions and environments. Pro-gay predispositions and environments were created by setting individual-level variables at their 95th percentile. Average predispositions and environments were created by setting variables at their means. Anti-gay predispositions and environments were set by setting variables at their 5th percentile.

Table 4.3 shows sets of predicted probabilities and standard deviations of support for civil unions and same-sex marriage given particular pro-gay, average, and anti-gay predispositions and state environments based on the findings from Table 4.1. Based on

results from models in Table 4.1, I created three arch-types or caricatures of people who would be expected to have certain predispositions toward civil unions and same-sex marriage. I created three types of people based on the results of the models above: those with pro-relationship recognition predispositions at the 95<sup>th</sup> percentile, those with average predispositions, and those with anti-recognition predispositions at the 95<sup>th</sup> by setting values of their personal characteristics at the upper 5<sup>th</sup> percentile, mean, and lower 5<sup>th</sup> percentile respectively. I created similar caricatures of political and social environments that are representative of states with pro, average, or anti-recognition populations.

As would be expected from the results of Table 4.1, I find significant differences in predicted probabilities for the types of recognition. Those who are most inclined toward relationship recognition have a greater probability of choosing full marriage recognition than civil unions but the average and anti-recognition caricatures flip this pattern. For the average person in the NAES the probability of support for recognition never breaks 50%. However, the likelihood of support for civil unions is always higher than same-sex marriage. The probability of support for civil unions among the people who are most predisposed to oppose recognition is around 5% while the probability of support for marriage is less than 1%.

What is more interesting is the differences in the variance around estimates of support for relationship recognition. Hypothesis 5 assumes that being in conforming environments would narrow the variance in attitudes by reinforcing people's predispositions while the variance will increase in disconfirming environments. While this is sometimes the case, I find that the reality is somewhat more complicated.

People with pro-recognition predispositions do follow the pattern outlined in hypothesis 5 very clearly. In pro-recognition states the variance around predicted support for marriage is approximately half that compared to average states. Further, the variance around estimates for average states is less than half that for anti-recognition states. In other words, not only does an anti-recognition environment push down the effect of a pro-recognition predisposition but it increases the variation around attitudes. A similar pattern can be seen in the influence of pro-recognition predispositions on support for civil unions where overall support is reduced and the variation in support increases.

People with average predispositions for 2008 show a more complicated pattern. While the level of predicted support drops when going from a pro-recognition state to an anti-recognition state the variation around the estimates stays relatively constant. However, when looking at estimates of support for same-sex marriage we see increased variation in attitudes as the environment becomes more predisposed toward recognition. This likely means that the average person is somewhat negatively predisposed and the pro-recognition environment is adding and activating a different set of considerations to their mental evaluation. When these same people live in an anti-recognition environment the variation in attitudes drops.

Those people who are predisposed not to support recognition seem to have exceptionally low levels of support regardless of their political environment. Both support for civil unions and the variation around that support is exceptionally low and stable implying that those predispositions overwhelm any environmental influence. Both support for same-sex marriage and the variance around that support are infinitesimal. However, it appears that variation in attitudes does increase in disconfirming

environments. Comparing the variation among people predisposed to recognize same-sex relationships that comes from the environment to those at the opposite end it appears that the influence of the political and social environment is asymmetrical.

### ***Discussion and Conclusion***

Clearly, the political environment can have a substantial influence on attitudes toward same-sex marriage and civil unions. This should come as little surprise to students of the social sciences. What is more interesting is precisely how, why, and when context effects occur. Context effects work by altering the number and types of considerations that people use to produce attitudes relative to what their own predispositions would have produced. This can mean greater ambivalence when there is a disconnect between the environment and someone's predispositions or it can mean greater certainty and consistency when the environment affirms someone's natural inclinations.

For people with only vague or weak predispositions toward things like same-sex marriage, the political environment can strongly influence the direction of their views. For those people who are strongly predisposed to support or oppose same-sex marriage their political environment can weaken or strengthen their attitudes. However, this dynamic appears to be asymmetrical. Results from Table 4.3 show that the variation in attitudes for those with strong predispositions can increase in disconfirming environments but it does so to a much greater degree for those on the pro-recognition end. Part of this is simply a floor effect where support for recognition of same-sex relationships is so low for the anti-recognition crowd that there simply is not much variation to explain. But it seems clear that those who are disinclined to support recognition seem to be far more resistant to the environment than others.

This pattern can be explained in two ways: either those who are negatively predisposed toward recognition are more immune to outside influence or the observed levels of support do not capture the entire range of support. In other words, it may be the case that there are not enough sufficiently positively predisposed Americans within the sample to mirror the observed resistance of the negatively predisposed. We can think of these types of people as holding militant predispositions or as having crystalized attitudes that are the result of extremely closely held considerations.

Furthermore, the range of environmental predisposition within the United States may simply be too narrow to show the full potential influence of context. If the most positively predisposed environment that the data can generate is not as uniformly positive as the most negative environment is negative, then it makes sense that we would see some variation. Future work will need to expand the range of both political environments and predispositions to unravel this asymmetry.

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## Chapter 5: Attitude Change on Same-Sex Marriage and State Climate of Opinion

One of the most important questions within LGBT politics over the past two decades has revolved around the massive changes in mass opinions on questions of gay rights. This chapter focuses on that question in a new way by analyzing change in attitudes among a specific group of individuals over a six-year period as a function of their own personal characteristics and their changing environments. I show that changes in context—specifically higher rates of improvement in social tolerance toward homosexuals—correlate strongly with changes in the level of support that individuals have for same-sex marriage.

In the last few decades America has undergone an enormous and extraordinary degree of change in mass opinion about homosexuality and LGBT policies (see Brewer 2008, Baunach 2012). These changes have sparked an important debate about the underlying mechanisms driving rapidly shifting mass preferences. Research shows how people's views on homosexuality and gay rights change? over time, but whether these changes occur at the individual-level or primarily at the aggregate level is an open question. Some argue that changes in mass preferences on issues like same-sex marriage are the result of differences in socialization across cohorts leading to aggregate shifts without much in the way of individual change in attitudes. Those that have argued in favor of theories of individual attitude change—as opposed to aggregate shifts —have hypothesized that changes in the climate of opinion have been instrumental in driving attitude change at the individual-level (Andersen and Fetner 2008).

Brewer (2003, 2008) argues that attitude change in the 1990s and early 2000s reflects the influence of different issue frames that affect attitudes toward gay rights



issues. While gay rights in past decades were framed through the lens of moral traditionalism (Fetner 2008) or sexual threat (Freedman 1987), younger cohorts began to view homosexuality and gay rights issues through the values of egalitarianism and fairness. The values that people used to form attitudes on gay rights issues shifted, which, in turn, affected the considerations that shaped people's attitudes. The shifting dynamics of public opinion about gay rights—where the frames that people use to understand gay rights issues change over time—represent a pattern that occurred within cohorts of people and across many different groups (Andersen and Fetner 2008, Lewis and Edwards 2011). Some individuals within cohorts changed frames faster than others while many never changed at all.

One of the key findings from political psychology research over the last two decades is that people are unlikely to change their previously formed attitudes about important political issues. This is especially true of attitudes that are emotionally charged or tied to core values because people are motivated to protect such existing attitudes (Lodge and Taber 2013). In light of this research, some have argued that changes in mass opinions are primarily a function of differences in socialization experiences and the replacement of older generations with their children and grand-children (Garretson 2014). In this view, what looks like individual-level attitude change in cross-sectional surveys is not change at all but is actually the result of generational replacement.

By contrast, several studies show that it *is* possible to change people's opinions on homosexuality and gay rights. Increased interpersonal contact—typically measured as regular conversation or interaction—with acknowledged LGBT individuals in observational studies (Lewis 2011) and in field experiments (Broockman and Kalla 2016)

has been shown to affect changes in expressed attitudes over time. These effects have been shown as reasonably consistent within meta-analysis so that we are fairly certain that contact does matter (Smith, Axelton et al. 2009). It does however have varying effects based on personal characteristics (Skipworth, Garner et al. 2010). Further, these effects occur even when contact is mediated. Increased exposure to LGBT people and content in the media has demonstrably changed attitudes as well (Riggle, Ellis et al. 1996, Garretson 2014).

While the enormous change in mass opinions on gay rights within the United States is incontrovertible, there is still an open debate on how that change occurred because there are multiple apparently plausible arguments to explain it. We know that people are unlikely to change their attitudes once clearly established (Lodge and Taber 2013). We know it is possible for attitudes to change as a function of changes in people's environment thanks to abundant research on contact theory (Smith, Axelton et al. 2009). It makes sense to think that attitudes would change in response to other types of environmental influence like shifts in the climate of opinion on homosexuality (Brewer 2003). While many people do find these arguments compelling there has, as of yet, only been weak evidence to support these claims.

In this chapter, I use panel re-interview data over the six-year period from 2006 to 2012 to more directly test the notion that attitude change on same-sex marriage has occurred as a function of a changing political and social environment. I find that changes in climate of opinion—particularly the state climate of opinion on support for same-sex marriage—do lead to changes in individual-level attitudes on same-sex marriage. Individuals in states where attitudes have shifted more are more likely to have increased

their level of support for same-sex marriage than those in other states. I also find that increased contact with gays and lesbians similarly leads to increased support for same-sex marriage over a six-year period. These findings provide strong evidence that individual-level attitude change on gay rights has occurred and that it is largely driven by changes in people's political environment. Changes that continued after the 1990s and appear to be ongoing within the United States.

### ***Predispositions and Attitudes on Gay Rights***

Political psychologists define attitudes as evaluations of considerations—concepts, ideas, or feelings—related to an attitude object that act as a reason for favoring one side of an issue rather than another (Zaller 1992, Zaller and Feldman 1992, Lodge and Taber 2013). A lot of work has been done to understand what factors influence people's basic attitudes on gay rights questions. Understanding how people form their initial attitudes on gay rights questions is relatively straightforward given the breadth of research on public opinion about such questions over the last twenty years. Dozens of articles and books on public opinion about homosexuality and gay rights have found a relatively consistent set of personal characteristics that correlate with attitudes (Zaller 1992, Loftus 2001, Haider-Markel and Joslyn 2008, Lewis 2009, Herek and McLemore 2013, Flores 2015).

Research on attitudes towards gay rights has shown that religious and ideological belief systems tend to have a very large impact on attitudes toward gay rights. Being a fundamentalist or evangelical Christian tends to be strongly associated with anti-gay views (Smith and Johnson 2010, Ellison, Acevedo et al. 2011, Herek and McLemore 2013). Ideological conservatism and authoritarianism are also strong predictors of homophobia

and opposition to same-sex marriage and other gay rights issues even after controlling for religion and education (Hetherington and Weiler 2009, Poteat and Mereish 2012, Poteat and Mereish 2012, Herek and McLemore 2013).

Education likewise presents as having a strong impact on people's attitudes toward gay rights. It is typically associated with increases in social and political tolerance that often translate directly to higher rates of support for gay rights. Less formal education is associated with political intolerance—or reduced support for civil liberties—toward minorities (Bobo and Licari 1989, Knudsen 1995) and an unwillingness to support homosexuality and gay rights specifically (Loftus 2001, Baunach 2012). This is thought to be the result of lower levels of cognitive sophistication for less educated relative to those with more (Andersen and Fetner 2008).<sup>39</sup>

While education, religion, and ideology all clearly influence attitudes by structuring how different types of considerations are activated they are not the only important characteristics for understanding attitudes on same-sex marriage. Research has demonstrated that race, gender, and age cohort can influence attitudes as well (Herek 2002, Andersen and Fetner 2008). Past work has shown significant, albeit inconsistent, differences between blacks and whites on support for various gay rights issues (Lewis 2003). Women have been generally more tolerant or at least more indifferent to homosexuality than men in many contexts (Herek 2002, Lemelle Jr and Battle 2004,

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<sup>39</sup> The precise mechanisms underlying the role of education in the connection between political and or social tolerance and attitudes toward homosexuality and gay rights are complex and not entirely well understood. Some mechanisms that have been proffered include higher rates of cognitive sophistication, increased levels of meaningful contact with minorities, social desirability bias due to the popularity of liberal (pro-civil liberties) ideological preferences on college campuses, and selection bias on the part of those who are drawn to or able to attain higher levels of education. While these specific mechanisms are important they are well beyond the scope of this chapter or dissertation. The key factor for the purposes of this work with respect to education is that research has consistently found that higher rates of formal education correlate with more positive attitudes on minority rights generally and gay rights specifically.

Balzer and Jacobs 2011, Herek and McLemore 2013). Age cohort also helps explain attitudes on gay rights issues as people born in previous generations were more likely to be socialized to view homosexuality as inherently unnatural, unhealthy, and sinful (Converse 1964, Lewis and Edwards 2011).

There is also solid theory for how considerations may be triggered by predispositional characteristics like religiosity, political ideology, gender, and race (Herek and McLemore 2013). Concepts like sin, immoral sexual behavior, gender identity and norms, and political and social tolerance are all known to be important for people in building attitudes about homosexuality and gay rights. The framing of issues within certain contexts and as related to concepts has been widely shown to influence how people build attitudes and evaluate issues (Chong and Druckman 2007). The same set of frameworks for understanding sexuality and sexual orientation are common the world over and have apparently similar impacts on how people think about gay rights issues across cultures (Brewer 2003, Nemtsev 2008, Encarnacion 2011).

### ***Attitude Change and Stability on Gay Rights***

While we know what individual-level factors tend to drive—or at least correlate with—attitudes on gay rights we also know that the magnitudes of the relationships are variable across time. Baseline support for gay rights generally has skyrocketed within the United States over a relatively short time frame. More than simply seeing increased support we have seen increased polarization on issues like same-sex marriage which was once a non-partisan issue in the United States. From 2004-2016 it became a hugely partisan issue with Democrats and Republicans being highly polarized on either side. Brewer (2003, 2008) argues that these changes reflect changes in the underlying issue

frames that people use as gay rights became more contentious (Chong and Druckman 2013, Druckman, Peterson et al. 2013). The fact that the kinds of frameworks that people use to evaluate gay rights issues have changed over time is practically incontrovertible. The underlying mechanisms at play behind those changes are still being heavily contested.

Policy attitudes tend to form spontaneously when an event prompts someone to form an evaluation about something based on whatever considerations come to mind and that attitude will often fade back out of memory (Zaller and Feldman 1992). This is largely because most people don't tend to think about questions of public policy all that much and if prompted to form an attitude might not care much about it. However, over the last several decades a significant body of work has developed within political psychology demonstrating the idea that people resist changing their attitudes about many political issues, ideas, groups, and people (Lodge and Taber 2013). Typically, people are willing to change their opinion on issues about which they know and care little and when they are not particularly emotionally attached to the issue.

Once people have formed a stable attitude it tends to get reinforced via motivated reasoning (Taber and Lodge 2006) and it takes considerable effort to change people's minds (Redlawsk, Civettini et al. 2010). If people are forced to think about an issue repeatedly or if the issue is sufficiently important to them then their attitude is more likely to stay consistent than not. Given the passion with which many people seem to hold their views on gay rights and the omnipresence of these issues within American politics over the past few decades it seems unlikely that people's minds would change much or quickly. Most of personal characteristics driving people toward attitudes on

issues like same-sex marriage are relatively stable within people over time they tend to activate the same kinds of considerations over time. They lead to both initial evidence for an attitude when it is formed and as confirmatory evidence when it is reevaluated. Research shows that once people form attitudes based on considerations that are informed by their personal characteristics the attitude become self-reinforcing and thus difficult to change (Lodge and Taber 2013). This leads to the implication that—because attitudes don't typically change—that individual-level attitudes have not changed so much as they have been replaced by new people with different attitudes.

This has led to a broad debate about the nature of who is causing public opinion to change over time. One camp has taken the Taber and Lodge theoretical framework and generally argued that most of the cultural shift in public opinion on gay rights over the last twenty years has been intergenerational where younger voters, socialized in a more tolerant environment, range from ambivalence to outright support for same-sex marriage (Farrell 2011, Lewis and Edwards 2011, Garretson 2014). This line of reasoning argues that most contextual effects are not motivating attitude change so much as reflecting the replacement of older, more socially intolerant people with more tolerant younger age cohorts.

However, we know that differences in the kinds of frames that people use exist within cohorts and across sub-groups so that people cannot be completely immune to attitude change (Andersen and Fetner 2008, Lewis and Edwards 2011). We know that some elderly people support same-sex marriage while they previously did not (e.g. Democratic members of the Senate). Some individuals within cohorts changed frames

faster than others while many never changed at all. Anecdotally, practically everyone knows someone who at one point didn't support same-sex marriage and now does.

Increased interpersonal contact—typically measured as regular interaction with someone perceived to be gay or lesbian—in observational studies (Lewis 2011) and in field experiments (Broockman and Kalla 2016, Harrison and Michelson 2017) has been shown to affect changes in expressed attitudes over time. The moderating effects of contact have been shown to occur even when contact is mediated through mass media (e.g. television and movies) (Riggle, Ellis et al. 1996, Garretson 2014). These effects have been shown as reasonably consistent within meta-analysis so that we are fairly certain that contact does matter (Smith, Axelton et al. 2009). It does however have varying effects based on personal characteristics (Skipworth, Garner et al. 2010).

### ***The Effects of Context on Attitude Change***

Many personal characteristics interact to create a personal predisposition towards an issue like same-sex marriage but dispositional characteristics do not automatically determine attitudes. Attitudes are structured and activated by a person's characteristics, social network, culture, and the climate of opinion in which they live because considerations are often placed in people's minds and links across ideas and concepts are often forged by their environment. Political context moderates the relationship between personal predispositions toward attitudes and a person's eventual attitude by altering the mix of considerations that are activated. This means that as that context changes so might a person's attitudes.

A person might be naturally predisposed to support gay rights issues because they are liberal, highly educated, and religiously agnostic. People in a religious and



conservative state will be constantly primed with religious information from politicians, the news, and regular discussion. In a highly homophobic area where public opinion strongly points in the other direction they may feel pressure against their natural inclinations. Both these pressures and the natural predisposition with which they fight are based on sets of considerations that are being used to build an attitude. Both context and personal predispositions work similarly to influence on attitude formation by altering the probability that a given set of considerations will be used to create an attitude.

We know from a significant body of experimental work that it is possible to change people's attitudes through media and by subtle priming and framing effects. Decades of research on survey manipulation that it is possible to prompt people to give a variety of conflicting attitudes (Zaller and Feldman 1992). It is possible to change people's minds in controlled settings by exposure to different types of media (Chong and Druckman 2007) and if elites are willing to fight over an issue (Chong and Druckman 2013, Druckman, Peterson et al. 2013).

People might also simply change their minds because new considerations overwhelm their existing predispositions and attitudes. We have significant evidence within psychology and political science that it is possible to change attitudes on gay rights through changes in an environment. Research shows that support for gay rights ballot initiatives changes depending on the location within which a voter casts their ballot. If the ballot is cast in a church then gay rights fair worse (Rutchick 2010).

Contact with gays, lesbians, and transgendered individuals have been shown to lead to changes in attitudes on LGBT policies (Smith, Axelton et al. 2009, Lewis 2011, Broockman and Kalla 2016). People generally express more support for LGBT policies

and more social tolerance for homosexuality if they know or have interactions with gays and lesbians. These effects have been shown to vary based on personal characteristics so that some people are more likely to be influenced by contact than others (Skipworth, Garner et al. 2010) and the effects of contact can be weakened or magnified by one's social network (Merino 2013) and identity (Harrison and Michelson 2017).

The climate of opinion is thought to influence people in a few ways through distinct, but related causal mechanisms. The climate of opinion structures the kinds of leadership cues that people receive, the ways in which they view issues and ideas as related, and the types of interactions they have with their social networks where the media, elite leadership, and social networks all work as mediators. The political and cultural environment helps us to structure our understanding of how political and social concepts are related (Converse 1964, Goren 2012, Noel 2014). By framing issues like gay rights as related to particular sets of considerations, or by subsequently priming those considerations for evaluations, the information environment moderates the relationship between a person's predispositions and their attitudes. In this way, the environment can change people's attitudes and the consistency of those attitudes over time.

I argue that the climate of opinion on homosexuality influences attitudes on same-sex marriage in such a way that a change in climate is likely to correspond to a change in attitudes in a similar direction. In other words, if a state becomes more socially tolerant towards gay people over time then people within that state should register correspondingly positive changes in their levels of support for issues like same-sex marriage. People should feel pressure to change their views thanks to new and additional sets of considerations coming into play.

H1: Support for same-sex marriage will increase among respondents who live in states that have seen increases in social tolerance toward homosexuality

The theoretical expectations behind Hypothesis 1 are relatively straightforward but the issue is complicated by the fact that a significant body of literature argues that once people have political attitudes they tend to react to contradictory considerations in one of two ways. Taber and Lodge (2013) argue that people will actively reason against this new information and double down if they care about the issue in question. Their views will become hardened and people will be polarized over the issue. If that is the case, then it is to be expected that people who are largely neutral or slightly positive on same-sex marriage will become more supportive and those opposed will become more so.

H2: Opposition for same-sex marriage will grow stronger among respondents who live in states that have seen increases in social tolerance toward homosexuality

Large scale environmental influence from shifts in the climate of opinion should matter a great deal in understanding attitude change but it is clearly not the only way that context matters. Decades of research on contact have shown that regular interactions with minority groups lead to increased social tolerance. This has been studied quite a lot for gays and lesbians and LTBT policy attitudes especially. It could very well be the case that increased contact with gays and lesbians explains the effects of climate of opinion at a network level. In other words, increases or decreases in the level of conversation with gays and lesbians could lead to increased or decreased support for same-sex marriage.

H3: Increased regular conversation with gays and lesbians will lead to increased support for same-sex marriage.

As with Hypothesis 2 it is possible—though presumably less likely given existing literature—that people who hold negative views toward homosexuality and same-sex marriage could react against regular conversation and growing even less supportive. This is because people have a degree of control over their immediate social network and with whom they have contact that does not exist for their aggregate context. However, people do not have absolute control over the people with whom they must have regular contact. People from work or home are difficult to avoid.

H4: Opposition to same-sex marriage will grow stronger among respondents who have increased conversation with gays and lesbians.

Each of these four hypotheses offers differing tests based on the two underlying sets of theoretical expectations. Either individuals change their attitudes on same-sex marriage as a (partial) function of changes in their environment or they do not. Here I define environment broadly to include both network interactions—in interpersonal contact—and the climate of opinion—in the aggregate level of homophobia. While it is important to note that direct causal claims are inherently difficult, the fact that these hypotheses can be tested directly on panel data allows us to make stronger inferences than much of the past research.

Some researchers have looked to cross-sectional comparisons of people within different local or state environments to show variability in attitudes because of physical location (see chapter 4 of this dissertation, for instance.). These attempts to leverage national and subnational variation to show contextual effects are useful and often

compelling but cannot effectively segregate individual-level attitude change from other factors that influence population-level attitude change. These studies typically cannot account for people's varying reactions to their environment –e.g. people may simply move to a new community when they become out of step with their old one. Existing research has had a difficult time separating out these different causal mechanisms because most work has been cross-sectional while the mechanisms involved are often more about individual attitude change. Disentangling these dynamic responses from static cross-sectional surveys is inherently difficult and would require better survey instruments than researchers typically have.<sup>40</sup>

Researchers typically look at aggregate effects of change over time (i.e. Brewer 2008) using ANES or GSS cross-sections at different points in time to imply individual-level change. However, cross-sectional and rolling cross-section studies have difficulty confirming attitude change and directly testing its mechanisms because attitude change is inherently a dynamic process. Newer work on LGBT politics has looked at individuals over time in (field) experimental settings but this is still the exception rather than the rule (Broockman and Kalla 2016). To test the influence of context and the climate of opinion on attitude change we must move beyond cross-sections to actual panels of the same individuals asked identical questions at more than one point in time. measured at multiple times. By leveraging panel surveys, it is possible to get a more direct test of the impact of a changing environment on attitudes.

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<sup>40</sup> At a minimum, it would require surveys that asked people about their previously held views on questions like same-sex marriage, what (if any) evolution they have undergone, and the factors that might have influenced that evolution. Given the unreliability of people's abilities to explain and understand why they hold the attitudes that they do—instead of creating a post-hoc justification for them—even this would be a poor substitute for repeated interview panel data that only attempts to measure someone's current state of mind. It is also difficult to establish causation with contextual effects when context operates at multiple potentially conflicting levels simultaneously.

### *Design, Data, and Analysis*

This analysis is primarily based on panel data from the Portraits of American Life Survey. This survey was fielded in 2006 and again in 2012 when 1,314 1214 people were re-interviewed of those people 1,214 were included in this analysis after accounting for missing covariates.<sup>41</sup> Support for same-sex marriage is based on agreement with the statement, “*Marriage should be between a man and a woman,*” that offers a five-point Likert scale of responses, from strongly disagree, somewhat disagree, neither, somewhat agree, to strongly agree, asked in both waves of the survey.

The dependent variable for this analysis is the change in support for same-sex marriage from 2006 to 2012. Respondents can move towards marriage support, away from marriage support, or register no change from their initial response meaning that the outcome is a trichotomous measure with no change as the reference category. About 52% of the respondents experienced no change in their position, while 31% became more favorable toward same-sex marriage, and, somewhat surprisingly, 17% became less supportive of same-sex marriage, indicating some tendency towards greater polarization on the issue. Descriptive statistics for the original measures in support for same-sex marriage from 2006 and 2012 and the change in support across those six years depending on a trichotomous or pentachotomous coding scheme.

To analyze attitude change, I used a generalized mixed multinomial logistic regression with the reference category as no change and the alternatives as either increased or decreased support for same-sex marriage. This model includes a state-level random intercept with correlated random effects across different response options

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<sup>41</sup> This is the sample size after listwise deletion from non-response from certain questions.

(Skrondal and Rabe-Hesketh 2003).<sup>42</sup> I ran several different simplified models—basic multinomial logistic regression with and without clustered errors,—as well as the model presented in Table 1. As the most general model (i.e. the one with the least assumptions) I present the mixed multinomial logit here however the others are shown in Appendix C.

My primary independent variable is the change in state climate of opinion on homosexuality from 2006 to 2012. Unlike in my other empirical chapters, state climate of opinion in each year was estimated from national polls on same-sex marriage instead of a measure on the social acceptability of homosexuality. This choice was made because of a lack of survey data on social tolerance for homosexuality in both 2006 and 2012 that included state-level identifiers.<sup>43</sup> I used multilevel regression and post-stratification to generate state-level estimates of support for same-sex marriage in 2006 and 2012 and took the difference in each state's estimated level of support (Lax and Phillips 2009, Kastellec, Lax et al. 2010).

While environmental factors like the climate of opinion are theoretically the most likely drivers of attitude change, individuals' predispositional characteristics are also important. In addition to climate of opinion, several other variables should matter. I include gender and race with the presumption that women could be more likely to change their attitudes faster than men and that whites might change their attitudes at different rates than other racial and ethnic groups.

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<sup>42</sup> Note that this is a slightly different model specification from that used in Chapter 4. I was able to include correlated random effects in this analysis which helps to reduce the underlying assumption that the response categories are effectively independent of one another. In practice this is a weak assumption however the model presented here is slightly more robust because of it.

<sup>43</sup> Alternative measures with different survey instruments were tested using General Social Survey and National American Election Study data and showed negligible substantive differences. The measure based on support for same-sex marriage was retained because it allowed for more state-level estimates given survey sample design.

One important complication with looking at the change in attitudes toward same-sex marriage over such a long period of time is that other factors can change as well. People can become more educated. They can change in their religious or partisan views. They can change in the amount of contact they have with gays and lesbians. All of these factors can change the types of considerations that people might bring to bear in evaluating same-sex marriage. To account for these possible drivers of attitude change, I also included the amount of change in these variables that people experienced over the six-year period.

I use a nominal measure of change in partisanship strength over time coded as no change, conservative (Republican) change, or liberal (Democratic) change that is similar to the structure of my dependent variable. This measure is based on differences in a standard seven-point partisanship scale at both time periods. I created a similar variable to measure change in religious conservatism. I use a dichotomous measure of education change (increased or not) given that formal education cannot decrease over time. I also used a three-category measure assessing how regularly respondents had conversations with gays and lesbians, coded as decreased, no change, or increased.

In addition to these substantive variables, I also included controls designed to capture floor and ceiling effects for respondents who gave the highest or lowest possible responses to the same-sex marriage support question in 2006. Including these controls helps to differentiate between people who choose not to change their position from those who cannot change their position due to the extremity of their initial position. I have included versions of the model with and without such controls for comparison in Table 1.



Findings

Table 5.1: Change in Support for Same-Sex Marriage

|  | Model A             |                     | Model B                |                        |
|--|---------------------|---------------------|------------------------|------------------------|
|  | Negative            | Positive            | Negative               | Positive               |
| Female   | 0.087<br>(0.179)    | -0.029<br>(0.151)   | 0.476*<br>(0.211)      | -0.149<br>(0.167)      |
| Race (Base is White)                           |                     |                     |                        |                        |
| Black  | 0.423*<br>(0.203)   | 0.085<br>(0.179)    | 1.151**<br>(0.261)     | -0.076<br>(0.196)      |
| Hispanic                                       | 0.171<br>(0.230)    | -0.006<br>(0.194)   | 0.562*<br>(0.268)      | -0.178<br>(0.213)      |
| Asian  | -0.471<br>(0.353)   | 0.001<br>(0.277)    | -1.010*<br>(0.393)     | 0.070<br>(0.297)       |
| Other  | 1.629<br>(0.930)    | 0.659<br>(0.937)    | 2.414*<br>(1.193)      | 0.369<br>(0.984)       |
| Change in Education                            | 0.167<br>(0.236)    | -0.127<br>(0.185)   | 0.282<br>(0.271)       | -0.292<br>(0.208)      |
| Change in Religious Conservatism               |                     |                     |                        |                        |
| Liberal Change                                 | 0.006<br>(0.202)    | 0.534**<br>(0.165)  | -0.366<br>(0.242)      | 0.571**<br>(0.183)     |
| Conservative Change                            | -0.027<br>(0.195)   | -0.223<br>(0.168)   | 0.146<br>(0.230)       | -0.436*<br>(0.185)     |
| Change in Party Support                        |                     |                     |                        |                        |
| Conservative (Republican) Change               | 0.157<br>(0.213)    | 0.030<br>(0.176)    | 0.067<br>(0.255)       | 0.048<br>(0.192)       |
| Liberal (Democratic) Change                    | 0.291<br>(0.187)    | -0.128<br>(0.161)   | -0.000<br>(0.219)      | 0.012<br>(0.177)       |
| Change in Regular Interactions with Gay People |                     |                     |                        |                        |
| More Conversation                              | 0.685**<br>(0.213)  | 0.380*<br>(0.170)   | 0.369<br>(0.253)       | 0.428*<br>(0.184)      |
| Less Conversation                              | 0.403<br>(0.210)    | -0.095<br>(0.168)   | 0.076<br>(0.245)       | 0.030<br>(0.185)       |
| State-Level Decrease in Homophobia             | -0.012<br>(0.023)   | 0.085**<br>(0.019)  | -0.151**<br>(0.028)    | 0.138**<br>(0.023)     |
| Low Early Opposition to SSM                    |                     |                     | 0.055<br>(0.205)       | -21.278<br>(2,144.483) |
| High Early Opposition to SSM                   |                     |                     | -20.977<br>(1,590.634) | -0.813**<br>(0.172)    |
| Constant                                       | -1.965**<br>(0.543) | -1.317**<br>(0.438) | 0.066<br>(0.652)       | -0.504<br>(0.506)      |
| Random Effects Components                      |                     |                     |                        |                        |
| Random Intercept on Negative Change            | 1.000<br>(0.000)    |                     | 1.000<br>(0.000)       |                        |
| Random Intercept on Positive Change            |                     | 1.000<br>(0.000)    |                        | 1.000<br>(0.000)       |
| Random Effect Variance (Negative)              | 0.001**<br>(0.000)  |                     | 0.007*<br>(0.003)      |                        |
| Random Effect Variance (Positive)              |                     | 0.000**<br>(0.000)  |                        | 0.001**<br>(0.000)     |
| Covariance of Random Effects                   |                     | -0.001**<br>(0.000) |                        | 0.001**<br>(0.000)     |
| Observations                                   | 1,214               | 1,214               | 1,214                  | 1,214                  |

This table shows results for different model specifications for individual-level change in attitudes on same-sex marriage. Dependent variable is a trichotomous measure of attitude change. The options are: A) No change from 2006-2012 --the base category, B) Becoming less supportive of same-sex marriage C), Becoming more supportive of same-sex marriage. Reference categories for all change variables are "no change". Specification 1 -- in gray-- is a base model while specification 2 --in white-- includes control variables for past level of support on the boundary of the measure to control for floor and ceiling effects. Low early opposition to same-sex marriage in 2006 makes it impossible to become more negative while high early opposition makes it impossible to become more positive. These variables help to regularize the model. The model is random intercept multinomial logit with correlated random effects. The random intercepts are constrained to be 1 to allow for a covariance model of the intercepts across both response options and different variances on the random effects for each response. Alternative specifications of the variance covariance and random effects structures can be seen in the Appendix for Table A.

The results in Table 5.1 show that support for my hypotheses varies across model specification. Model A shows results without controls for floor and ceiling effects, and Model B includes these controls. From a technical standpoint, Model B is strongly preferred because the floor and ceiling variables help to regularize the effects of other variables. However, because this specification is unusual and I have no direct citation to justify it, Model A is included in the Table for comparison.

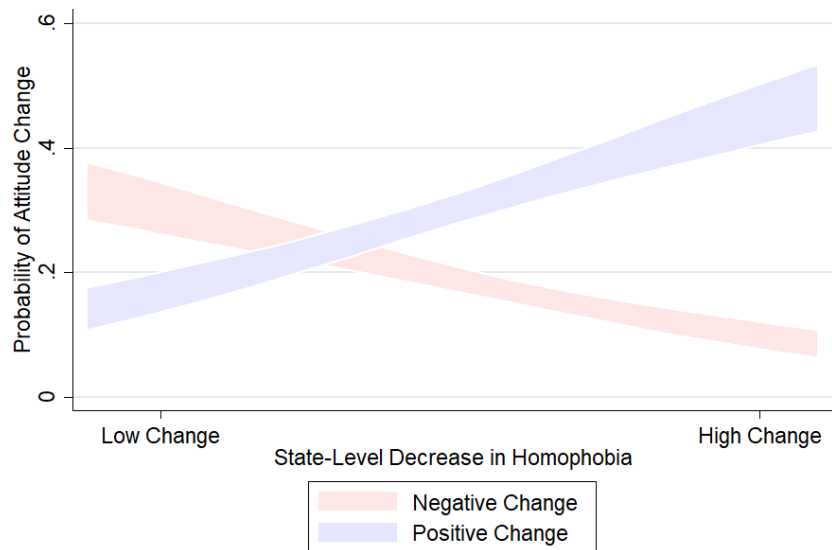
For both the equation predicting decreased support and that predicting increased support the change in the climate of opinion is statistically significant and substantively important. Living in a state that has seen a steeper rise in support of same-sex marriage appears to correlate with higher individual-level support for same-sex marriage over time while living in a state with a lower rate of improvement leads to more negative views, thus confirming Hypothesis 1. The magnitude of the effect for Model B is almost twice that compared to Model A, but both models show statistically significant increases in the probability of a positive change when an individual's state climate of opinion also becomes more supportive of same-sex marriage.

Results are less supportive of Hypothesis 2, however. Both Models A and B show a that an increasingly tolerant state climate is associated with a reduced probability of a negative shift—i.e., people living in increasingly tolerant states are less likely to become less supportive of same-sex marriage than similar people living in states that changed less. This means there is no support for Hypothesis 2: opposition for same-sex marriage did not grow stronger for those living in states with increased social tolerance for homosexuality. In other words, people are not rejecting more positive considerations and

doubling down on their lack of support as we might expect from a motivated reasoning argument.

Figure 5.1 shows the marginal effects of a shift in state level homophobia at the 5<sup>th</sup> and 95<sup>th</sup> percentiles of change in climate of opinion on the probability of both a positive and a negative individual-level change in support for same-sex marriage calculated from Model B. We can see that the probability of declining support for same-sex marriage (i.e., a negative change) is greatest in states with the with the worst improvement in their climate of opinion and least in states with the highest declines in homophobia. The inverse is true when explaining increasing (i.e., positive change in) individual-level support for same-sex marriage. Living in a state with greater declines in homophobia leads to larger increases in support for marriage at the individual-level. Moving across the range of the change in state homophobia scale accounts for a nearly 25% shift in the probability is of increasing support for same-sex marriage—a massive shift by any standard.

Figure 5.1: Effects of Decrease in Homophobia on Attitude Change



Both models consistently support Hypothesis 3: An increase in conversations with LGB individuals is associated with an increase in support for same-sex marriage. The substantive effects of increased conversation are also relatively close in both Models A and B. Reductions in conversation, on the other hand, do not affect support for same-sex marriage in any of the models. Support for Hypothesis 4, which predicts the opposite effects of increased conversations with gays and lesbians, is mixed at best, with some support in Model A, but none for Model B. Given the stronger statistical justification for Model B over Model A, I am inclined to be skeptical of support for Hypothesis 4.

### ***Discussion and Conclusion***

It is undeniable that there have been massive changes in public opinion on support for gay rights generally and marriage specifically within the United States over the last two decades. The exact nature of those changes and the underlying mechanisms behind them have been up for heavy debate among public opinion scholars. Evidence above seems to push for some acceptance of the notion that individual-level attitude change has occurred on the question of same-sex marriage. By looking at panel re-interview data this finding becomes incontrovertible so long as we view this survey as generalizable to the larger population. Despite the strong theoretical reasons to believe people's attitudes remain fixed about important and highly salient issues this does not seem to be the case on marriage.

Further, it appears that changes in state climate of opinion are an important predictor for explaining individual-level changes in support. This implies that the kind of theoretical argument about shifting frames for gay rights articulated by Brewer (2003) operates over time within individuals as well as across cohorts. While this evidence

provides strong indications about individual-level attitude it is not proof positive that the climate of opinion or any other single contextual effect is the causal driver of attitude change. Aggregate changes in the state-climate of opinion likely represent a complex process of opinion leadership, a changing media environment, and changing standards of acceptable attitudes among likeminded people. While more work is needed to understand the exact causal mechanisms behind the apparent influence of climate of opinion on individual-level changes in support for same-sex marriage those individual-level attitudes *have* changed for some people.

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Appendix A:

Table A1: Countries Included in Analysis

| Country            | In Model | Original Sample |
|--------------------|----------|-----------------|
| Mexico             | 1,250    | 4,682           |
| Guatemala          | 993      | 4,540           |
| El Salvador        | 1,451    | 4,828           |
| Honduras           | 1,300    | 4,703           |
| Nicaragua          | 1,138    | 4,842           |
| Costa Rica         | 856      | 4,500           |
| Panama             | 1,138    | 4,608           |
| Colombia           | 1,149    | 4,500           |
| Ecuador            | 1,876    | 8,925           |
| Bolivia            | 2,197    | 9,029           |
| Peru               | 1,245    | 4,500           |
| Paraguay           | 1,047    | 3,833           |
| Chile              | 1,433    | 5,009           |
| Uruguay            | 1,311    | 4,200           |
| Brazil             | 1,674    | 5,193           |
| Venezuela          | 1,386    | 4,510           |
| Argentina          | 973      | 2,897           |
| Dominican Republic | 1,131    | 4,523           |

Table A shows the specific countries included in the analyses presented, their original sample sizes, and their final sample sizes. Missing countries include the United States and Canada due to missingness on key religiosity measures. Robustness tests omitting these measures and including the United States and Canada show similar results for hypotheses 1 & 2.

Appendix B:

Table B1

| <b>Variable Name</b>                | <b>Coding</b>  | <b>Survey Instrument</b>  |
|-------------------------------------|--|---|
| Climate of Opinion                  | Country mean of individual responses 1-10  | How Justifiable is Homosexuality?   |
| Female                              | Male or Female 0-1   |   |
| Education                           | Continuous: 0 None, 1 Primary, 2 Secondary, 3 Higher   |   |
| Denomination                        | Referenced against Catholic: Mainline, Evangelical, Mormon, Athiest/Unaffiliated, Other        |   |
| Religious Service Attendance        | Coninuous: 1 > once per week, 2 weekly, 3 monthly, 4 once or twice a year, 5 never             |   |
| Importance of Religion              | Continuous: 1 Very Important, 2 Rather Important, 3 Not Very Important, 4 Not at all Important |   |
| Urban                               | 0 Rural, 1 Urban   |   |
| Population Size                     | Continuous: 1 Rural, 2 Small City, 3, Medium City, 4 Large City, 5, Metro Area                 |   |
| Attend Meetings of Religious Groups | Continuous: 1 Weekly, 2 Once or Twice a Month, 3 Once or Twice a Year, 4 Never                 |   |
| Age                                 | 1 16-25, 2 26-35, 3 36-45, 4 46-55, 5 56-65, 6 66+   |   |
| Ideology/Party (Right to Left)      | Right to Left on a 1-10 scale  | According to the meaning that the terms "left" and "right" have for you, and thinking of your own political leanings, where would you place yourself on this scale? |

## Appendix C

Table C1: Change in Support for Same-Sex Marriage in 3 Categories

|  | Multinomial Logit   |                     |                      |                        | Multinomial Logit w Clustered Hubert-White<br>Cluster Robust Errors |                     |                      |                      |
|--|---------------------|---------------------|----------------------|------------------------|---|---------------------|----------------------|----------------------|
|  | Model 1a            |                     | Model 1b             |                        | Model 2a  |                     | Model 2b             |                      |
|  | Negative            | Positive            | Negative             | Positive               | Negative  | Positive            | Negative             | Positive             |
| Female   | 0.088<br>(0.179)    | -0.031<br>(0.151)   | 0.475*<br>(0.211)    | -0.149<br>(0.167)      | 0.088<br>(0.192)  | -0.031<br>(0.141)   | 0.475**<br>(0.167)   | -0.149<br>(0.171)    |
| Race (Base is White)                                 |                     |                     |                      |                        |   |                     |                      |                      |
| Black  | 0.424*<br>(0.203)   | 0.084<br>(0.179)    | 1.149**<br>(0.260)   | -0.077<br>(0.196)      | 0.424<br>(0.233)  | 0.084<br>(0.189)    | 1.149**<br>(0.209)   | -0.077<br>(0.195)    |
| Hispanic   | 0.170<br>(0.230)    | -0.005<br>(0.194)   | 0.557*<br>(0.268)    | -0.178<br>(0.213)      | 0.170<br>(0.285)  | -0.005<br>(0.188)   | 0.557<br>(0.307)     | -0.178<br>(0.183)    |
| Asian  | -0.472<br>(0.352)   | 0.001<br>(0.277)    | -1.021**<br>(0.392)  | 0.068<br>(0.297)       | -0.472<br>(0.258)   | 0.001<br>(0.315)    | -1.021**<br>(0.340)  | 0.068<br>(0.350)     |
| Other  | 1.630<br>(0.930)    | 0.657<br>(0.937)    | 2.403*<br>(1.190)    | 0.369<br>(0.984)       | 1.630*<br>(0.732)   | 0.657<br>(0.758)    | 2.403*<br>(1.209)    | 0.369<br>(0.928)     |
| Change in Education                                  | 0.168<br>(0.236)    | -0.128<br>(0.185)   | 0.285<br>(0.271)     | -0.292<br>(0.208)      | 0.168<br>(0.218)  | -0.128<br>(0.146)   | 0.285<br>(0.288)     | -0.292<br>(0.180)    |
| Change in Religious Conservatism (Base is No Change) |                     |                     |                      |                        |   |                     |                      |                      |
| Liberal Change                                       | 0.006<br>(0.202)    | 0.534**<br>(0.165)  | -0.364<br>(0.242)    | 0.571**<br>(0.183)     | 0.006<br>(0.160)  | 0.534**<br>(0.158)  | -0.364*<br>(0.177)   | 0.571**<br>(0.177)   |
| Conservative Change                                  | -0.027<br>(0.195)   | -0.223<br>(0.168)   | 0.147<br>(0.229)     | -0.436*<br>(0.185)     | -0.027<br>(0.214)   | -0.223<br>(0.198)   | 0.147<br>(0.195)     | -0.436**<br>(0.151)  |
| Change in Party Support (Base is No Change)          |                     |                     |                      |                        |   |                     |                      |                      |
| Conservative (Republican) Change                     | 0.156<br>(0.213)    | 0.030<br>(0.176)    | 0.068<br>(0.254)     | 0.048<br>(0.192)       | 0.156<br>(0.242)  | 0.030<br>(0.156)    | 0.068<br>(0.195)     | 0.048<br>(0.134)     |
| Liberal (Democratic) Change                          | 0.290<br>(0.187)    | -0.128<br>(0.161)   | 0.002<br>(0.218)     | 0.012<br>(0.177)       | 0.290<br>(0.169)  | -0.128<br>(0.148)   | 0.002<br>(0.212)     | 0.012<br>(0.181)     |
| Change in Regular Interactions with Gay People       |                     |                     |                      |                        |   |                     |                      |                      |
| More Conversation                                    | 0.685**<br>(0.213)  | 0.381*<br>(0.170)   | 0.370<br>(0.253)     | 0.429*<br>(0.184)      | 0.685**<br>(0.210)  | 0.381*<br>(0.157)   | 0.370<br>(0.238)     | 0.429**<br>(0.163)   |
| Less Conversation                                    | 0.403<br>(0.210)    | -0.095<br>(0.168)   | 0.078<br>(0.245)     | 0.030<br>(0.184)       | 0.403<br>(0.245)  | -0.095<br>(0.166)   | 0.078<br>(0.269)     | 0.030<br>(0.158)     |
| State-Level Decrease in Homophobia                   | -0.012<br>(0.023)   | 0.085**<br>(0.019)  | -0.151**<br>(0.028)  | 0.138**<br>(0.023)     | -0.012<br>(0.019)   | 0.085**<br>(0.018)  | -0.151**<br>(0.021)  | 0.138**<br>(0.014)   |
| Low Early Opposition to SSM                          |                     |                     | 0.053<br>(0.205)     | -20.215<br>(1,260.316) |   |                     | 0.053<br>(0.240)     | -20.215**<br>(0.356) |
| High Early Opposition to SSM                         |                     |                     | -19.916<br>(936.454) | -0.812**<br>(0.172)    |   |                     | -19.916**<br>(0.295) | -0.812**<br>(0.163)  |
| Constant   | -1.967**<br>(0.543) | -1.315**<br>(0.437) | 0.064<br>(0.650)     | -0.503<br>(0.506)      | -1.967**<br>(0.538)   | -1.315**<br>(0.357) | 0.064<br>(0.597)     | -0.503<br>(0.396)    |
| Observations   | 1,214               | 1,214               | 1,214                | 1,214                  | 1,214   | 1,214               | 1,214                | 1,214                |

This table shows results for different model specifications for individual-level change in attitudes on same-sex marriage. Dependent variable is a trichotomous measure of attitude change. The response options are: A) No change from 2006-2012 -- the base category, B) Becoming less supportive of same-sex marriage C), Becoming more supportive of same-sex marriage. Four basic models were run with two specifications each. Specification 1 -- in gray-- is a base model while specification 2 -- in white-- includes control variables for past level of support on the boundary of the measure to control for floor and ceiling effects. Low early opposition to same-sex marriage in 2006 makes it impossible to become more negative while high early opposition makes it impossible to become more positive. These variables help to regularize the model.



Table C2: Change in Support for Same-Sex Marriage in 3 Categories

|  | Random Intercept Multinomial Logit |                     |                        |                        | Random Intercept Multinomial Logit with Correlated Random Effects |                     |                        |                        |
|--|------------------------------------|---------------------|------------------------|------------------------|---|---------------------|------------------------|------------------------|
|  | Model 3a                           |                     | Model 3b               |                        | Model 4a  |                     | Model 4b               |                        |
|  | Negative                           | Positive            | Negative               | Positive               | Negative  | Positive            | Negative               | Positive               |
| Female   | 0.088<br>(0.180)                   | -0.030<br>(0.152)   | 0.476*<br>(0.212)      | -0.149<br>(0.167)      | 0.087<br>(0.179)  | -0.029<br>(0.151)   | 0.476*<br>(0.211)      | -0.149<br>(0.167)      |
| Race (Base is White)                                 |                                    |                     |                        |                        |   |                     |                        |                        |
| Black  | 0.424*<br>(0.204)                  | 0.085<br>(0.179)    | 1.150**<br>(0.261)     | -0.076<br>(0.196)      | 0.423*<br>(0.203)   | 0.085<br>(0.179)    | 1.151**<br>(0.261)     | -0.076<br>(0.196)      |
| Hispanic   | 0.171<br>(0.231)                   | -0.006<br>(0.194)   | 0.561*<br>(0.272)      | -0.178<br>(0.213)      | 0.171<br>(0.230)  | -0.006<br>(0.194)   | 0.562*<br>(0.268)      | -0.178<br>(0.213)      |
| Asian  | -0.471<br>(0.353)                  | 0.001<br>(0.277)    | -1.013*<br>(0.403)     | 0.069<br>(0.297)       | -0.471<br>(0.353)   | 0.001<br>(0.277)    | -1.010*<br>(0.393)     | 0.070<br>(0.297)       |
| Other  | 1.630<br>(0.930)                   | 0.658<br>(0.938)    | 2.411*<br>(1.196)      | 0.369<br>(0.984)       | 1.629<br>(0.930)  | 0.659<br>(0.937)    | 2.414*<br>(1.193)      | 0.369<br>(0.984)       |
| Change in Education                                  | 0.167<br>(0.236)                   | -0.127<br>(0.185)   | 0.283<br>(0.272)       | -0.292<br>(0.208)      | 0.167<br>(0.236)  | -0.127<br>(0.185)   | 0.282<br>(0.271)       | -0.292<br>(0.208)      |
| Change in Religious Conservatism (Base is No Change) |                                    |                     |                        |                        |   |                     |                        |                        |
| Liberal Change                                       | 0.006<br>(0.203)                   | 0.534**<br>(0.165)  | -0.366<br>(0.243)      | 0.571**<br>(0.183)     | 0.006<br>(0.202)  | 0.534**<br>(0.165)  | -0.366<br>(0.242)      | 0.571**<br>(0.183)     |
| Conservative Change                                  | -0.027<br>(0.195)                  | -0.223<br>(0.168)   | 0.146<br>(0.230)       | -0.436*<br>(0.185)     | -0.027<br>(0.195)   | -0.223<br>(0.168)   | 0.146<br>(0.230)       | -0.436*<br>(0.185)     |
| Change in Party Support (Base is No Change)          |                                    |                     |                        |                        |   |                     |                        |                        |
| Conservative (Republican) Change                     | 0.157<br>(0.214)                   | 0.030<br>(0.176)    | 0.067<br>(0.255)       | 0.048<br>(0.192)       | 0.157<br>(0.213)  | 0.030<br>(0.176)    | 0.067<br>(0.255)       | 0.048<br>(0.192)       |
| Liberal (Democratic) Change                          | 0.290<br>(0.188)                   | -0.128<br>(0.161)   | 0.000<br>(0.219)       | 0.012<br>(0.177)       | 0.291<br>(0.187)  | -0.128<br>(0.161)   | -0.000<br>(0.219)      | 0.012<br>(0.177)       |
| Change in Regular Interactions with Gay People       |                                    |                     |                        |                        |   |                     |                        |                        |
| More Conversation                                    | 0.685**<br>(0.213)                 | 0.381*<br>(0.170)   | 0.369<br>(0.253)       | 0.429*<br>(0.184)      | 0.685**<br>(0.213)  | 0.380*<br>(0.170)   | 0.369<br>(0.253)       | 0.428*<br>(0.184)      |
| Less Conversation                                    | 0.403<br>(0.210)                   | -0.095<br>(0.168)   | 0.077<br>(0.246)       | 0.030<br>(0.185)       | 0.403<br>(0.210)  | -0.095<br>(0.168)   | 0.076<br>(0.245)       | 0.030<br>(0.185)       |
| State-Level Decrease in Homophobia                   | -0.012<br>(0.023)                  | 0.085**<br>(0.019)  | -0.151**<br>(0.028)    | 0.138**<br>(0.023)     | -0.012<br>(0.023)   | 0.085**<br>(0.019)  | -0.151**<br>(0.028)    | 0.138**<br>(0.023)     |
| Low Early Opposition to SSM                          |                                    |                     | 0.054<br>(0.206)       | -22.755<br>(4,487.654) |   |                     | 0.055<br>(0.205)       | -21.278<br>(2,144.483) |
| High Early Opposition to SSM                         |                                    |                     | -22.406<br>(3,250.539) | -0.813**<br>(0.172)    |   |                     | -20.977<br>(1,590.634) | -0.813**<br>(0.172)    |
| Constant   | -1.966**<br>(0.543)                | -1.316**<br>(0.439) | 0.065<br>(0.652)       | -0.504<br>(0.506)      | -1.965**<br>(0.543)   | -1.317**<br>(0.438) | 0.066<br>(0.652)       | -0.504<br>(0.506)      |
| <b>Random Effects Components</b>                     |                                    |                     |                        |                        |   |                     |                        |                        |
| Random Intercept on Negative Change                  | 1.000<br>(0.000)                   | -0.627<br>(11.498)  | 1.000<br>(0.000)       | 0.084<br>(1.247)       | 1.000<br>(0.000)  |                     | 1.000<br>(0.000)       |                        |
| Random Intercept on Positive Change                  |                                    |                     |                        |                        |   | 1.000<br>(0.000)    |                        | 1.000<br>(0.000)       |
| Random Effect Variance (Negative)                    | 0.001<br>(0.020)                   |                     | 0.005<br>(0.057)       |                        | 0.001**<br>(0.000)  |                     | 0.007*<br>(0.003)      |                        |
| Random Effect Variance (Positive)                    |                                    |                     |                        |                        |   | 0.000**<br>(0.000)  |                        | 0.001**<br>(0.000)     |
| Covariance of Random Effects                         |                                    |                     |                        |                        |   | -0.001**<br>(0.000) |                        | 0.001**<br>(0.000)     |
| Observations   | 1,214                              | 1,214               | 1,214                  | 1,214                  | 1,214   | 1,214               | 1,214                  | 1,214                  |

This table shows results for different model specifications for individual-level change in attitudes on same-sex marriage. Dependent variable is a trichotomous measure of attitude change. The options are: A) No change from 2006-2012 --the base category, B) Becoming less supportive of same-sex marriage C), Becoming more supportive of same-sex marriage. Four basic models were run with two specifications each. Specification 1 -- in gray-- is a base model while specification 2 --in white-- includes control variables for past level of support on the boundary of the measure to control for floor and ceiling effects. Low early opposition to same-sex marriage in 2006 makes it impossible to become more negative while high early opposition makes it impossible to become more positive. These variables help to regularize the model.

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## VITA

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### EDUCATION

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Fields: Political Science, History

### PUBLICATIONS

Bromley-Trujillo, Rebecca, J. S. Butler, John Poe, and Whitney Davis. "The Spreading of Innovation: State Adoptions of Energy and Climate Change Policy." *Review of Policy Research* 33. 5 (2016): 544-565.

Richard Fording and John Poe. "Policies Towards Minority Populations." Invited review essay to be included in *Oxford Handbook of State and Local Government*, Oxford University Press. 2014

Jeremiah Olson, Yu Ouyang, John Poe, Austin Trantham, and Richard W. Waterman "The Teleprompter Presidency: Comparing Obama's Campaign and Governing Rhetoric." *Social Science Quarterly* 93.5 (2012): 1402-1423.

### AWARDS

UK College of Arts and Sciences Outstanding Teaching Award (\$500)  
April 2015

Sidney Ulmer Award for Best Research Paper by a Graduate Student (\$100)  
April 2015

University of Kentucky Summer Methods Institute Award (\$4,500)  
ICPSR June-August 2012

UK Department of Political Science Research Grant (\$2,000)  
June 2014

University of Kentucky Travel Grants (\$2,900)  
April 2012, April 2013, April 2014, May 2014, August 2014, April 2015

State Politics & Policy Association Travel Grant (\$200).  
May 2014