

# Countries with Greater Gender Equality Have More Positive Attitudes and Laws Concerning Lesbians and Gay Men

P. J. Henry<sup>1</sup> · Geoffrey Wetherell<sup>2</sup>

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**Abstract** Social scientists have long discussed and empirically demonstrated how attitudes toward lesbians and gay men are determined in part by sexism and endorsement of gender roles, but only at the psychological level of analysis. We present data that considers these relationships at the cross-national level of analysis, using country-level measures of gender equality (the Gender Global Gap Index), aggregate measures of attitudes toward lesbians and gay men in a country, and a newly constructed measure of the progressiveness of sexual orientation laws. We show for the first time to our knowledge that countries that have the greatest gender equality also have (a) the most positive aggregate attitudes toward lesbians and gay men and (b) the strongest legislative protections for lesbians and gay men. These results hold even when controlling for plausible third variables such as a country's level of religiosity and its economic and political development, each with their own separate effects. We discuss the results within the context of the various forces that contribute to, and work against, ensuring more accepting attitudes of, and equal rights for, lesbians and gay men. In conclusion, to fully understand support for lesbians and gay men and the laws that protect

them, one should also consider how women are treated in a country.

**Keywords** Gender gap · Gender equality · Social equality · Sexual orientation · Civil rights

Traditional beliefs about gender are related to negative attitudes toward lesbians and gay men at the psychological level of analysis (Herek 1988; Kerns and Fine 1994; Kite and Deaux 1987; Kite and Whitley 1996), and for decades scholars have speculated that these psychological relationships extend to the legal and policy level (e.g., Koppelman 1994). However, this relationship is not known to have been demonstrated empirically. Cross-national data now are available that document both the aggregate levels of attitudes toward lesbians and gay men and the legislation passed in a country to protect or restrict their rights, and these can be compared with the progress in a country toward gender equality. The present analysis tests these relationships while ruling out plausible third variables that may drive the relationship.

Evidence at the psychological level of analysis links beliefs about gender to beliefs about lesbians and gay men. Gendered beliefs concern how men and women should conduct themselves, such that men should behave in strong, agentic ways, whereas women should behave in passive, communal ways (Eagly and Mladinic 1989; Williams and Best 1990). People often react negatively to those who violate these gender prescriptions (Rudman 1998; Rudman and Fairchild 2004). Lesbians and gay men violate gender prescriptions in at least two general ways. First, heterosexuality is an important component of gender-role beliefs (Deaux and Lewis 1984), particularly for men (Herek 1986). Second, gay men are viewed as adopting a range of feminine characteristics and lesbians masculine characteristics (Kite and Deaux 1987). These violations

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✉ P. J. Henry  
pj.henry@nyu.edu

Geoffrey Wetherell  
geoff.wetherell@valpo.edu

<sup>1</sup> Department of Psychology, New York University – Abu Dhabi, P.O. Box 903, New York, NY 10276, USA

<sup>2</sup> Department of Psychology, Valparaiso University, Valparaiso, IN, USA

of gender roles by lesbians and gay men bear out in studies which show that traditional beliefs about gender are associated with distaste for lesbians and gay men (Herek 1988; Kerns and Fine 1994; Kite and Whitley 1996) and individual-level opposition to court rulings that benefit lesbians and gay men (Law 1988).

For decades scholars have surmised that these psychological relationships extend to the societal level; for example, speculation exists that there is a relationship between gender equality and legislation that legalizes same-sex marriage (Koppelman 1994). However, there has been scant quantitative evidence to support this prediction. One cannot assume that the established psychological-level relationships between beliefs about gender and beliefs about sexual orientation will extend to the sociological level of analysis, as illustrated by the ecological fallacy (Robinson 1950), which is most notably exemplified by the finding that wealthy people in the United States tend to vote Republican but the wealthiest U.S. states tend to be Democratic. As concerns the present research, just because individuals link gender beliefs with attitudes toward lesbians and gay men does not automatically mean that national measures of treatment of women will link to national measures of treatment of lesbians and gay men. These links need to be tested.

There is some precedent showing that gender equality at the societal level of analysis is at least related to both individual- and aggregate-level attitudes toward women. For example, gender equality at the country level was related to lower levels of hostile and benevolent sexism at the aggregate level in analyses of convenience samples across 19 countries (Glick et al. 2000). These findings were replicated with more representative samples from 32 countries in the World Values Survey, showing a relationship between gender equality and lower aggregate hostile sexism endorsement (Napier et al. 2010). The relationship could also plausibly work in the other causal direction: In a longitudinal analysis of 57 countries from the World Values Survey, higher levels of aggregate hostile sexism predicted later increases in gender inequality at the country level (Brandt 2011).

We extend this past research to consider how gender equality in a country relates to other attitudes related to gender, notably attitudes toward lesbians and gay men. We predict that gender equality in a country will be positively related to both aggregate attitudes toward lesbians and gay men, as well as laws designed to protect them. However, what may seem like obvious hypotheses becomes more complicated by the fact that we do not believe that these relationships are merely the byproduct of other factors that would produce the same correlation spuriously. That is, we sought to rule out third variables that may be related to gender equality, aggregate attitudes toward lesbians and gay men, and sexual orientation laws.

One such factor is religiosity, which often strongly dictates gender roles as well as the proscription of same-sex romantic relationships. In particular Abrahamic religions proscribe same-sex sexual activity as is written in texts such as the Old Testament (Eskridge 2008), Christian law at various points in history (Greenberg and Brystry 1982), and the Koran, the Hadith, and later Islamic texts (Dunne 1990). Individuals' religiosity is predictive of both their gendered beliefs (Hawley 1994) and negative attitudes toward lesbians and gay men (Fisher et al. 1994; Herek 1988; Pharr 1988; Whitley 2009). Consequently we controlled for various measures of religiosity in a country.

We also assume that gender equality, attitudes toward gays and lesbians, and sexual orientation laws are not a coincidental byproduct of economic and political development, which may also affect both gender relations and the treatment of lesbians and gay men, particularly through education (Loftus 2001; Ohlander et al. 2005). A country's development is also a reflection of its general political progressiveness, which could be related to both gender gaps and sexual orientation laws.

## Method

The sample was composed of the 142 countries for which there were data available on (a) gender equality, (b) aggregate attitudes toward lesbians and gay men, and (c) our index of sexual orientation laws. All data used in our analyses (including coding of variables for each country) are available in supplementary online materials. As our measure of gender equality we used the Global Gender Gap Index (GGGI; Hausmann 2014) which catalogs differences between men and women in terms of health, economics, and politics, including differences in participation in the labor force, access to education, life expectancy, and parliamentary positions held. The index has a hypothetical range from 0 (perfect gender inequality) to 1 (perfect gender equality), but an actual range in our data set from .51 (Yemen) to .86 (Iceland).

We deliberately chose the Global Gender Gap Index over other measures of gender equality, such as the Gender Empowerment Measure (GEM), Gender Development Index (GDI), or Gender Inequality Index (GII). The GEM includes only information about percentage of parliamentary seats held by women; percentage of legislator, senior officials, and managers who are women; percentage of professional and technical workers who are women; and an estimate of the female-to-male ratio or earned income. The GGGI includes all of these as well as ratios of labor force participation, literacy rates, enrollment in primary, secondary, and tertiary education, sex ratios at birth, ratios of life expectancy, ratios of men-to-women in ministerial positions, and years with a male versus female head of state.

We also chose the GGGI over the GDI and the later GII because they are derived in part from measures of women that are not relative to men, such as measures of women's reproductive health that include rates at which women die during or shortly after giving birth and the prevalence of teenage pregnancies. Although these measures are very important for understanding the conditions of women in a region, they cannot be compared in any equivalent way to men. Thus, the GGGI is a more precise measure of differences between men and women in a country.

### Country-Level Attitudes

We expected gender equality in a country to be related to that country's aggregate attitudes toward lesbians and gay men. We created a six-item scale that is a combination of aggregate-level attitudes from a variety of sources. The first four items were drawn from surveys with the largest representation of countries on at least five continents as compiled and reported in Smith et al. (2014), of which the first two were drawn from a combination of the World Values Survey (WVS), European Values Survey (EVS), and Latinobarometer (LB) depending on the latest availability of the data. The majority of WVS/EVS/LB data were drawn from surveys in the years 2005–2009. The first was the percentage of people in a country's sample who indicated, among a number of behaviors, that "homosexuality" was "always justifiable." The second was the percentage of people in a country's sample who included "homosexuals" among groups of people "that you would not like to have as neighbors" (reverse coded). The third item was drawn from the 2013 Pew Global Attitudes Survey and was simply the percentage of people who agreed with the statement "Homosexuality should be accepted by society." The fourth item, taken from the 2008 International Social Survey Program (from 1998 if 2008 data were missing), asked "What about sexual relations between two adults of the same sex: is it always wrong, almost always wrong, wrong only sometimes, or not wrong at all?" A country's score on this item was computed by multiplying the percentage scoring "always wrong" by 1, the percentage scoring "almost always wrong" by 2.33, the percentage scoring "wrong only sometimes" by 3.67, and the percentage scoring "not wrong at all" by 5, to give a mean country score ranging from 1 to 5 wherein higher scores indicated greater acceptance of same-sex sexuality.

Our last two items were drawn from the International Lesbian Gay Bisexual Trans and Intersex Association (ILGA) surveys of representative samples of 53 countries on attitudes toward "LGBTI people" (Sabbadini et al. 2016). One item asked, "How would you feel if your neighbor were gay or lesbian?" A country's score was computed by multiplying the percentage indicating "very uncomfortable" by 1, "somewhat uncomfortable" by 3, and "no concerns" by 5, to give a mean country score ranging from 1 to 5 wherein higher scores

indicated greater comfort. A second item asked agreement with the statement "Being LGBTI should be a crime" (it is unclear how the phrase "LGBTI" may have been translated across the 53 countries). A country's score was computed by multiplying the percentage indicating "strongly agree" by 1, "somewhat agree" by 2, "neither" by 3, "somewhat disagree" by 4, and "strongly disagree" by 5, also resulting in a mean country score ranging from 1 to 5 wherein higher scores captured more supportive attitudes.

Most countries received a score on at least one of these six items. The items were transformed into  $z$ -scores before averaging the available items in a country to produce its score on attitudes toward lesbians and gay men. Despite the fact the items were conceptually different and were asked in different surveys by different organizations, the items scaled with good reliability (Cronbach's  $\alpha = .95$ ) for the 16 countries with scores on all six items. When considering the full sample of countries, the correlations between any two items ranged from  $r = .52$  ( $p < .001$ ) to  $r = .91$  ( $p < .001$ ), with a median correlation of  $r = .82$ .

### Index of Sexual Orientation Laws

The ILGA also documents laws regarding the rights of lesbian, gay, bisexual and transgender (LGBT) people in nearly every country in the world (Itaborahy and Zhu 2012, also summarized under the Wikipedia web page "LGBT rights by country or territory"). Seven types of laws have been documented that specifically concern same-sex relationships or those who identify as lesbian or gay, including (a) the legality of same-sex sexual activity for men, (b) the legality of same-sex sexual activity for women, (c) the legal recognition of same-sex relationships, (d) same-sex marriage rights, (e) same-sex adoption rights, (f) allowing gays to serve in the military, and (g) the presence of anti-discrimination laws. We assigned a value to each type of law (described in the following), and the values were transformed into  $z$ -scores and averaged to create the scale of sexual orientation laws that showed reliable consistency ( $\alpha = .91$ ).

#### *Legality of Same-Sex Sexual Activity*

We decided a priori that countries with complete restrictions on same-sex sexual relations for either gender would be coded 0, and countries with legal same-sex sexual relations were coded 1. We created two variables, one indicating the legality of male same-sex activity and one indicating the legality of female same-sex activity, because sometimes the laws changed depending on gender. For example, in Jamaica, men engaging in same-sex relations may be sentenced to up to 10 years in prison, but female same-sex relations are legal. Hence, for Jamaica male same-sex relations were coded 0 and female same-sex relations were coded 1. (Interestingly, in no

country was it true that same-sex sexual activity was illegal for women but legal for men.) For simplicity, we did not score countries based on the severity of the punishments nor the rate of convictions for illegal same-sex sexual activities.

### *Legal Recognition of Same-Sex Relationships*

The recognition of same-sex relationships is legal recognition of same-sex couples that does not constitute marriage (e.g., registered cohabitation, civil unions). Countries that fully recognize same-sex unions for legal purposes were coded as 1. Countries with limited or incomplete legal protection of partnerships were .5, as in the case in the United States where before *Obergefell v Hodges* same-sex unions were recognized in some regions (e.g., certain states and municipalities) but not in others. Countries with no legal recognition of same sex relationships were coded as 0. All countries that scored a 1 on the same-sex marriage variable (see the following) also automatically scored a 1 on the legal recognition of same-sex relationships.

### *Same-Sex Marriage*

We coded countries with no legal same-sex marriage either at the national level or within regions as 0, with regional same-sex marriage as .5 (e.g., states and municipalities in the United States before the recent *Obergefell v Hodges* Supreme Court ruling), and countries with legal same-sex marriage as 1.

### *Adoption by Lesbians and Gay Men*

We coded countries as 0 if they do not recognize the right of individual lesbians, gay men, or same-sex couples to adopt children, and .5 if they have restricted same sex adoption. For example, in the Philippines, adoption by same-sex couples is permitted for step-children only. We coded countries as 1 if they afford the unrestricted right to adopt to individual lesbians, gay men, or same-sex couples.

### *Military Service*

Countries not allowing lesbians and gay men to serve in the military were coded as 0. Countries allowing service under special circumstances were coded as .5. For example, in Belarus, gays are allowed in the military only during wartime. Countries that allow lesbians and gay men to serve openly in the military were coded as 1.

### *Anti-Discrimination Laws*

Countries without laws prohibiting discrimination against lesbians and gay men, such as hate-crime legislation and discrimination in the workplace, were coded as 0. Countries with laws providing protections in only some contexts (i.e., the

government sector) were coded as .5, and countries with comprehensive laws prohibiting discrimination against lesbians and gay men were coded as 1.

## **Controls**

There are a limitless number of controls one could include in such a regression model. We limited controls based on (a) multicollinearity concerns and (b) selection of those that posed genuine plausible third-variable explanations for the relationship between the gender gap and attitudes toward lesbians and gay men and/or sexual orientation laws, meaning that the controls needed to be related to these variables in some fashion. Specifically, we selected controls for the religiosity of a country, its political and economic development, and its region.

### *Religiosity Controls*

We selected several controls relevant to the religious composition and attitudes of a country: (a) percent of population identifying as Christian or Muslim, (b) importance of religion to the population, and (c) religious regulation. These controls are especially important for demonstrating that the relationship between gender equality and legalized protection of lesbians and gay men is not simply a byproduct of their relationship to the decreased importance of religion in a country.

To assess the effect of the religious composition of a country, we included measures of the percentage of each country in the dataset identifying as Christian or Muslim. These data were obtained from the 2012 Pew report on the global religious landscape (Hackett et al. 2012), which documents religious affiliations across the world. We did not include Judaism because of low variability: outside Israel, the proportion of Jews living in a country is uniformly low.

We assessed the average importance of religion to individuals across countries using a measure from the 2006–2008 Gallup Global Reports (also summarized under the RationalWiki web page “Importance of religion by country”). This report provides the percentage of people sampled in a particular country reporting that religion is important to them in their day-to-day life, with a theoretical range of 0 to 100. The actual range in our dataset was from 16.50 (Sweden) to 95.50 (Nigeria).

To capture the extent to which religious practice is regulated in each country, we combined measures of state regulation of religious practices and beliefs, the extent to which the government favors a specific religion or religious group, and the extent to which religious beliefs are socially regulated in the population (Grim and Finke 2006). We averaged these items into a single scale ( $\alpha = .79$ ) with a possible range of 0 to 10, where 0 indicates no regulation and 10 the strongest religious regulation. The actual range was 0 (Bahamas, Barbados) to 9.77 (Saudi Arabia).

### *Economic and Political Development*

We also included several controls of indices of economic and political development in a country: (a) human development index, (b) economic inequality, and (c) democratic political culture. These controls ensure that the relationship between gender equality and reactions to lesbians and gay men is not simply a function of the general progressiveness of a country. There are a number of indices from which we selected. The following are some of the most commonly used measures that did not overlap too much.

The development of a country was measured by the human development index (HDI) from the United Nation's International Human Development Report (Malik 2014). The HDI combines measures of education using mean and expected years of schooling, longevity using average life expectancy, and quality of life using gross national income per capita. The scale ranges from a possible 0 to 1, with Chad ranking lowest in terms of development (.37) and Norway ranking first (.94).

The equality of income distributions in a country was measured using the Gini index (Gini 1921), which could plausibly be a reflection of general approaches toward inequality in a region including those affecting women and sexual minorities. The Gini ranges theoretically from 0 (perfect income equality) to 1 (perfect income inequality), with an actual range in our sample from 23.7 (Slovenia) to Lesotho (63.2). Finally, the measure of democratic political culture was taken from the Economist Intelligence Unit (Kekic 2007) and theoretically spans from 0 to 10, with higher numbers indicating a more democratic political culture. This measure is composed of a number of ratings made by economists and responses culled from the World Values Survey. The components of a democratic political culture include: democratic social consensus and desire for democratic leadership; opposition to military rule and to a government run solely by experts (e.g. "technocrats"); belief that democracies maintain order, are good for the economy, run well, and are the best form of government; and general popular support for democracy and a strong separation between church and state. In our dataset this index ranged from 5 (Yemen) to 10 (Sweden).

### *Region*

Our last set of controls concerned the region in the world where the country is situated. Neighboring countries tend to be similar, which may lead to violations of the assumption of independence of data points (Kuppens and Pollet 2014). To manage this problem, we controlled for country region with a five-category code provided by the United Nations (2013) website, such that 1 = Africa, 2 = Americas, 3 = Asia, 4 = Europe, and 5 = Oceania. This region code was broken into four dummy codes that were simultaneously entered into

the model to fully account for the data. Each dummy code gives the value "1" to countries in the region, and "0" to all other countries in the world. The dummy codes include Africa, the Americas, Asia, and Oceania, and thus compare these regions to Europe (the omitted variable and thus the comparison group). For example, a negative relationship between the "Region: Africa" variable and the index of sexual orientation laws would indicate that African countries have a lower mean score on sexual orientation laws compared to European countries.

## **Results**

Table 1 shows the correlations between our study variables. Most importantly for our purposes, there was a strong negative relationship between the Global Gender Gap Index and the aggregate measure of attitudes toward lesbians and gay men ( $r = .72, p < .001$ ) and the index of sexual orientation laws ( $r = .61, p < .001$ ). These findings are illustrated in the scatterplots shown in Figs. 1 and 2. We kept Fig. 2 in the original sexual orientation laws metric (as opposed to its  $z$ -score transformation used in the statistical analyses) for ease of interpretation. To match Fig. 2, we also recomputed the score of attitudes toward lesbians and gay men in Fig. 1 to a 0 to 1 range (as opposed to its  $z$ -score transformation used in the statistical analyses), applying the formula  $(x - \min(x)) / (\max(x) - \min(x))$ .

We next ran a series of regression models in MPlus version 7 (Muthén and Muthén 1998–2011) to ensure that the relationships observed could not be explained by other factors related to a country's religiosity, development, political culture, or region. Missing data for the key outcome variables were managed in different ways. For the measure of attitudes toward lesbians and gay men, the score for each country represents their mean  $z$ -score for however many items were available for that country. Only countries with all six items missing were treated as missing data. For the index of sexual orientation laws, because there were fewer missing items, we used a multiple imputation approach to account for missing values using 50 imputed datasets. In this analysis we included all variables in the model and imputed each of the seven components of the index of sexual orientation laws. Following the imputation procedure we transformed each of the seven components of the index of sexual orientation laws into  $z$ -scores and averaged them to form the final scale.

Tables 2 and 3 show these results for attitudes toward lesbians and gay men and sexual orientation laws, respectively. In each case, several control variables predicted reactions to lesbians and gay men independently of the GGGI (gender equality), as expected. For example, in the full regression (Model 8 of Tables 2 and 3), countries where the democratic political culture was higher had more positive aggregate

**Table 1** Correlations among study variables

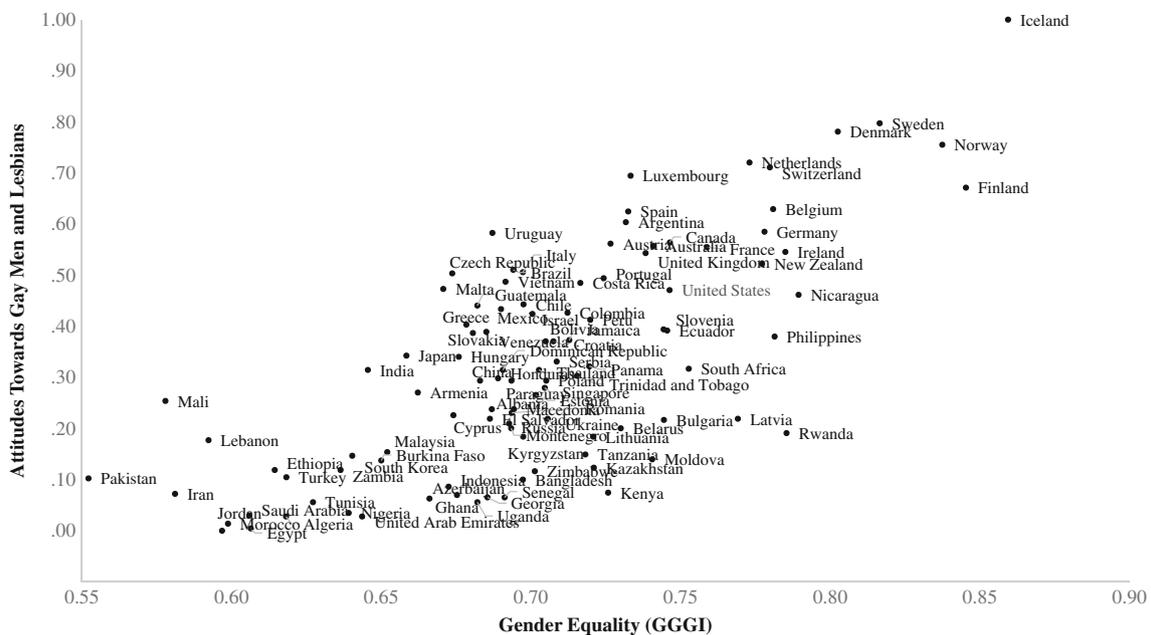
Variables	Correlations													
	1	2	3	4	5	6	7	8	9	10	11	12	13	
1. Index of sexual orientation laws	--													
2. Attitudes toward lesbians and gay men	.83***	--												
3. Gender equality	.62***	.72	--											
4. Percent Christian	.42***	.43***	.57***	--										
5. Percent Muslim	-.51***	-.61***	-.63***	.74***	--									
6. Religiosity	-.70***	-.60***	-.53***	-.19*	.40***	--								
7. Religious regulation	-.33***	-.47***	-.49***	-.51***	.55***	.26**	--							
8. Country development (HDI)	.59***	.60***	.40***	.13	-.24**	-.67***	.01	--						
9. Democratic political culture	.50***	.62***	.42***	.12	-.26***	-.48***	-.28***	.50***	--					
10. Gini index	-.31***	-.26***	-.15	.14	-.09	.56***	-.19*	-.39	-.30***	--				
11. Region: Africa	-.41***	-.46***	-.21*	.01	.16*	.47***	-.10	-.71***	-.08	.34***	--			
12. Region: Americas	.12***	.21*	-.15	.38***	-.32***	.07	-.32***	.09	-.20*	.44***	-.27***	--		
13. Region: Asia	-.36***	-.36***	-.40***	-.69***	.45***	.21*	.53***	.04	-.20*	-.03	-.35***	-.31***	--	
14. Region: Oceania	.14	.14	.06	.03	-.09	-.20*	-.14	.14	.12	-.08	-.08*	-.07	-.09	--

All *Ns* > 122. All entries are zero-order correlations, except the region variables which show partial correlations controlling for the presence of the other region dummy codes (to more closely approximate their counterparts in the Table 2 regression). These correlations therefore test the difference between that region and the comparison group—Europe. The data produced in this table are available as an online supplement (see Table S3)

\**p* < .05. \*\**p* < .01. \*\*\**p* < .001

attitudes toward lesbians and gay men and more progressive sexual orientation laws. Countries where religion was particularly important had less progressive sexual orientation laws. In terms of region, countries in Africa had less positive aggregate attitudes toward lesbians and gay men and less

progressive sexual orientation laws compared to Europe. Asian countries also had less progressive laws compared to Europe, and countries in the Americas had more progressive attitudes compared to those in Europe. Although many independent relationships were shown in these regression



**Fig. 1** Country-level gender equality predicts aggregate attitudes toward lesbians and gay men. For ease of interpretation, the attitudes toward lesbians and gay men are presented in 0 to 1 format, recomputed from

the z-scores used in the analyses from Tables 1, 2, and 3. The data that produced this figure are available as an online supplement (see Tables S1 and S3)



**Table 2** Country-level gender equality predicts attitudes toward lesbians and gay men

	Model 1 <i>b</i> (SE)	Model 2 <i>b</i> (SE)	Model 3 <i>b</i> (SE)	Model 4 <i>b</i> (SE)	Model 5 <i>b</i> (SE)	Model 6 <i>b</i> (SE)	Model 7 <i>b</i> (SE)	Model 8 <i>b</i> (SE)
Gender equality	9.22 (1.27)***	8.35 (1.08)***	10.44 (1.17)***	8.80 (1.01)***	8.58 (.99)***	10.58 (1.00)***	7.98 (1.07)***	5.28 (1.10)***
Percent Christian	-.004 (.002)	--	--	--	--	--	--	-.002 (.003)
Percent Muslim	-.008 (.003)**	--	--	--	--	--	--	-.004 (.002)
Importance of religion		-.01 (.003)***	--	--	--	--	--	-.002 (.003)
Religious regulation			-.02 (.03)	--	--	--	--	.02 (.03)
Country development (HDI)				2.11 (.44)***	--	--	--	-.89 (.69)
Democratic political culture					.21 (.04)***	--	--	.25 (.04)***
Gini index						-.02 (.01)*	--	-.01 (.01)
Region							--	--
Africa							-.92 (.17)***	-.77 (.25)**
Americas							-.05 (.15)	.43 (.18)*
Asia							-.52 (.16)***	-.27 (.20)
Oceania							-.03 (.38)	-.12 (.32)
<i>R</i> <sup>2</sup>	.54***	.58***	.50***	.60***	.61***	.52***	.63***	.78***

All *N*s = 142. Regions use Europe as the reference group. The data produced in this table are available as an online supplement (see Table S3)

\**p* < .05. \*\**p* < .01. \*\*\**p* < .001

explanations for the link. But we can only speculate as to why we believe these links exist. In our case we believe that similar mechanisms that connect individual-level beliefs about gender roles to anti-lesbian and gay attitudes are the same mechanisms that connect the treatment of women at a societal level to legalized discrimination against lesbians and gay men.

We also cannot establish any definitive causal effects because our data are not experimental. Establishing pure causality is nearly impossible with any country-level analysis. As a result, we cannot determine from the present data whether or not gender inequality is causing attitudes toward lesbians and gays or the laws that affect them, or whether there are other relationships. However, as the documentation of sexual orientation attitudes and laws continues over the years, it may be possible soon to capture how changes in the treatment of women map onto changes in attitudes toward lesbians and gays and the passage of legislation to protect them over time. For example, Brandt (2011) used longitudinal data to show that attitudes toward women at Time 1 predicted later gender inequality even when controlling for gender inequality at Time 1. In the near future when more data are available on changes in attitudes toward lesbians and gay men and sexual orientation laws over time, a similar analysis could be conducted using the data we present here.

Another future direction of research concerns other groups that are affected by gender relations, that of transgender, transsexual, and intersex individuals. Attitudes toward members of these groups, and laws and policies designed to protect them, has differed

across countries (Itaborahy and Zhu 2012). Attitudes toward transgender people is related to beliefs about gender norms at the individual level (Norton and Herek 2013), and such relationships may also operate at the societal level of analysis. However, it is not clear that reactions to the transgender, transsexual, and intersex communities would follow the exact patterns as reactions toward lesbians and gay men (see Worthen 2013, who furthermore argues that reactions toward lesbians, gay men, and bisexuals could be analyzed separately from each other). For example, some countries in our dataset that have strong gender inequality and harsh sexual orientation laws actually have progressive laws concerning changing one's sex, including Iran (Barford 2008) and India (New York Times 2014). This leaves open some interesting empirical questions concerning how gender relationships in a country may manifest different outcomes concerning the transgender, transsexual, and intersex communities compared to the lesbian, gay male, and bisexual communities.

### Practice Implications

The overall findings from the research we have presented here contain a number of practical implications for activists and lawmakers interested in social and legal changes for lesbians and gay men. Many campaigns for legal changes for lesbians and gay men have, for example, focused on reinterpreting religious doctrine and writings in the service of eliciting greater compassion toward lesbians and gay men. For example, the

**Table 3** Country-level gender equality predicts index of sexual orientation laws

	Model 1 <i>b</i> (SE)	Model 2 <i>b</i> (SE)	Model 3 <i>b</i> (SE)	Model 4 <i>b</i> (SE)	Model 5 <i>b</i> (SE)	Model 6 <i>b</i> (SE)	Model 7 <i>b</i> (SE)	Model 8 <i>b</i> (SE)
Gender equality	6.64 (1.12)***	4.81 (.86)***	8.13 (.1.01)***	6.03 (.83)***	6.74 (.91)***	7.86 (.84)***	4.52 (.85)***	2.38 (.98)*
Percent Christian	-.001 (.002)	--	--	--	--	--	--	.001 (.002)
Percent Muslim	-.01 (.002)*	--	--	--	--	--	--	-.001 (.002)
Importance of religion		-.02 (.002)***	--	--	--	--	--	-.01 (.003)**
Religious regulation			-.01 (.02)	--	--	--	--	.01 (.02)
Country development (HDI)				2.28 (.34)***	--	--	--	.02 (.59)
Democratic political culture					.14 (.03)***	--	--	.09 (.04)*
Gini index						-.02 (.01)***	--	.002 (.01)
Region							--	--
Africa							-1.10 (.13)***	-.67 (.22)***
Americas							-.45 (.13)***	-.11 (.17)
Asia							-.85 (.13)***	-.47 (.19)*
Oceania							.10 (.29)	.02 (.28)
<i>R</i> <sup>2</sup>	.42***	.59***	.39***	.54***	.46***	.45***	.61***	.68***

Numbers represent unstandardized betas, and parentheses indicate standard errors. All  $N = 142$ . Regions use Europe as the reference group. The data produced in this table are available as an online supplement (see Table S3)

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$

Human Rights Campaign, one of the major lobbying groups for lesbian and gay rights, recently launched the campaign, “We Are All God’s Children,” in an effort to persuade especially religious Southerners in the United States of greater equal treatment for sexual minorities (Human Rights Campaign 2017). While we do not doubt the efficacy of such campaigns to a point, we believe they do not cover the full spectrum of the kind of social changes necessary to implement change. Activists may also consider targeting independent forces that lead to gender inequality. By doing so, conditions might improve for women in general as well as for lesbians and gay men.

We do not want to interpret too far beyond our data, but these results also suggest that lesbians and gay men might not want to emphasize how masculine gay men can be or how feminine lesbians can be. For example, gay male athletes (Sastre 2016) and female beauty queens (Coyne 2016) are sometimes celebrated for breaking stereotypes and fitting into more gender-appropriate masculine or feminine ideals. If sexual orientation laws are tied to gender gaps because of gender-role expectations, celebrating normative gendered expression for gay men and lesbians might unintentionally exacerbate the problem.

## Conclusion

Most scientists who study gender would not be surprised to hear that issues about lesbians and gay men are fundamentally about gender. Our data support that perspective and raise it to the level of society. Anyone fighting for social and legal

change for lesbians and gay men in a country should be aware of the importance of fighting for change for women too.

**Compliance with Ethical Standards** The research reported involves exclusively secondary analyses of data that has been made publicly available on the internet.

**Conflicts of Interest** The authors of this manuscript have no conflicts of interest.

**Human Studies** No new data were collected involving human subjects.

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