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Countries Mimicking Neighbors: The Spatial Diffusion of Governmental Restrictions on Religion

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Conceptualized as efforts to deny religious freedoms, previous research explains the presence of governmental restrictions on religion by isolating national governments, asserting that the primary determinant is a country's internal structural characteristics. These approaches overlook why the levels of governmental restriction on religion are spatially clustered and increasing in distinct patterns. Utilizing spatial analysis and data from the Religion and State Project, this article demonstrates that governmental restrictions on religion are spatially clustered, not independent from neighboring countries, and that increases in a country's level of restrictions reflect similar changes in bordering countries. Spatial clustering emerges through the diffusion of policies, where national governments mimic their neighbor's policies and practices even when accounting for internal structural characteristics. The article concludes that while a country's internal structure is clearly a predictor of policies, national governments are not isolated from neighbors where the level of restrictions are susceptible to external influence.

Keywords: religious freedom, religion and state, diffusion of restrictions, religious discrimination.

INTRODUCTION

While promises of religious freedoms in a country's constitution are common, restrictions are prevalent and frequent (Fox 2008; Grim and Finke 2011; Finke and Martin 2014; Finke, Mataic, and Fox 2018). Identified as a human rights concern (Office of International Religious Freedom 2016), scholars have recognized the importance in understanding the determinants of restrictions on religion, particularly considering the associations between restrictions and increased levels of religious persecution and violence (see Akbaba and Fox 2011; Finke and Harris 2011; Finke and Martin 2014; Grim and Finke 2007, 2011). Searching for answers, researchers have determined that the reasons for restrictions on religion are exceptionally complex (Koesel 2014; Sarkissian 2015). Fox (2016) recently outlined 11 potential motivations for state restrictions and discrimination. Although the motivations for the state to restrict religious practice may vary, a common thread between these explanations is the reliance on internal characteristics of the country. Even two of the most robust explanations, the religious economies and governance dimensions, isolate countries from the influence of factors outside a country's border.

Yet, countries and their national governments are not isolated from their neighbors. This article corrects the isolated approach by considering the impact of neighboring countries on the spread and adoption of restrictions on religion. Although unique to the study of religious restrictions, researchers have approached the susceptibility of the state to external influence in other domains, including democracy, protection of human rights, and the degree of civil liberties (Beckfield 2010; Berry, Guillén, and Hendi 2014; Starr 1991; Gleditsch and Ward 2006, 2008;

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O' Loughlin et al. 1998; Simmons 2009; Wejnert 2005). The clustering of countries with similar policies and governance may appear accidental, yet this is hardly the case. Rather, countries are susceptible to both direct and indirect factors. The spread of practices is particularly evident among nongovernmental organizations, where similarities occur through mimicry (Meyer and Rowan 1977). Organizational operation in close proximity increases the likelihood that policies and practices spread between organizations. Like nongovernmental organizations, Gleditsch and Ward (2006) argue that the spread of state policies is a function of diffusion between countries.

Using spatial analysis, through the combination of cross-national data sets, including the Religion and State Project for measures of religious restrictions (Fox 2015), this project provides additional insight into the spread of restrictive policies between national governments. I begin with a demonstration of the clustering of restrictions on religion around the world and predict that this clustering is the diffusion of restrictive policies between borders, and not characterized by a clustering of similar internal or structural characteristics. Applying the diffusion perspectives and methods to measure the spread of governmental restrictions offers two key contributions to the study of global policies. First, it provides insight into both the spread and clustering of governmental restrictions on religion, despite constitutional promises of freedoms. Second, the investigation of restrictions on religion demonstrates that not only do progressive policies, such as women's rights or fair trials, spread between countries, but so do oppressive policies.

Explaining the Spread of Governmental Restrictions on Religion

Governmental restrictions on religion represent efforts to deny religious freedoms through the limiting of behaviors such as public religious speech, sermons by clergy, freedom to worship, and the operation of religious organizations. Governmental policies on religion are often implemented as seemingly benign policies, but inevitably are used to restrict religious freedom. For example, many countries require religious organizations to register with the national government to legally operate, but restrict religions through certain registration requirements (Finke, Mataic, and Fox 2018). Other restrictions are more direct, such as explicit policies preventing clergy from holding political office. This is the case in Guatemala, where the constitution declares the inability for clergy to hold office (Fox 2015), or the banning of women from praying in mosques in Tajikistan (Sarkissian 2015). These restrictions, whether intentional or not, create substantial consequences for religious practice and state relations. Moreover, the restrictions are increasingly widespread, with presence within every region of the world and among almost every country (Finke and Mataic 2017; Fox 2015; Grim and Finke 2011).

Researchers tasked with identifying the motivations behind these restrictions found numerous explanations. Fox (2016) outlined an extensive list of potential motivations, such as maintaining religious monopolies to reducing perceived political threat. Similarly, Samuel P. Huntington's "Clash of Civilizations" argument is a commonly used explanation. The argument is that heterogeneous countries with competing groups, such as differing religions, will experience more conflict than countries with homogenized cultural groups. In response to a greater potential for cultural conflict, Huntington (1996) argues that governments use restrictions to counteract this potentiality. Arguments such as these are logical, but have routinely experienced limited support (Grim and Finke 2011). In subsequent efforts, researchers have routinely identified two consistently robust explanations: (1) the religious economies model and (2) the importance of governance dimensions.

Developed out of rational choice literature, the religious economies model provides a general understanding of how religious organizations compete for practitioners and explains individuals' involvement in religious organizations (Finke 1990, 2013; Gill 2008; Iannaccone 1994; Pearce II, Fritz, and Davis 2010; Stark and Finke 2000). Religious groups with more resources, access to individuals, financial benefits, or status will subsequently have greater success and longevity. At the country level, religious groups can use their relationship with the state to gain a competitive



Figure 1 Average level of government restrictions on minority religions, 1990–2008

Note: Figure 1 corresponds with the average level of restrictions on minority religions for 155 countries between 1990 and 2008.

advantage. Minority religious groups that are unable to register for tax benefits or are prevented from renting worship space are at a disadvantage compared to other religious groups that may not experience the same restrictions. Similarly, governments that restrict religious practice or align with a religious group receive benefits such as increased support, legitimation, and loyalty for the state (Baradaran-Robinson, Scharffs, and Sewell, 2005; Billings and Scott 1994; Kokosalakis 1985; Shterin and Richardson 2000;). Thus, it is mutually beneficial for a state and majority religion to align; consequently, these alliances regularly result in decreased freedoms for minority religions.

Governance dimensions reflect the general conditions within a state, such as the structure and type of government. Prior research has identified the strong relationship between democracy and higher levels of human rights in general (Davenport and Armstrong 2004; Poe and Tate 1994). Similar patterns exist for the level of religious restrictions within a country. Finke and Martin (2014) found a significant relationship between independent judiciary and the level of restrictions, where the presence of a separate judicial body protects the rights of individuals. Others find connections between democracies or autocratic governments and the presence of religious restrictions (Schleutker 2016). Not only does the research that approaches restrictions on religions through governance dimensions highlight religious freedom as a form of human rights, but it also emphasizes the impact of political institutions as protectors of freedoms, including reduced levels of religious restrictions.

While these two explanations of governmental restrictions on religion are robust, the models treat countries as unrelated and do not address the potential importance of neighboring or related countries. Demonstrated in Figure 1, it is clear that restrictions of minority religions are clustered in similar areas, where the highest levels of governmental restrictions are situated near China, Russia, and the Middle East. The lowest levels of restrictions, however, are clustered in North and South America as well as southern Africa.

Additionally, using an average of restrictions for each country at four periods (1990–1994, 1995–1999, 2000–2004, 2005–2008) demonstrates that not only are restrictions clustered, but the implementation of governmental restrictions on minority religions both increased and decreased over time in distinct locations. Particularly, observing the changes between 1990 and 2008



Figure 2 Change in average governmental restrictions on minority religions

Note: Figure 2 depicts the average level of governmental restrictions for 155 countries during four periods: 1990–1994, 1995–1999, 2000–2004, and 2005–2008.

in Figure 2 highlights the increases in governmental restrictions in the countries surrounding China, the former USSR, and the Middle East, where the shading continues to darken across the four periods. Not only are the restrictions increasing, but they are also clustered within similar locations. Similarly, the shading of Bolivia lightens over time, reflecting the levels of its neighbors, Brazil, Peru, Paraguay, and Argentina. Is this clustering a consequence of the neighbors or simply a clustering of similar cultural, economic, or political patterns? These questions cannot be answered alone by observing the internal characteristics.

Thus, the sole reliance on internal, structural explanations for the relationship between a country's government and religious organizations is not problematic; it is, however, limited in understanding global patterns and the presence of restrictions on religion. To address these limitations, I argue that restrictions on religious organizations occur not only because of relevant internal characteristics, such as the presence of an independent judiciary, but also because of the diffusion of policies and practices between countries. This approach is also similar to investigations into the spread of other global human rights policies (Beckfield 2010; Berry, Guillén, and Hendi 2014; Gleditsch and Ward 2006, 2008; O' Loughlin et al.1998; Starr 1991; Simmons 2009; Wejnert 2005).

Diffusion of Governmental Structure, Behavior, and Policies

Much like nongovernmental organizations, governments modify their structures and policies by experiencing pressures to change or observing other countries. Although not all organizations will succumb to the pressures and change, diffusion processes help explain why organizations and countries learn (Levitt and March 1988). Diffusion processes have extremely broad applications, ranging from explaining the spread of organizational innovations (Greenhalg et al. 2004) to the dynamics of social movements (Briscoe, Gupta, and Anner 2015; Briscoe and Safford 2008; Strang and Soule 1998). Diffusion and, subsequently, organizational learning originates from both internal and external sources. Internal diffusion identifies the spread of ideas, behaviors, and structures through actors within an organization or population. Individuals within a country may use elections to change a state's practice or policy in favor of increasing religious restrictions. Among restriction on religion research, there is evidence to suggest the importance of internal diffusion, such as Grim and Finke (2011) who find that governments change restrictions on religion in reaction to the emergence of certain religious organizations. Conversely, diffusion also occurs through external forces, such as the imitation of a neighboring country or pressures to adopt policies that are more democratic. While internal pressures may be a factor, external diffusion is important in explaining the spread of policies between countries for two reasons. First, in recent years, researchers have regularly demonstrated the significance of external processes in comparison to competing internal explanations when describing the diffusion and clustering of countries with similar government characteristics and human rights policies (Berry, Guillén, and Hendi 2014; Gleditsch and Ward 2006, 2008; O'Loughlin et al. 1998; Starr 1991; Wejnert 2005). Second, research on the presence of restrictions on minority religions has been exclusively focused on internal factors and has not yet acknowledged the potential importance of external factors, resulting in an incomplete understanding of why restrictions on religion continue to spread.

Three interrelated pressures contribute to the external diffusion of policies and practices. The first is coercion, or diffusion that occurs when an external actor directly influences another organization through their behaviors, such as the adoption of governmental policies following international sanctions (Beckfield 2010). The diffusion of policies originating from coercion is easy to identify, and reflects direct commands or orders to make changes. This is particularly applicable in today's globalized world where intercountry networks are strong and common. However, as discussed below, coercive factors do have limitations with regards to explaining the spread of policies. Normative pressures are a second important factor and reflect the socialization and the development of norm responses to uncertainty. One example would be the norms and expectations of how to adjust policies following a terrorist event. Organizations with similar norms and socialization will respond with similar anti-terrorist policies, whereas contrasting organizations will respond differently (Shor 2017).

Although these two approaches can be used to explain the spread of governmental policies between countries, there are limitations with both approaches. Coercion has been established as a key predictor in the spread of some world policy (Beckfield 2003, 2010), yet its explanatory power is not always robust. Shor (2017) tested the influence of international organizations on the adoption of counterterrorist legislation between countries, coercion, and network influence, finding that membership in organizations was not a significant explanation. The limitations are present even in explanations of governmental restrictions on religion, as it has continued to spread despite the presence of regulatory agencies, such as the Office of International Religious freedom. Moreover, an assessment of a country's membership in international organizations, such as the United Nations, provided few explanations for the extent of restrictions on religion (Mataic and Finke 2018). Contrary to expectations, Mataic and Finke (2018) found that the number of membership a country had, thus increasing exposure to external influence and coercion, did not decrease gaps between promises of religious freedom and the extent of religious restrictions.

Normative explanations are also limited in explaining the spread and clustering of restrictions on religion. About 90 percent of all constitutions include some promise of religious freedom, yet, governmental restrictions on religion are prevalent (Fox 2015; Grim and Finke 2011; Mataic and Finke 2018). It should be expected that the norms of having constitutional promises of religious freedom would thus reduce the presence of restrictions. Yet, this is not the case. Despite the limitations, this is not to say diffusion of governmental restrictions on religion cannot occur through coercion or normative pressures but, rather, that the spread and clustering of restrictions on religion may occur because of another factor that is demonstrated by the spread of policies and practices between networks and borders.

Thus, it seems that the third external diffusion pressure, mimicry, explains clustering of governmental restrictions on minority religions. Mimetic diffusion occurs when organizations copy others as a response to uncertainty, such as the adoption of policies among countries (Berry, Guillén, and Hendi 2014). Further, mimicry relies on the spread of information from one organization to another, such as through networks and ties between organizations (Briscoe and Murphy 2012; Granovetter 1973; Strang and Soule 1998). When a state is experiencing uncertainty, such as following the adoption of a new constitution, regime change, or influx of immigrants, it may look, for example, for responses and what policies to adopt. Among national governments, spatial dependence is demonstrated through the clustering of specific characteristics or policies.

Democracy was largely assumed to develop as a reflection of structural characteristics within individual countries, such as average wealth of the citizens. Although structural explanations are important, much like current assumptions surrounding the occurrence of restrictions on religion, researchers ignored the impact of external actors, including cultural considerations and the influence of other governments. O'Loughlin et al. (1998), however, noticed a trend, where democracy was often a reflection of neighboring actors. Others soon followed, making similar arguments regarding the importance of neighbors in the spread of individual state policies. For instance, Simmons (2009) argued that a reliance on social and political explanations to explain the spread of human rights policies was limited. To address these limitations, Gleditsch and Ward (2006) constructed diffusion models that specifically accounted for the space between neighbors to explain the spread of democracy between countries. Their results demonstrate that even when accounting for internal characteristics, such as GDP, the probability of a country transitioning between an autocracy to a democracy increased when a country's neighbors were also democracies. Wejnert (2005) also compared both endogenous and exogenous explanations for the spread of democracy from 1800 to 1999, finding that both are significant predictors of the spread of democracies. Subsequent efforts demonstrate the spread of human rights policies (Berry, Guillén, and Hendi 2014) and are the most consistent explanation for counterterrorist legislation (Shor 2017).

Spatial diffusion and mimicry is reliant on proximity, where the closer the countries are, the more likely adoption of policies will occur. In fact, distance between organizations and adoption of policies is negatively related, where increases in distance decrease the potential for mimicry (Baller and Richardson 2002). This negative relationship is a function of how proximity increases the potential for communication, interaction, and observation between countries, thus contributing to imitation. The geographic clustering of policies, then, represents at least partial emulation by neighbors. Importantly, proximity between countries increases the interest in their neighbors. This interest exposes a state to the policies, habits, and practices of its neighbors and offers examples of legitimate behavior. If a country perceives the policies as legitimate through this increased attention through proximity, it is likely that the policies will then transfer between countries. The importance of spatial proximity and emulation have been demonstrated by explanations of similarities between countries (Holzinger and Knill 2005), the spread of educational practices (Strang and Meyer 1993), the adoption of accounting practices by U.S. state governments (Carpenter and Feroz 2001), and the spread of policies across Europe (Radelli 2000). Thus, I argue that the clustering of restrictions on religion, as presented in Figures 1 and 2, are related to spatial proximity and mimicry, where the increase or decrease of restrictions in one country reflects similar levels of restrictions in neighboring countries in prior years.

H1: Countries are more likely to adopt policies that impose restrictions on minority religions following the adoption of policies in neighboring countries.

	Mean	SD	Min	Max	1	2	3	4	5	6	7
1. Restrictions of minority religions	8.90	11.44	0	65							
2. Government funding of religions	2.57	2.57	0	10	.38						
3. Government effectiveness	09	.97	-1.77	2.43	11	.24					
4. Communist state	.27	.45	0	1	.26	.10	11				
5. Free and open elections	.54	.50	0	1	48	09	.28	17			
6. Independent judiciary	.51	.50	0	1	21	.02	.52	13	.24		
7. Log GNI	8.23	8.23	8.23	11.38	.02	.29	.81	07	.23	.42	
8. Proportion of Muslims	.27	.27	.27	1	.44	.20	31	03	40	27	25

Table 1: Summary statistics and correlations

Note: Summary statistics from 155 countries in 2008.

Alternative Explanations for the Clustering of Restrictions on Religion

The significant clustering of restrictions on religion may in fact by explained by the clustering of similar structural characteristics that predict restrictions on religion. In this situation, the significant clustering of governmental restrictions on religion may in fact occur through the clustering of governance structures, such as the presence of an independent judiciary or government favoritism of particular religions. This is an important consideration, as structural components have been thoroughly tested in previous research (Finke and Martin 2014; Grim and Finke 2007, 2011; Schleutker 2016) and governance itself has been shown to spatially diffuse and cluster (Berry, Guillén, and Hendi 2014; Gleditsch and Ward 2006, 2008; O'Loughlin et al. 1998; Starr 1991; Wjnert 2005). As Gurr (2000) argues, even cultural factors that may result in increased conflict or subsequent restrictions diffuse between state borders. Thus, the clustering of restrictions on religion might not be a function of spatial diffusion of restrictive policies but, rather, an alternative explanation such as the spread of cultural identities and conflict or the geographic clustering of countries with similar structures or cultural heritage.

H2: Countries with internal predictors of restrictions are clustered together, increasing the likelihood for the clustering of restrictions on religion.

DATA AND METHODS

This project relies on data from a number of different cross-national data sources corresponding with the measures included in the analytical models. The models correspond with an analysis of 155 countries with a population over 500,000 to account for any potential inaccuracies in the collection of data from small countries. Table 1 provides an overview of the summary statistics and correlations between the structural measures included in the models.

Dependent Variable

I measure the number of governmental restrictions on religion using an index adapted from the Religion and State Project, Round 2 (Fox 2011, 2015). The RAS2 was collected retrospectively for 177 countries from 1990 to 2008. The number of restrictions corresponds with the "Indicators of

Restrictions on Minority Religions Index," which was modified corresponding to a prior research designed to test the presence of governmental restrictions on religion (Finke and Martin 2014; Finke, Mataic, and Fox 2018). The removal of some items from the full index also corresponds with measures that are conceptually similar to predictive measures. The final index includes 27 items of restrictions towards minority religions, with potential scores ranging between 0 and 65.¹ Higher values on this modified index represent countries with more restrictions on minority religions. Individual items measure the relationship between the national government and minority religious by addressing topics such as denying religious speech, education, and the operation of religious organizations. (See Appendix S1 for a complete list of index items.) Each item in the index has four potential values, ranging from "not significantly restricted for any" (a value of "0") to "the activity is prohibited or sharply restricted" (a value of "3").

Independent Variables

Despite the primary argument of this article emphasizing the importance of spatial diffusion between countries, it would be a major oversight to overlook the impact of internal characteristics. I separate the independent variables into three categories: the religious economies measure, governance dimensions, and controls that were significant in prior research predicting restrictions on religion. Each category builds on previous research, allowing for replication and robustness checks of spatial diffusion.

Religious Economies

Corresponding with the religious economies argument discussed above, I assess government favoritism through the level of funding religions receive from the national government.² I constructed an index of 11 items from the RAS2 measures of religious legislation.³ Countries received a "1" if the funding item was present, and a "0" if the item was not present. The values for the government funding index range from 0 to 10, with each item measuring the level of government funding and support for religions. Countries with higher values correspond with higher levels of government funding for religions and, subsequently, higher levels of favoritism. The government funding index included items such as official government positions for clergy, direct grants to religious organizations, and free air time on television or radio provided by the government. (See Appendix S1 for a complete list of index items.)

Governance Dimensions

Four concepts assess the importance of governance dimensions. The first is a measure of government effectiveness, which ranges from -2.45 to 2.43 and is derived from the World

³The entire religious legislation index was not utilized as various measures are directly related to state restrictions on religion, such as those that assess restrictions of practice (e.g., other restrictions on activities during religious holidays or restrictions on public music). Instead, the constructed index specifically assesses the financial benefits that some religions have over others and, consequently, differences in competitive advantage.

 $^{^{1}}$ Although the 27 items, with a range of 0–3, provide a potential maximum score of 81, the countries in the analysis never had a score higher than 65. Thus, no country sharply restricts religious minorities across all 27 items.

²This approach differentiates itself from essential research that previously utilized the "Government Favoritism Index" from the International Religious Freedom Data (Finke and Martin 2014). I excluded this measure because the IRF data do not include measurement for the United States and would therefore exclude an important country within the "Western Democracies" region from the analysis. Despite this, the modified RAS2 and the IRF favoritism indexes measure similar concepts, such as the balance of government funding between religious organizations such as hospitals and schools, and have been used in recent tests of restrictions on religion (Finke, Mataic, and Fox 2018). Similarly, social restrictions of religion, which demonstrate competition between nonstate actors, are excluded from the analysis despite their relation to state restrictions on religion (Finke and Martin 2014; Grim and Finke 2007, 2011).

Bank (2014). Countries with lower scores on the index are estimated to be less effective at implementing and maintaining human rights policies than the countries higher on the index. To account for differences over competing government ideologies, I include a measure of whether a country was communist or not. The communist government ideology measure is from InfoPlease (2011); a "0" represents a country that has never been a communist nation and a "1" is for countries that are or were a communist nation. I also include two additional governance measures that address dimensions of democracy, specifically through an item testing the presence of free and open elections as well as an independent judiciary. Both measures were derived from the Cingrenelli-Richards (CIRI) Human Rights Data Project (Cingrenelli and Richards 2010). The original free and open election measure consists of a three-point scale, which I dichotomized to address whether a country generally has free and open elections. A country receives a "0" if free and open elections were not present, while a "1" corresponds with countries that have either partially or generally free and open elections. The independent judiciary item was also measured on a three-point scale, which I dichotomized where "0" represents a country without a judicial system independent from external control and a "1" a country that has a judicial system that is generally separate.

Controls

Finally, I included two additional control measures associated with characteristics of a country, specifically the gross national income per capita and the proportion of the population that is Muslim. I logged the gross national income per capita as reported in current U.S. dollars from the World Bank (2015). Further, the proportion of the population that is Muslim is derived from the Religious Characteristics of States Dataset (Brown and James 2015).⁴

Methods

While Figures 1 and 2 present evidence of clustering of governmental restrictions on minority religion and diffusion of policies across time, they do not account for the structural dimensions or the clustering of these dimensions. Therefore, I test the spatial diffusion of governmental restrictions on religion in two distinct steps: (1) determine the diffusion and clustering of restrictions on religion and (2) robustness checks of alternative explanations for the spread of restrictions on religion.

Once demonstrating the change in restrictions over time (see Figure 2 and Table 2), increases or decreases for one country followed by a similar pattern among neighbors in subsequent years, I test for significant clustering using exploratory spatial data analysis (ESDA) and the local indicators of spatial association (LISA) as demonstrated in Figures 3 and 4. For the analyses, I define neighbors if a country is in contact with any part of a country's border, and exclude the influence of countries that are separated by water or other countries.⁵ While beneficial in assessing the effect of immediately bordering countries, this method does result in neighborless countries, such as Australia. Figure 3 demonstrates the patterns of clustering of restrictions on

⁴Additional models also tested the religious diversity within a country by adding the squared proportion of each religious group within a country and subtracting this value from 1. Higher values correspond with greater levels of religious diversity. However, religious diversity was not a significant predictor of governmental restrictions on religion when included with other structural components. The inclusion did not influence the significance of the spatial diffusion predictor.

⁵This definition is referred to as a first-order queen weight matrix (Gleditsch and Ward 2008). To account for alternative definitions of neighbors, I also include an assessment of the nearest neighbor and those at specific distances from a country. These additional definitions remained significant and did not change the results. Moreover, in these assessments, countries were no longer neighborless, but did have lower levels of correlations. The reduced correlations provide additional support for the conclusions of proximity and its importance. See Appendix S2 for a detailed overview of the steps used to construct and test the spatial associations of countries and neighbors.

	1990	1995	2000	2005	2008
Western democracies	3.67	3.86	4.38	5.05	5.19
	(n = 21)				
Former USSR	9.33	11.05	12.08	12.88	12.44
	(n = 3)	(n = 20)	(n = 24)	(n = 25)	(n = 27)
Asia	13.11	12.80	13.5	13.35	13.57
	(n = 19)	(n = 20)	(n = 20)	(n = 23)	(n = 23)
Middle East and North Africa	21.75	22.14	22.14	21.17	21.53
	(n = 12)	(n = 14)	(n = 14)	(n = 17)	(n = 17)
Sub-Saharan Africa	2.70	2.76	2.95	3.93	4.14
	(n = 40)	(n = 38)	(n = 38)	(n = 45)	(n = 44)
Latin America	2.91	2.95	3.05	3.18	3.22
	(n = 21)	(n = 22)	(n = 22)	(n = 22)	(n = 23)

Table 2: Average number of restrictions for each world region, by year

Figure 3

LISA statistics of governmental restrictions on minority religions, significant diffusion in 2008



Note: The Moran's I coefficient for governmental restrictions on religion is .428 and is statistically significant at the .001 level assessed through 999 random permutations.

minority religions. Figure 4 presents the results from a space-time ESDA between 1990 and 2008, where significant clustering demonstrates countries that adopted their level of governmental restrictions on minority religious from their neighbors in subsequent years. The second step uses OLS regression models to test both internal factors that predict governmental restrictions on religion as well as robustness checks for spatial diffusion⁶ (Table 3). The OLS models

⁶Regression output in GeoDa provides diagnostics for spatial dependence through Lagrange Multiplier (LM) tests. Two components are produced, spatial lag or spatial error, identifying whether a neighbor affects the level of restrictions on minority religions. When a spatial lag model is preferred, it suggests that the spatial diffusion between neighbors occurs (Baller and Richardson 2002). Conversely, if a spatial error model is preferred, then this suggests that significant clustering of restrictions on religion is related to the clustering of another structural component (e.g., similar levels of





Note: The Moran's I coefficient for governmental restrictions on religion is .244 and is statistically significant at the .001 level assessed through 999 random permutations.

	Mode	el 1	Mode	el 2	Model 3 Spatial Error		
	OL	S	Spatial	Lag			
	β	SE	β	SE	β	SE	
Constant	-6.665	6.513	-6.843	6.171	-7.180	6.698	
Government funding of religion	1.161^{*}	.332	1.033^{*}	.316	1.047^{*}	.320	
Government effectiveness	-1.388	1.332	-1.466	1.263	-1.773	1.299	
Communist state	4.725^{*}	1.628	3.247^{*}	1.595	4.018^{*}	1.719	
Free and open elections	-7.290^{*}	1.582	-6.651^{*}	1.508	-6.695^{*}	1.557	
Independent judiciary	-1.780	1.661	-2.159	1.576	-1.876	1.577	
Log GNI	1.670^{*}	.765	1.595^{*}	.727	1.738^{*}	.787	
Proportion of Muslims	8.546^{*}	2.272	6.497^{*}	2.291	8.149^{*}	2.391	
Spatial lag (ρ)			$.192^{*}$.080			
Spatial error (λ)					.192	.099	
R2	.447		.47′	7	.466		
AIC	1125.09		1119.	.79	1121.05		
BIC	1149.48		1147.	.24	1145.	1145.45	
Log likelihood	-554.543		-550.	894	-552.536		

Table 3: Regression models predicting restrictions of minority religions

Note: *p < .05. Each model has 155 countries and corresponds with data from 2008.

favoritism towards religion or governance dimensions). After the LM tests, I tested model preference through the Akaike information criterion (AIC) and Bayesian information criterion (BIC) and log likelihood. These additional tests determine what models are preferred in explaining the presence of restrictions on minority religions.

also incorporate a spatial lag, the level of restrictions of neighboring countries in a prior year (Model 2), and a spatial error, to test for alternative explanations of clustering (Model 3), components. The coefficients for the spatial lag component are interpreted as the effect of a one-unit increase in the neighbor's level of restrictions on minority religions (Golgher and Voss 2016). Using these models, I demonstrate that not only are internal factors important in predicting the level of restrictions on minority religions, but also these restrictions diffuse between countries separate from other potential factors.

RESULTS

As discussed above, comparing the average level of restrictions for each country at four different periods, Figure 2, provides a visual representation of the increase in governmental restrictions on minority religions. Table 2 further demonstrates the changes in the level of restrictions on minority religions. While all regions show an increase in the average number of restrictions, the greatest increase occurred in the former USSR. In 1990, the countries in the former USSR had a low average number of restrictions (nine), however by 2008, the average number of restrictions in the region increased by three points. One reasoning for these changes is captured by the formation of governmental revolutions or the foundation of new countries. With the dissolution of the USSR, the subsequent formation of new countries reflects the high levels of restrictions on religion found in Russia. As Russia continues to darken in Figure 2 with higher levels of restrictions, the shading of neighboring countries also darkens in subsequent years. The influence of neighbors is also present in regions with increases in the number of countries but relatively stable levels of restrictions. For example, in Asia, the number of countries increased from 19 to 23 in the data set, yet the high level of restrictions in this region remained relatively stable. Thus, it is not simply the formation of countries, and a natural shift post formation that results in increases in restrictions on minority religions. Rather, the levels of restrictions within countries and regions are frequently changing in response to the neighbors.

This figure and table are merely descriptive and do not demonstrate whether this clustering and patterned shift in restrictions is necessarily related to the neighbors or just a product of time. The Moran's I coefficient for governmental restrictions on religion is .428 and is statistically significant at the .001 level assessed through 999 random permutations in GeoDa. These results demonstrate that the level of restrictions on minority religions is significantly correlated. Countries with higher levels of governmental restrictions on religion neighbor countries also with heightened levels. Conversely, countries with low levels of restrictions neighbor other countries with low levels. These patterns can also be assessed visually (Figure 3). The shading of each country identifies if it is significantly related to its neighbors. Not surprising, the significant clustering of governmental restrictions on minority religions is similar to Figures 1 and 2. Higher restrictions are significantly clustered in the Middle East, Asia, and the former USSR, as indicated by the "High-High" shading in 2008. Lower restrictions, however, are clustered in southern Africa and South America, as demonstrated by the "Low-Low" shading.⁷ Ultimately, there are significant spatial patterns associated with religious restrictions. Through these significant spatial patterns, initial conclusions are that the models that do not account for spatial patterns may be biased, and future research should incorporate a spatial component.

⁷Outliers correspond to countries that were either "High-Low" or "Low-High," and do not support the spatial diffusion hypothesis. These outliers correspond with countries that have significantly different levels of restrictions than their neighbors, such as the few countries around China. These neighbors feature low levels of restrictions, while China consistently had very high levels of restrictions. It is possible that these outliers provide evidence that diffusion occurs through other means in addition to spatial proximity, such as governmental networks or alliances (Wejnert 2005).

The results from standard OLS regression models predicting governmental restrictions on religion are consistent with previous research (Finke and Martin 2014; Grim and Finke 2011; Schleutker 2016). Internal structural measures are significant predictors of religious restrictions (Model 1, Table 2).

First, government funding (the religious economies argument) is significant, where each level increase in government funding is associated with a 1.16 increase in the number of restrictions. This represents a 10.44 point different in the extent of restrictions on minority religions when comparing a country with zero government funding of religion to a country with the highest level. Substantively, changes between levels of government funding of religions is associated with large increases in the number of restrictions. Thus, it seems that state favoritism of one religion corresponds with increased competitive advantage for the majority religion in the form of greater restrictions for minority religions.

Two governance dimensions were also significantly related to higher levels of restrictions on minority religions, specifically the presence of free and open elections as well as the presence of a communist governance. Countries with free and open elections are predicted to have 7.29 fewer restrictions than countries without free and open elections, holding all else constant. It seems that free and open elections allow nongovernmental actors to make changes and encourage greater freedoms. Countries that have or had communist governance are also associated with significantly higher levels of restrictions on religion, by about 4.73 units higher. These two measures reaffirm that governance dimensions are an important factor when predicting the level of restrictions on religion. The two controls included in the model, proportion of Muslim and the log gross national income, are also significantly associated with the level of restrictions on religion. Countries with higher proportions of Muslims are associated with higher levels of government restrictions on minority religion. The significance of the proportion of Muslims might suggest that the clustering of restrictions is related to religious tradition or the lack of diversity of religious practice within a country (e.g., clustering of restrictions in the Middle East). However, as I demonstrate below, the significance of spatial diffusion is still significant when included in the model with a proportion of Muslim measure. In separate models, the religious diversity measure was not a significant predictor of restrictions on religion. These results are consistent with previous findings (Finke and Martin 2014). Further, as the log gross national income increases, the level of restrictions is also expected to increase. While surprising, the significance of GNI could be related to the availability of resources to implement restrictive policies.

Initial and subsequent Lagrange Multiplier (LM) tests suggest that the spatial lag component is preferred, supporting a conclusion that government restrictions on religion diffuse between neighboring countries. Despite the preference for the spatial diffusion of restrictions model, results from both spatial models are presented in Table 3. Model 2 presents the results when accounting for the diffusion of restrictions on minority religions between two countries, while Model 3 tests whether the significant clustering presented in Figures 3 and 4 is because of an untested factor (e.g., the clustering of religious tradition).

The inclusion of the spatial lag and spatial error components did not substantially change the coefficients for the internal structural predictors of governmental restrictions on religion. In fact, the five significant predictors from the initial OLS regression model remained significant, and their coefficients and standard errors are stable, highlighting that previous results of restricting religion are not biased, but instead are incomplete. Model 2 provides clear evidence that countries are more likely to adopt restrictions on religion following adoption by neighboring countries. Specifically, the spatial lag coefficient is significant and positive, signaling that for each unit increase in a neighbor's restrictions in a prior year, the observed country is also expected to increase its restrictions by .192 units. This may seem minimal at first, but considering the potential range of restrictions is 0–65, the potential increase is quite large even when accounting for internal characteristics of a country. Conversely, Model 3 does not support an argument that the reason restriction on minority religions are clustered is because of the clustering of internal

characteristics. Thus, while neighboring countries may share similarities, such as the proportion of Muslims or the presence of free and open elections, they do not explain adoption of similar levels of restrictions by neighboring countries.⁸

Hypothesis 1, the spatial diffusion of restrictions on minority religions, is further affirmed through Figure 4. Figure 4 demonstrates the direction of policy diffusion through a significant space-time relationship, where the spread of governmental restrictions on religion is compared between 1990 and 2008. The Global Moran's I coefficient is .244 and is statistically significant. As above, the LISA statistics demonstrate the process of diffusion (clustering of "High-High" and "Low-Low"), but also demonstrates the direction that diffusion occurs. A significant "High-High" categorization highlights countries that mimic their neighbors' practices of high restrictions on minority religions over time. Similarly, a significant "Low-Low" categorization signifies countries that adopted policies regarding low levels of restrictions from their neighbors. Therefore, a country such as Russia has a "High-High" shading corresponding to the adoption of high levels of governmental restrictions on religion between 1990 and 2008 from its neighbors that have high levels of restrictions. Ultimately, these results confirm that there is spatial dependence and that governmental restrictions on minority religions diffuse over time through imitation of neighboring governments and levels of restrictions.

DISCUSSION AND CONCLUSION

Although many governments promise freedoms for religion, their actions tend to contradict these promises. As a human rights concern, where restrictions on religion are associated with higher levels of religious violence and persecution, many researchers have attempted to explain the factors predicting their presence (see Akbaba and Fox 2011; Finke and Harris 2011; Finke and Martin 2014; Fox 2016; Grim and Finke 2007, 2011). Researchers frequently turned to structural determinants for predicting the levels of restrictions within countries. In general, clear connections were made between the religious economies model and governance dimensions and the level of government restrictions on religion. Favoritism of particular religions was associated with higher levels of restrictions. Although important, this research ignores the influence of external factors, such as neighboring countries. This article continues the discussion of restrictions on religion, but includes a new dimension: governments are not isolated and susceptible to neighboring countries.

The results provide robust support for Hypothesis 1; countries adopt policies that impose restrictions on minority religions following the adoption of policies in neighboring countries. Governmental restrictions on minority religions are significantly clustered, where countries with high levels of restrictions neighbor countries with similar levels. This conclusion is evident through Figures 3 and 4, as well as Model 2 in Table 3. Not only is the measure of spatial diffusion (spatial lag) significant in Model 2, the space-time model (Figure 4) demonstrates that changes between 1990 and 2008 are reflected in the adoption of restrictive policies from a country's neighbor. The diffusion of governmental restriction on religion policies is especially cogent in countries that did not exist or have policies initially in the data set. Over time, countries looked to their neighbors, for example, for how to behave, and as evident in Figure 4, the policies shifted between neighbors as demonstrated explicitly through the significant space-time

⁸Of the three models tested, the one accounting for the spatial diffusion of restrictions on minority religions is preferred (Model 2). Both the AIC and log likelihood tests were smallest for the diffusion model and the LM tests determined that a spatial lag component should be used to account for potential biases. Moreover, the spatial lag component is significant in Model 2, while the spatial error (significant clustering because of similar structures or culture) is insignificant.

clustering in Eastern Europe and especially within the countries that formed after the dissolution of the Soviet Union.

Supplemental analyses further confirm the importance of proximity and the spatial diffusion of restrictions on religion (Appendix S2). Changes in the definition of neighbors (e.g., changing the number or proximity) directly corresponded with changes in the correlations between the level of restrictions. As the number of neighbors, or the distance between increased, the Global Moran's I decreased, highlighting a decrease in the impact of spatial diffusion. Thus, it seems that immediate neighbors have the greatest effect on the transmission of restrictive policies, while increases in the proximity between neighbors further reduces this effect.

Conversely, Hypothesis 2, an expectation that the significant clustering is a consequence of similar domestic conditions instead of diffusion, was not supported. As presented in Model 3 of Table 3, the spatial error component, which tests for unaccounted reasons for clustering, is not significant. Additional tests, including those for model preference and the necessity of the spatial error component, further demonstrate that the clustering depicted in the figures is not simply because of similar governance, cultural, or political patterns. This is not to say that domestic conditions do not affect the level of restrictions on minority religions. Internal characteristics, including government favoritism of religion and governance, remained significant even with the inclusion of spatial components (Table 3). Thus, both the religious economies and governance dimensions continue to be robust explanations for the presence of restrictions on minority religions even when accounting for external influence.

Despite the significant contributions and findings of this article, it is important to note what the results do and do not demonstrate. The results demonstrate that the level of government restrictions on religion is directly related to the policies and practices of neighboring countries. Consistent with spatial diffusion theory and past research (Baller and Richardson 2002; Gleditsch and Ward 2006, 2008), significant patterns emerged where increases in restrictions in one year reflected high levels of restrictions among neighbors in prior years. However, outliers and nonsignificant results are also present. Mongolia, for instance, is an outlier throughout the analyses (Figures 3 and 4), experienced little change in the number of restrictions and had fewer restrictions than its neighbors (Russia and China) had. Moreover, some countries, such as China, have distinct increases in the number of restrictions (Figure 1), but these restrictions are not significantly related to the country's neighbors (Figure 4). These outliers and nonsignificance are not enough to discount the importance of neighbors and spatial diffusion, but identify that additional alternative explanations may exist. In part, these contrary results may emerge from colonial networks (Wejnert 2005) or governmental power and spatial coercion. Countries such as China may be more resilient to the influence of neighbors and thus account for the insignificance in Figure 4. While networks in general seem to be inadequate in consistently explaining the adoption of state policies (Mataic and Finke 2018; Shor 2017), future research should test this robustly by assessing coercive networks and the impact of sanctions or declaration events by regulating bodies.

Ultimately, however, this article contributes both narrowly and broadly with regards to national governments and the spread of policies. Narrowly, this article builds on the knowledge that internal structure is clearly a significant predictor of restrictions on religion by introducing the effect of neighbors and spatial analysis. Broadly, this article reinforces the argument that government behaviors and policy implementation are susceptible to neighbors even for oppressive policies and practices.

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SUPPORTING INFORMATION

Additional supporting information may be found online in the Supporting Information section at the end of the article.

Appendix S1 Appendix S2