Culture, Region, and Cross-National Violent Crime[1]

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Past cross-national crime research has focused on structural factors with considerably less attention paid to cultural predictors. We extend the culture of honor thesis by identifying the importance of cultural gender inequality and test a direct measure of it on cross-national violent crime rates. While prior research typically uses regional variables as proxies for culture, by using a direct cultural measure we are also able to identify whether culture contributes to explaining the regional associations found previously. Based on national surveys of 153 nations and more than a million respondents, this study is able to explore cultural, structural, and regional predictors of violent crime rates cross-nationally. Two regions, Latin America and sub-Saharan Africa, are far above the rest of the world in terms of violent crime rates. It turns out that most of the standard structural variables found to be important in previous cross-national studies no longer have significant effects when controls for these two regions are imposed. On the other hand, we find that our measure of cultural gender inequality has one of the largest associations with violent crime rates, net of region, and also explains portions of both regional associations.

KEYWORDS: crime; cross-national analysis; culture of honor; gender inequality; regional variation; violence.

INTRODUCTION

Cross-national criminological research is inundated by theories and studies specifying relationships between crime and key structural features of society, such as modernization, poverty, and inequality, to the neglect of more cultural features (Nivette 2011; for exceptions, see Antonaccio and Tittle 2007; Hughes, Schaible, and Gibbs 2015; Schaible and Hughes 2011). This is likely due to a lack of theory regarding why culture should affect cross-national crime rates and a lack of measures to directly capture culture (Altheimer 2013a). The culture of honor thesis—that societies with cultures of honor will have higher levels of violence—has recently been tested at the macrolevel predicting cross-national homicide rates (Altheimer 2013a, 2013b). While this represents a major advancement in the development and testing of theory regarding culture and cross-national crime, it fails to consider the importance of gender in cultures characterized by honor. These cultures privilege masculinity and violence in ways that intertwine with patriarchal cultural values. The current study extends the culture of honor thesis by incorporating feminist theory to argue that cultural gender inequality is one component of cultures of honor. Thus, we should expect that countries with higher levels of cultural gender inequality should have higher levels of violent crime.

In addition to a lack of theory regarding the relationship between culture and cross-national crime, there is a lack of data. Because cross-national data on cultural measures are difficult to come by, regional variables are often used as proxies. In a recent meta-analysis of cross-national homicide studies, Nivette (2011) found that a Latin American regional indicator had the largest effect of any variable, including the most oft-cited structural measures, which suggests that prior research failing to control for it may be biased. Net of structural and demographic characteristics, Latin America has been used as a proxy for machismo culture, which extols hyper-masculinity and dominance over women (Neopolitan 1994). Latin America's machismo culture is just one example of how cultural gender inequality plays out in cultures of honor; hypermasculinity and aggressiveness is far more widespread (Deyoung and Zigler 1994; Gilmore 1990). Sub-Saharan Africa also exhibits cultural gender inequality (Barker and Ricardo 2005; Bingenheimer 2010) and has the highest crime rate of any region (Morrison, Buvinic, and Shifter 2003), with Latin America coming in second. And yet, to our knowledge, no cross-national crime studies control for it. Thus, while some recent studies control for Latin America, because sub-Saharan Africa remains in the referent category, even results from these models may still be biased. The present study tests one element of cultures of honor—cultural gender inequality—and investigates whether it accounts for Latin America's and sub-Saharan Africa's high levels of violent crime.

The general failure to include a sub-Saharan Africa indicator in models may be in large part due to cross-national studies of crime suffering from small sample sizes, usually less than 50 (Nivette 2011), and few non-Western nations. Worse yet, in an effort to overcome incomparable definitions of reported crimes, most cross-national research has been restricted to studies of homicide rates, as only these are considered to be relatively comparable (Messner 1989; Neapolitan 1997; Pratt and Godsey 2003). Unfortunately, as van Wilsem (2004:90) notes, "the focus on homicide has narrowed the research field, and has resulted in a situation in which it is not clear if the structural correlates of national homicide rates relate in the same way to other types of crime."

Crime victimization surveys—in which individuals are asked about crimes committed against them—can partly substitute for the lack of official crime statistics and for the use of noncomparable definitions. Unfortunately, prior cross-national studies based on victimization surveys are also handicapped by using relatively small samples within nations as well as by having only a small number of nations available for analysis—studies using the highly regarded International Crime Victimization Survey typically include fewer than 50 nations. It is thus not surprising that prior studies fail to properly analyze regional associations and do not include direct measures of the cultural factors for which they are intended to capture (Nivette 2011).

The current study analyzes victimization reports based on surveys including very large numbers of respondents from nearly every nation on earth. In 2005, the Gallup Organization launched its remarkable World Poll project, which conducts an annual survey of respondents in each of what now add up to 161 nations—including 98% of the world's population. A victimization item has been asked every year, and by now the total number of respondents has passed the million mark. By

collapsing the annual samples, large case bases provide very reliable estimates even of rather rare incidents. Using these data allow us to address the overemphasis on homicide rates and the neglect of regional and cultural predictors in past studies.

CULTURAL VARIABLES AND CROSS-NATIONAL CRIME

Cultural variables have received relatively little attention in cross-national crime research. One reason for this is the difficulty in measuring cultural factors at the national level (Altheimer 2013a). Because of this, cross-national crime research tends to invoke cultural variables as the cause of some effect without actually including them in the analysis. Thus, as Peter Blau and Judith Blau (1982:118) pointed out, theories of culture and crime typically use cultural concepts "as hypothetical variables for which no empirical evidence is supplied. The typical explanatory format is that empirically observed relationships between objective conditions and crime rates are interpreted on the basis of cultural factors assumed to constitute the links between the antecedent variables and the rates." Worse yet, rather than attempting to account for regional differences by analyzing cultural variables, region is treated as a cultural measure per se. Hence, in a recent meta-analysis, Nivette (2011:104) pointed out that "cultural values remain scarcely tested at the international level" (for exceptions see Antonaccio and Tittle 2007; Hughes et al. 2015; Schaible and Hughes 2011). Consequently, the effects of cultural factors have been so little studied directly in cross-national research that there was no such research to be found in Nivette's meta-analysis.

Another reason for the lack of attention to culture in international crime studies is that theory regarding the relationship between culture and crime rates is underdeveloped (Altheimer 2013a). Recent work (Altheimer 2013a, 2013b) has looked to Nisbett and Cohen's (1996) culture of honor thesis as a theoretical framework linking culture to macrolevel crime. This thesis argues that societies with a culture of honor develop cultural milieus that encourage violence (Altheimer 2013a; Nisbett and Cohen 1996). While this argument has been tested on the individual level, it has only recently been tested on the macrolevel using cross-national homicide rates (Altheimer 2013a, 2013b). However, these studies have failed to consider the vital role of gender systems and cultural gender inequality in cultures of honor. The current study incorporates feminist theory into the culture of honor thesis and is the first to directly test it in cross-national crime studies using an actual measure of cultural gender inequality.

SUBCULTURES, CULTURES OF HONOR, AND CRIME

Much of current criminological research on culture is rooted in the work of Wolfgang and Ferracuti (1982). This work proposed the subculture of violence thesis—that higher levels of violence among minorities and the poor was the result of a subculture that socializes them into norms that promote the use of violence. Most subsequent work in this area has focused on theorizing a subculture of violence or honor to explain the higher rates of homicide in the U.S. South. Cultures of honor

tend to exist when the state is unable to protect property or punish theft and there is a risk of such crime (Altheimer 2013a). *Lex talionis* typically emerges in which each man must protect his own property and family (Nisbett and Cohen 1996). In these environments, individuals often resolve interpersonal disputes on their own, with violence considered an acceptable and normative method of doing so. Violence is used to preserve one's "reputation of strength and honor" (Altheimer 2013a:40). Cultures of honor operate "at the macro-level to influence crime by creating a social milieu that keeps individuals vigilant in their own defense" (Altheimer 2013a:30; see also Nisbett and Cohen 1996).

Underlying the relationship between cultures of honor and crime is a social environment in which there are "lower levels of informal social control and increasing feelings of strain felt by members of the population" (Altheimer 2013a:847). Individuals in these societies come to believe that violence is the way to respond to affronts to their reputation, as there are no or few other avenues of informal social control. At the same time, these individuals are more likely to be around people experiencing high levels of strain who may prompt retaliatory violence. Individuals in these cultures are also more likely to engage in predatory violence as they lack nonviolent strategies to deal with situations that may arise in other areas of their life (Altheimer 2013a). In this way, culture affects how individuals in these societies understand the behavior of others and whether they view violence as an acceptable response. This represents the core theoretical mechanism connecting cultures of honor to violence (Altheimer 2013a).

Cultures of honor disproportionately affect men because they align with traditional understandings of masculinity. However, because women are also socialized into such cultures, they participate in them as well (Altheimer 2013a; Nisbett and Cohen 1996). Yet cross-national research on crime has not examined the role of gender in cultures of honor. Gender systems develop and exist in all societies; they are constituted by stratified divisions of labor based on biological sex and socially constructed gender designations that typically entail polarized understandings of masculinity and femininity in which the former is deemed dominant and superior (Whaley and Messner 2002). The combination of these characteristics offers men increased opportunities and resources that facilitate a patriarchal cultural belief system, which privileges men and masculinity, devalues women and femininity, and justifies violence by men as a means of asserting and maintaining their socially constructed dominant status and power. Such cultural belief systems not only facilitate increased male-on-female violence, but also male-on-male as well as violence committed by females (Whaley and Messner 2002). Gender systems provide socially constructed definitions of what it means to be a man and a woman and what types of behaviors are consistent with such definitions. These definitions affect how men and women behave toward themselves and others (Hunnicutt 2009). In cultures of honor, masculinity is privileged and patriarchal cultural belief systems prevail into which both men and women are socialized. Thus, cultural gender inequality is one component of cultures of honor and it is expected that higher levels of cultural gender inequality will be associated with higher levels of violent crime. Yet no study has directly tested a cultural measure of gender inequality on cross-national crime. This study does so

using one element of cultural gender equality—respect for women—to test the following hypothesis:

> Hypothesis 1: Societies with higher levels of respect for women will have lower levels of violent crime rates.

Of course, structural forms of gender inequality can occur alongside cultural forms and may influence or facilitate the other. We discuss structural predictors of gender inequality later on in our description of structural predictors.

CULTURAL GENDER INEQUALITY AND REGION

Regional indicators have often been used as proxies of culture in cross-national crime studies (Altheimer 2013a; Neapolitan 1994; Pridemore 2002). Neapolitan (1994) uses Latin America as a proxy for what he describes as its "machismo" culture. Machismo culture is a classic example of a society characterized by a culture of honor with high levels of cultural gender inequality. Neapolitan (1994) argues that the "machismo" culture of Latin America, that is, "a culture of aggressive masculinity, intransigence, and sometimes violence," contributes to its higher levels of violence and homicide. Machismo is characterized by sexism and the control of women, violence, and the prioritization of bravery. A core component of machismo is that of "male domination and female subordination" (Asencio 1999:109). Machismo includes the belief that men have the right to control women and that violence is an acceptable means of doing so (Deyoung and Zigler 1994; Gutmann 1996). Through observing group sessions for male domestic abusers in Mexico, Gutmann (1996) identified that their main justification for their violent behavior was that they had been brought up in a machismo culture and, many of whom, had experienced violence themselves growing up.

In addition to violence against women, the macho ethos encourages violence against men (Gutmann 1996). This violence is further reinforced by the machismo characteristics of bravery, fearlessness, and the need to outperform other males. Being macho means never backing down from anything including drugs, alcohol, and violence. As Gilmore (1990:16) indicates, "In urban Latin America, for example, as described by Lewis (1961:38), a man must prove his manhood every day by standing up to challenges and insults, even though he goes to his death 'smiling.'" This highlights the culture of honor present in Latin America.

Neapolitan's (1994) study was the first to directly suggest the relationship between Latin American machismo and cross-national homicide. However, he did not directly measure machismo culture but instead used a Latin American binary variable with the assumption that it would represent "culture" net of all relevant structural and demographic variables. Chon's (2011) more recent study strongly critiques this assumption, but rather than attempting to measure culture directly, he merely added other structural variables to the regression analyses in order to attenuate the Latin American effect. Given that Nivette's (2011) meta-analysis identified Latin America as having the strongest association with cross-national homicide rates net of structural factors, the attenuation of its association in Chon's (2011) study may be due to the particular sample he used. By using a more proximate measure of one element of machismo culture and

cultures of honor—respect for women—the current study contributes to addressing the weaknesses of past research.

While more recent research controls for Latin America, it does not control for sub-Saharan Africa, which actually has the highest crime rate of any global region (Morrison et al. 2003). The association between Latin America and cross-national crime may in fact be even stronger than past research has found, given that sub-Saharan African countries were included in the referent category. Cultures of honor, which promote hypermasculinity and aggressiveness, are not specific to Latin America (Deyoung and Zigler 1994; Gilmore 1990). In sub-Saharan Africa, men have "institutionalized authority over women in numerous domains" including work and school (Bingenheimer 2010:2). However, husbands have the most authority over their wives (Abepoju and Mbugua 1997; Bingenheimer 2010; Dodoo and Frost 2008). Barker and Ricardo (2005) note that while there are multiple masculinities in this region, it is common for them to condone violence to varying degrees, particularly against women. This is not surprising as sub-Saharan African countries are herding societies (Rass 2006), which typically have cultures of honor due to the need to constantly protect one's herd (Nisbett and Cohen 1996). Thus, cultures of honor and their corresponding cultural gender inequality may also contribute to explaining sub-Saharan Africa's high levels of violent crime. This leads us to the following hypotheses:

> *Hypothesis 2: Latin America will have significantly higher violent crime rates compared to other regions.*
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> *Hypothesis 3: Sub-Saharan Africa will have significantly higher violent crime rates compared to other regions.*
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> *Hypothesis 4: The relationship between Latin America and cross-national violent crime rates will be partially mediated by respect for women.*
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> *Hypothesis 5: The relationship between sub-Saharan Africa and cross-national violent crime rates will be partially mediated by respect for women.*

As prior cross-national studies of crime do not include controls for both Latin America and sub-Saharan Africa, their results may be biased. To determine whether this is the case, we test prior structural theories of crime controlling for region. We begin by describing the prevailing structural theories of cross-national crime.

STRUCTURAL THEORIES OF CROSS-NATIONAL CRIME

Cross-national criminological research has identified several structural and demographic factors that affect crime rates. These correlates can be grouped into seven of the most common theoretical domains: Modernization/Development, Absolute Deprivation, Relative Deprivation, Social Disorganization, Institutional Anomie Theory, Routine Activity, and Political Structure (Nivette 2011).

Modernization/Development

The factor most often used to explain virtually any cross-national difference in crime is modernization. When applied to crime, a remarkable contradiction arises.

Some scholars argue that modernization will result in *higher* crimes rates due to the breakdown of traditional norms and values combined with weakened social control (Durkheim 1984 [1893]; see also Neumayer 2003; Salvesberg 2002), while others propose that crime rates will be *lower* in more modern nations due to the civilizing effects of modernization (Elias 1978 [1939]). Most research has identified a negative, rather than positive, relationship between modernization and cross-national crime rates. Consequently, scholars now provide more opportunity-based arguments emphasizing that modernization reduces the opportunity for interpersonal violence by decreasing the number and quality of social relationships in a society (LaFree and Kick 1986). Within this perspective, female enrollment in higher education has been used as one measure of modernization (Nivette 2011). It also represents a structural measure of gender inequality.

Absolute Deprivation and Relative Deprivation

Past research has examined the relationship between poverty and criminal behavior. Poverty is said to cause misery as well as envy, and hence people will seek to increase their material well-being by illegal means—their frustrations also prompting them to violent behavior. As for cross-national studies of crime, poverty is assumed to be a major factor, although there is not a lot of research testing its effects (Pridemore 2008).

It has often been argued that it is not poverty per se but poverty *relative* to others that leads to crime. That is, poverty tends to be accepted rather fatalistically in places where everyone is poor but rankles where the poor are confronted with many who are better off. This perspective often cites Merton's anomie theory, which suggested that individuals become frustrated and aggressive when they cannot achieve cultural goals through legitimate means and this leads to crime (Chamlin and Cochran 2006; LaFree 1999).

Institutional Anomie Theory and Governmental Social Support

Closely related to the poverty explanations of cross-national crime rates is the claim that to the extent that the state "insulates personal well-being from market forces" (Messner and Rosenfeld 1997:1393), crime will be reduced. Institutional-anomie theory (IAT) argues that as the economy becomes the dominant societal institution, its materialistic orientation permeates social life, such that individuals are more likely to behave based on the goal of achieving materialistic ends with little consideration for the legitimacy (or legality) of the means to such outcomes (Messner and Rosenfeld 1997). The ascendance of economic goals weakens other social institutions and their social control capacity. A key means of identifying whether the economy is the dominant societal institution is the degree of decommodification —that is, whether individuals can decide not to work if necessary without risking their livelihood (Esping-Anderson 1990:23). As such, social welfare expenditures are a core measure of decommodification.

Social Disorganization

Social disorganization theory argues that weakened social ties allow people to deviate from social norms at lower social cost. That is, where family ties are attenuated and people live in communities of strangers, rather than among people with whom they have close relationships, crime rates will be high (Altheimer 2007, 2008; Bjerregaard and Cochran 2008).

Routine Activity

The "routine activity" approach attributes crime to "the convergence in space and time of likely offenders, suitable targets, and the absence of capable guardians" (Cohen and Felson 1979:588). Routine activity theory applied on the aggregate level proposes that modernization creates more opportunities for committing crime by increasing unsupervised situations that place potential targets and motivated offenders in close proximity to each other. One way this has been measured is by female labor force participation, which is used to capture dwellings where no one is around during the day (Nivette 2011). Although it has not been conceptualized as such within this perspective, this is also a measure of structural gender inequality.

Political Structure

LaFree and Tseloni (2006) identify three competing explanations for how democracy affects crime. The "civilization perspective" argues that modernization, including democratization, generates higher levels of external and internal social control, which should decrease crime (Elias 1978 [1938]; see also Eisner 2001). The "conflict" perspective proposes that capitalist economic development, which is associated with democratization, increases deprivation which in turn increases crime. Finally, the modernization perspective draws on Durkheim to argue that democratization will only increase crime when countries are in political transition—that is, when they are undergoing extensive social change.

METHODS

Data

We use data from the 2006–2013 Gallup World Polls (GWP) for 153 countries/ territories. See Table I for a country list by region. The GWP is a regularly occurring nationally representative survey[4] of adult (15+ or 18+) residents in over 160 countries/territories that make up over 98% of the world's adult population. The

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[4] Surveys are nationally representative except in countries where areas posed safety threats to interviewing staff or in countries in which remote desolate areas were not surveyed. All models were reestimated excluding countries in which less than 85% of the population was represented (results not shown). The respect for women measure maintains a strong negative significant association with violent crime in these models.

Table I. Violent Crime Rate by Country Within Region (Rounded to the Nearest Whole #)

Europe		Europe Continued		Middle E./N. Afr.		Sub-Saharan Afr.	
Albania	3	Switzerland	4	Syria	4	Angola	34
Armenia	2	Tajikistan	2	Tunisia	6	Benin	9
Austria	3	Ukraine	3	Turkey	6	Botswana	13
Azerbaijan	2	Uzbekistan	1	UAE	2	Burkina Faso	7
Belarus	2			Yemen	7	Burundi	11
Belgium	6	**Asia**				Cameroon	12
Bosnia-Her.	5	Afghanistan	14	**Latin America**		Cen. Afr. Rep.	10
Bulgaria	3	Bangladesh	5	Argentina	13	Chad	23
Croatia	5	Burma (Myan.)	1	Belize	14	Comoros	7
Cyprus	3	Cambodia	3	Bolivia	15	Congo (Kin.)	17
Czech Rep.	5	China	3	Brazil	9	Congo (Bra.)	9
Denmark	3	Hong Kong	1	Chile	10	Djibouti	9
Estonia	5	India	6	Colombia	12	Ghana	13
Finland	2	Indonesia	2	Costa Rica	12	Guinea	12
France	6	Japan	1	Cuba	6	Ivory Coast	6
Georgia	2	Laos	5	Dom. Rep.	8	Kenya	11
Germany	3	Malaysia	4	Ecuador	17	Liberia	25
Great Brit.	3	Mongolia	6	El Salvador	15	Madagascar	2
Greece	4	Nepal	5	Guatemala	15	Malawi	16
Hungary	4	Pakistan	5	Guyana	9	Mali	5
Iceland	2	Philippines	6	Haiti	21	Mauritania	8
Ireland	3	Singapore	1	Honduras	15	Mozambique	26
Italy	6	South Korea	2	Jamaica	5	Namibia	15
Kazakhstan	4	Sri Lanka	3	Mexico	13	Niger	5
Kosovo	4	Taiwan	4	Nicaragua	11	Nigeria	17
Kyrgyzstan	3	Thailand	3	Panama	9	Rwanda	9
Latvia	4	Vietnam	3	Paraguay	13	Senegal	7
Lithuania	3			Peru	14	Sierra Leone	29
Luxem.	4	**Middle E./N. Afr.**		Puerto Rico	4	Somaliland	12
Macedonia	11	Algeria	11	Suriname	7	South Africa	11
Malta	3	Bahrain	4	Trin. & Tob.	9	Sudan	11
Moldova	5	Egypt	5	Uruguay	9	Tanzania	17
Nagorno.	2	Iran	8	Venezuela	17	Togo	10
Netherlands	4	Iraq	9			Uganda	15
Norway	3	Israel	4	**Northern Amer.**		Zambia	10
Poland	3	Jordan	3	Canada	2	Zimbabwe	9
Portugal	7	Kuwait	8	US	2		
Romania	4	Lebanon	4				
Russia	4	Libya	1	**Austr./New Zea.**			
Slovakia	3	Morocco	6	Australia	4		
Slovenia	3	Palestin. Terr.	6	New Zealand	2		
Spain	6	Qatar	5				
Sweden	4	Saudi Arabia	7				

survey is translated into the primary languages of the countries and is then given to approximately 1,000 individuals. The survey is conducted annually in most countries and, in others, is conducted only once every two or three years. In countries where at least 80% of the population has telephones, telephones are used to conduct the survey by means of either random-digit dialing or a nationally representative list of phone numbers; in all other countries, face-to-face interviewing is used. When data weights are applied, the data are nationally representative. The weights account for oversamples, household size, national demographics,[5] nonresponse,

[5] Gender, age, and where reliable data are available, education or socioeconomic status.

unequal selection probability, and design effects. More detailed information regarding the GWP's methodology came be found at http://www.gallup.com/178667/gallup-world-poll-work.aspx. For each country, we first drop all respondents less than 18 years of age to ensure consistent age samples across countries; we then pool data from all available years, weight it, and aggregate it to the country level. To measure the independent variables, we draw on data from the GWP and a wide variety of sources including the World Bank and the United Nations. Table II provides descriptive statistics for all the measures described below.

Variables

Dependent Variable Nearly all past research on cross-national crime operationalizes it as intentional homicide to avoid the inconsistent definitions of other types of crime across countries. Victimization surveys are often "preferred to police administrative data for most types of cross-national research because of their greater potential for achieving comparability in crime definitions across nations" (Lynch 2006:247). Yet, victimization surveys are generally difficult to compare cross-nationally as their designs and questions may be nation-specific (Lynch 2006). Even the more uniform International Crime Victimization Survey has small country samples (Lynch 2006:232), which prohibits the investigation of regional associations.

The GWP's nationally representative victimization question asked in over 150 diverse countries addresses these limitations. The GWP asked respondents the following victimization question: "Within the past 12 months, have you been mugged or assaulted?" Eight percent said yes to this question. We aggregate and weight these individual responses such that our dependent variable represents the percent of adults in each country who have been assaulted or mugged in the past 12 months. Values of the dependent variable for all countries are provided in Table I. We logarithmically transform this measure, which sufficiently normalizes its distribution to allow us to use ordinary least squares (OLS) regression models. Use of this measure avoids the obvious limits of studies based only on homicide rates.[6] Because the number of nations available to us is far larger than used in any previous studies, we can expect far more stable statistical findings. We use "violent crime rates" to refer to this logarithmically transformed measure.

Independent Variables—Region We breakdown region into two variables, one for Latin America and the Caribbean (hereafter Latin America) and one for sub-Saharan Africa (1 = country is in that region; 0 = otherwise). Using Latin America as an indicator variable is consistent with past research (Chon 2011; Neapolitan 1994; Nivette 2011); the only difference is, we are also interested in examining results for sub-Saharan Africa, so we remove it from the referent category and create a separate variable for it. We use the United Nations Statistical Division's geographic regions to classify countries as Latin American/Caribbean (26 countries)

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[6] Our measure of violent crime rates is correlated with homicide rates at .60. This measure of homicide rates comes from the United Nations Office on Drugs and Crime and is the average intentional homicide rate across all available years from 2005 to 2011. The correlation between our measure and homicide rates is consistent with the correlation that van Wilsem (2004) found between homicide rates and self-reported non-lethal violence (0.56, $p < .01$).

Table II. Descriptive Statistics

Variables	N	Mean	SD	Min	Max
Ln(Violent Crime)	153	1.73	0.77	−0.33	3.53
Latin America	153	.170	—	0	1
Sub-Saharan Africa	153	.235	—	0	1
Human Development Index (HDI)	146	0.65	0.19	0.26	0.95
School Enrollment[a]	143	71.96	20.34	21	123[b]
Adult Literacy[a]	114	78.37	21.24	12.8	99.8
Female Enrollment in Tertiary Ed.	118	37.85	30.73	0.17	101.69[c]
Ln(GDP per capita)[a]	137	8.60	1.17	6.31	11.04
Infant Mortality (per 1,000 births)[a]	144	40.45	39.97	3	166
GINI	136	40.14	0.10	24.7	70.7
Income Ratio[a]	117	19.82	20.47	4.5	128.8
General Gov. Support	120	10.97	8.29	0.02	30.51
Education Expenditure[a]	107	4.69	2.23	1	18.7
Health Expenditure[a]	142	3.47	1.98	0.4	8.6
Divorce Rates	73	1.86	1.02	0.17	4.33
Ethnic Heterogeneity	147	0.45	0.26	0	0.93
Democracy Scale	141	4.19	6.23	−10	10
Political Rights	151	3.37	2.12	1	7
Civil Liberties	151	3.21	1.80	1	7
Political Rights Transition	151	0.45	0.66	0	3
Civil Liberties Transition	151	0.56	0.60	0	2
Population Growth Rate	150	1.47	1.38	−1.73	6.49
Urbanization[a]	145	57.61	22.40	10	100
Female Labor Participation	148	50.83	16.82	12.3	88.5
Young Male (15–24 years old)	147	18.29	3.28	10.9	25.8
Unemployment Rate[a]	130	13.85	13.69	0.70	85
Respect for Women	148	64.86	19.57	18.11	98.89

[a]Data were downloaded from the Association of Religion Data Archives, www.TheARDA.com, and were collected by Roger Finke and Brian J. Grim.
[b]Percentages "can be greater than 100% as a result of grade repetition and entry at ages younger or older than the typical age at that grade level" (ARDA 2005).
[c]Percentages can be greater than 100% as the ratio uses the "population of the age group that officially corresponds" to tertiary school and some females enrolled in tertiary school may not be within that age group (ARDA 2005).

and sub-Saharan African (36 countries) (United Nations Statistics Division 2016). The countries that comprise these regions are identified in Table I.

Independent Variables—Cultural Gender Inequality To directly capture cultural gender inequality (as one component of cultures of honor), we use one element of it—respect for women—from the GWP: "Do you believe women in [this country] are treated with respect and dignity, or not?" Given that in cultures of honor men would be expected to respond differently than women, we use the weighted percentage of women who identified that women are treated with respect and dignity in their country (i.e., responses of yes). Constructing the measure from the full sample does not change the results. Examining correlations between estimated earned income for females (PPP US$; 2003 United Nations data from ARDA 2005) and respect for women, we find that they are significantly correlated: 0.42, $p < .001$ (134 countries). Respect for women is also significantly correlated with the Gender Empowerment Index (2003 United Nations data from ARDA 2005): 0.33, $p < .01$

(74 countries). The Gender Empowerment Index "is a composite index measuring gender inequality in three basic dimensions of empowerment: Economic participation and decision-making, political participation and decision-making and power over economic resources" (ARDA 2005). Past research has critiqued studies for only using structural measures of gender equality as cultural beliefs regarding gender inequality can persist even when there are significant economic improvements in gender equality (Beteta 2006). Respect for women improves upon past research by providing a ground-up measure of gender equality that captures the actual perceptions and experiences of women in these countries, which likely reflect overarching cultural beliefs regarding gender. In this way, it makes sense that respect for women is significantly, but only moderately, correlated with earned income for females and the Gender Empowerment Index as it likely captures cultural, rather than structural, forms of gender equality.

Independent Variables—Structural Predictors Modernization/development has been operationalized in numerous ways, including adult literacy, female enrollment in higher education, and the Human Development Index (Antonaccio and Tittle 2007; LaFree and Kick 1986; Nivette 2011). We use the following variables to measure modernization/development: (1) the 2005 Human Development Index (United Nations Development Report); (2) the 2003 adult literacy rate (United Nations Development Report; ARDA 2005); (3) school enrollment in primary, secondary, and tertiary levels (% of school-aged population) (United Nations Development Report; ARDA 2005); and (4) the 2005 female enrollment in tertiary school (% gross) (World Bank, n.d.). We examined combining the three education measures into one index. However, such a measure does not have a statistically significant association and instead masks the association of female education. As such, we test each measure separately.

Prior studies have generally operationalized absolute deprivation/poverty as the gross domestic product (GDP) per capita (Antonaccio and Tittle 2007; LaFree and Kick 1986; Neumayer 2003; Rosenfeld and Messner 1991), which overlaps with the economic development/modernization explanations described above. Pridemore (2008) suggests that infant mortality is a better measure as it captures more than an income-based representation of poverty (see also Messner, Raffalovich, and Sutton 2010; Nivette and Eisner 2013). We use the 2003 infant mortality rate (per 1,000 live births) (United Nations Development Report; ARDA 2005). We also use the standard measure of poverty, the 2003 GDP per capita logarithmically transformed (ARDA 2005).

The relative deprivation perspective is typically operationalized with measures of inequality used as proxies for a greater likelihood of experiencing relative deprivation. Measures include the GINI Index (Avison and Loring 1986; Blau and Blau 1982; Chamlin and Cochran 2006; Krahn, Hartnagel, and Gartrell 1986; Pratt and Godsey 2003; Pridemore 2008) and income ratios (Altheimer 2007; Nivette 2011; Nivette and Eisner 2013). Following this research, we use the 2005 GINI Index (World Bank, n.d.) and the income ratio of the 10% of people with the highest income to the 10% of people with the lowest income[7] (i.e., the p90p10 ratio; United

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[7] These data come from the United Nations 2005 Human Development Programme Report. While most data come from 1990–2002, two countries had data from the 1980s (Rwanda 1983 and Sierra Leone 1989).

Nations data from ARDA 2005). For the GINI Index, if data were missing for 2005, we used data from the nearest year but not exceeding a maximum of 10 years (Messner, Raffalovich, and Shrock 2002; Nivette and Eisner 2013). We also investigated combining the absolute and relative deprivation measures into a single index as well as combining the relative deprivation measures into their own index, but neither index significantly affects violent crime rates net of the regional indicators. Thus, we present the results for each indicator separately.

To test IAT we use three measures (see Altheimer 2008): (1) general governmental support—the percentage of GDP spent on medical care, sickness, old-age benefits, employment injury, family, maternity, invalidity, survivors' benefit, and other income support and social assistance benefits not included in the other categories in the latest available year (2000–2007) from the World Social Security Report (International Labor Office 2011); (2) educational expenditure—the percentage of GDP spent on education in 2000 or 2002 from the United Nations Human Development Report (ARDA 2005); and (3) health expenditure—the percentage of GDP spent on public health in 2000 or 2002 from the United Nations Human Development Report (ARDA 2005).

In cross-national crime research, social disorganization theory is measured by divorce rates (Bjerregaard and Cochran 2008; Gartner 1990) and population heterogeneity (Altheimer 2007, 2008; Antonaccio and Tittle 2007). We use the 2005 officially reported divorce rate (United Nations Statistics Division 2006). In countries where 2005 data were not available, we use data from the next closest available year going back no more than four years (i.e., 2001). Following Antonaccio and Tittle (2007), we measure population heterogeneity using a measure of ethnic fractionalization from Alesina et al. (2003).

Some key variables for applying the routine activity perspective to cross-national research are measures of modernization, including GDP (i.e., "accessible targets") and school enrollment (i.e., motivated offenders) (Bennett 1991). However, we can investigate five other pertinent variables: population growth (the total population growth rate from 2000 to 2005) and urbanization as measures of structural factors[8] increasing the proximity of targets and offenders, female labor force participation as a measure of unsupervised situations such as houses and apartments where no one is home during the day (% of the female population ages 15+ involved in the labor force in 2005 from the World Bank), and the percent of the male population aged 15 to 24 years old in 2005 and unemployment rates as measures of the pool of motivated offenders. Unemployment rates may also be used as a measure of guardianship as more individuals would be home during the day. Population growth and male population aged 15–24 years old are taken from the United Nations Department of Economic and Social Affairs (2012). Urbanization refers to the percentage of the population living in an urban area (2003 United Nations from ARDA 2005). To measure unemployment, we use 2005 unemployment data, which refers to the percentage of the labor force that is without employment (CIA World Factbook 2005 from ARDA 2005).

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[8] Both of these predictors have also been used to test the modernization/development perspective.

To measure political structure, we created LaFree and Tseloni's (2006) democracy scale using 2005 data, used the 2005 Political Rights and Civil Liberties indices from the Comparative Survey of Freedom provided (Freedom House 2005; Lin 2007), and also created transition scores for both the Political Rights and Civil Liberties indices (i.e., subtracting the 2000 and 2005 index values and taking their absolute value; see Lin 2007).

Method

As our dependent variable approximates a normal distribution, we use OLS, which is the most parsimonious modeling strategy. We conducted numerous regression diagnostics to ensure that the underlying OLS model assumptions were met. For all models, the variance inflation factors (VIFs) are under 3, which suggests that multicollinearity is not a problem. We also examined the data for potential outliers using leverage values, DF betas, Cook's D, and studentized and standardized residuals. Overall, these tests suggested Libya, Madagascar, and Afghanistan as potential outliers. In some models, Hong Kong, Uzbekistan, and Tajikistan were indicated as potential outliers. Due to this, we also estimate robust linear models (RLMs, using M-estimation with Huber weighting), which down-weights influential cases and allows outliers to remain in a model without unduly influencing the results (Fox 2008). To conserve space, we only discuss the RLM results when they substantially differ from those of the OLS models, which occurred for only one independent variable.

First, we test the relationship between region and violent crime rates to determine if Latin America and sub-Saharan Africa have significant associations with violent crime. Second, as our aim is to determine whether major theories of cross-national crime hold up under controls for region, we test each theory by estimating the association of its measured indicators with violent crime using bivariate regression analyses with the largest sample possible. This provides the most *liberal* tests of the theories. We do this intentionally to give each theory the best chance of being supported initially. To determine if these indicators have significant associations on logarithmically transformed violent crime rates net of region, we also estimate models that include Latin American and sub-Saharan African regional dummy variables. To be valid, the indicators of a particular theory ought to be significantly associated with violent crime net of region. We summarize these bivariate and multivariate results in Table III for all the predictors.[9]

To determine if the independent variables can account for regional associations, we also compare the regional coefficients between models with and without the independent variables and test whether the regional coefficients are significantly reduced using seemingly unrelated estimation (suest). Suest handles the possibility of the cross-equation correlation of errors by simultaneously estimating a Huber-White sandwich covariance matrix (see Clogg, Petkova, and Haritou 1995). We

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[9] All nonpresented models are available upon request from the authors. The missing countries for each model are available upon request from the authors.

Table III.   OLS Models Predicting Logged Violent Crime Rates

	N	Bivariate		Controlling for Latin America and Sub-Saharan Africa	
		Direction	Significance	Direction	Significance
HDI	146	−2.224	$p < .001$	− 1.039	$p < .01$
School enrollment	143	−.016	$p < .001$		NS
Literacy	114	−.013	$p < .001$		NS
Female education	118	−.010	$p < .001$	−.004	$p < .05$
Ln(GDP)	137	−.287	$p < .001$		NS
Infant mortality	144	.008	$p < .001$		NS
GINI	136	.041	$p < .001$		NS
Income ratio	117	.020	$p < .001$		NS
Governmental welfare	120	−.021	$p < .05$		NS
Education expenditure	107		NS		NS
Health expenditure	142	−.067	$p < .05$		NS
Divorce rate	73		NS		NS[a]
Ethnic heterogeneity	147	1.211	$p < .001$		NS
Democracy scale	141		NS		NS
Political rights	151		NS		NS
Civil liberties	151		NS		NS
Political rights transition	151	.265	$p < .01$		NS
Civil liberties transition	151		NS		NS
Population growth rate	150	.209	$p < .001$	.087	$p < .05$
Urban	145	−.009	$p < .01$		NS
Female labor participation	148		NS	−.008	$p < .01$
Unemployment	130	.018	$p < .001$	.009	$p < .05$
Male youth population	147	.091	$p < .01$	.027	NS
Women respected	148	−.022	$p < .001$	−.013	$p < .001$

[a]The model with divorce rate does not control for sub-Saharan Africa, as there was not a sufficient number of sub-Saharan African countries to do so.

discuss all of these results, but only present them in-text when they are statistically significant.

RESULTS

Descriptively, Latin America and sub-Saharan Africa have much higher violent crime rates compared to all other regions. The rate of violent crime is 12% in Latin America, 13% in sub-Saharan Africa, and 4% in all other regions. But are these differences statistically significant? To test Hypotheses 2 and 3, we begin by estimating an OLS regression model predicting violent crime rates (results not shown, country n = 153). As predicted, Latin America ($b = 1.11$, $p < .001$) and sub-Saharan Africa ($b = 1.14$, $p < .001$) have significantly higher violent crime rates compared to all other regions. Examining the R^2, the Latin America and sub-Saharan Africa indicators explain roughly 51% of the variation in violent crime rates. Of course these regional indicators are merely proxies for other factors; the question then is, what are they measuring?

Structural Predictors

Table III shows that in terms of the modernization variables, only Human Development Index and female education measures maintain statistical significance (see Table 4, Models 3 and 5) net of region. The suest results show that Human Development Index ($\chi^2 = 6.63$, $p < .05$) and female education ($\chi^2 = 6.00$, $p < .05$) significantly reduce sub-Saharan Africa's coefficient, although they do not significantly reduce Latin America's coefficient. None of the measures of absolute deprivation, relative deprivation, IAT, social disorganization, and political structure have statistically significant coefficients net of region (see Table III).

In terms of routine activity predictors, Table III shows that population growth, female labor participation, and unemployment all have significant associations with violent crime rates in bivariate models and in models controlling for region. Population growth ($\chi^2 = 4.74$, $p < .05$) significantly reduces sub-Saharan Africa's association according to suest. Examining robust regression models, young male's positive association becomes statistically significant when outliers—Libya, Madagascar, and Hong Kong—are heavily down-weighted. Reestimating the suest results down-weighting these outliers shows that the rate of young males significantly explains roughly 6% of Latin America's coefficient ($F(1, 146) = 5.04 = p < .05$) and roughly 10% of sub-Saharan Africa's coefficient ($F(1, 146) = 5.99$, $p < .05$).

Structural Variables Overview

We tested 23 structural measures meant to explain variations in violent crime rates from seven major theoretical domains. Of these, 16 had statistically significant bivariate associations. But when we controlled for Latin American and sub-Saharan African regions, only Human Development Index, female education, population growth, female labor participation, unemployment, and young male rate (in robust models) remained statistically significant. Additionally, only one structural variable —young male rate—contributed to explaining Latin America's coefficient and four variables contributed to explaining sub-Saharan Africa's coefficient—Human Development Index, female education, population growth, and young male rate. To help rule the possibility of finding a significant result by chance, for Human Development Index, female education, population growth, female labor participation, young male rate, and unemployment we randomly selected 75% of their sample and reestimated each of the models (results not shown). In these models, the coefficient for female education and population growth are no longer statistically significant. Thus, it is possible that the initial results for female education and population growth were due to chance; at the very least, it shows that the initial results were not robust to sample changes. Human Development Index, female labor participation, unemployment, and young male rate (when outliers are down-weighted) continue to have significant associations with violent crime rates. Still, the associations are trivial compared to those of region, which remain strong and are thus likely due to cultural differences.

Cultural Gender Inequality

Table III shows that respect for women has a significant, strong negative association with violent crime rates in bivariate analyses and maintains this relationship net of region, providing support for Hypothesis 1. Moreover, the suest results show that respect for women significantly accounts for 40% of Latin America's coefficient ($\chi^2 = 17.51$, $p < .001$) on violent crime rates and 10% of sub-Saharan Africa's coefficient ($\chi^2 = 6.56$, $p < .05$). This provides support for Hypotheses 4 and 5. To ensure these results are not due to chance, we reestimated the models using a random sample of 75% of the cases. Respect for women maintains its negative, statistically significant association with violent crime rates and continues to significantly reduce both regional associations (results not shown). This supports the prediction that cultural gender inequality, at least in part, contributes to explaining the regional associations. Notably, it accounts for some of sub-Saharan Africa's association, which has not been previously theorized. We also reestimated this model controlling for each of the previous structural factors separately. Respect for women maintains its significant negative association in all models even though the sample size changes across them (results not shown). Thus, the association between respect for women and cross-national violent crime is not due to structural factors, including structural gender inequality. Next, we examine whether this association remains net of multiple structural variables.

Structural, Cultural, and Regional Variables

We now investigate multivariate analyses for all the indicators that had statistically significant associations with violent crime net of region—Human Development Index, female education, population growth, female labor participation, unemployment rate, young male rate (with outliers down-weighted), and respect for women.[10] First, we examined whether any of the variables could be combined into an index to reduce the possibility of multicollinearity and increase power. Factor analysis showed that Human Development Index, female education, and young male all loaded on the same factor at .70 or higher and formed a reliable index (Cronbach's alpha = .89). Given this, young male was reverse-coded, all three variables were standardized, and then combined into a factor, which we have labeled modernization.

Table IV presents the results of the models. Model 1 shows that net of the other variables, population growth has a positive statistically significant association with violent crime rates and modernization has a negative statistically significant association. As predicted, respect for women has a statistically significant negative association with violent crime rates. Model 2 adds the regional variables, which attenuates all the associations except population growth and respect for women.

[10] Given sub-Saharan Africa's history of internal and external violent conflict, we also estimated these models controlling for the number of battle deaths resulting from armed conflicts occurring from 2006 to 2013 (World Bank, n.d.). This variable does not significantly affect violent crime rates, does not affect the results for population growth and respect for women, and does not significantly explain either regional association (results not shown).

Table IV. Structural, Cultural, and Regional Measures Predicting Violent Crime, OLS and RL Unstandardized and Standardized Coefficients Displayed (SE)

	Model 1		Model 2		Model 3		Robust Linear Model 4		Robust Linear Model 5		Weighted LS[a] Model 6	
	Unstand.	Beta	Unstand.	Beta	Unstand.	Beta	Unstand.	Beta	Unstand.	Beta	Unstand.	Beta
Latin America			.633*** (.174)	.303	1.117*** (.151)	.546			.680*** (.172)	.324	1.079*** (.074)	.602
S.S. Africa			.766*** (.176)	.360	1.062*** (.156)	.500			.808*** (.174)	.457	1.023*** (.111)	.524
Modernization	-.163* (.066)	-.218	-.075 (.064)	-.101			-.151* (.070)	-.188	-.080 (.063)	-.100		
Population Gr.	.172*** (.040)	.352	.111** (.038)	.228			.171*** (.043)	.303	.096* (.037)	.170		
Female Labor	.001 (.003)	.019	-.005 (.003)	-.121			.001 (.003)	.021	-.006* (.003)	-.129		
Unemployment	.000 (.005)	.004	-.001 (.004)	-.015			.001 (.005)	.019	-.002 (.004)	-.041		
RespectWomen	-.020*** (.003)	-.562	-.012*** (.003)	-.349			-.019*** (.003)	-.485	-.010** (.003)	-.255		
Constant	2.683*** (.234)		2.38*** (.249)		1.346*** (.055)		2.645*** (.248)		2.335*** (.246)		1.387*** (.047)	
Country N	101		101		101		101		101		101	
R^2	.54		.64		.48		.49		.63		.55	
Adjusted R^2	.51		.61		.47		.47		.60		.54	

Note: ***$p < .001$, **$p < .01$, *$p < .05$.
[a]Weighted using the robust linear weights generated from Model 5.

According to the standardized coefficients, respect for women has the second largest association in the model after sub-Saharan Africa. According to the suest models comparing Models 2 and 3, both of the regional associations are significantly attenuated by the addition of these variables—Latin America by 43% ($\chi^2 = 13.19$, $p < .001$) and sub-Saharan Africa by 28 percent ($\chi^2 = 4.39$, $p < .05$). Models 4 and 5 estimates Models 1 and 2 using RLMs. Results from Model 4 mirror those of Model 1. Model 5 shows that net of region, female labor participation's association with violent crime rates becomes statistically significant. Because suest requires consistent weights, Model 6 is a WLS model using the weights generated from Model 5. RLMs and WLS models using the weights generated by a RLM produce exactly the same results. Suest models comparing Models 5 and 6 continue to show that both regional associations are significantly attenuated—Latin America by approximately 37% ($F(1, 100) = 16.02$, $p < .001$) and sub-Saharan Africa by approximately 21% ($F(1, 100) = 4. 25$, $p < .05$). Examining the standardized betas, in these models, the regional variables have the strongest associations, followed by respect for women. Combined, the variables in these models explain between 63%–64% of the variation in violent crime rates in RLM and OLS model, respectively. Of course these results are necessarily based on only 101 countries due to missing data on some of the independent variables and should thus be interpreted accordingly.

DISCUSSION AND CONCLUSION

This study further develops the culture of honor thesis in application to cross-national crime studies by highlighting the importance of cultural gender inequality. Using a direct measure of cultural gender inequality, we find that it has the strongest statistically significant association with violent crime rates, after region. This association cannot be attributed to other structural factors as respect for women maintains its significant association even controlling for structural factors. Respect for women also explains the largest percentage of the strong regional associations. Still, regionalism is the most potent factor affecting cross-national violent crime rates. Indicators for Latin America and for sub-Saharan Africa wipe out the strong bivariate associations of nearly all the structural variables from cross-national crime theories.

This study makes several contributions to cross-national crime research. First, we move beyond operationalizing cross-national crime as intentional homicide and instead examine a more common type of violent crime—assaults and muggings—for a considerably larger more diverse sample than prior research. We provide data for our dependent variable, which allows future research to move away from intentional homicide as the one-and-only measure of cross-national crime. Using this new measure of violent crime, we generally find support for most prior theories of cross-national crime in bivariate analyses. Second, we show that support for these theories is almost entirely attenuated when regional variables are included in the models. While studies have begun to control for Latin America, because sub-Saharan Africa remains in the referent category, results from these models may still be biased. We find that region has the largest association with violent crime rates; as such, Latin American and sub-Saharan African indicators should be included as

controls in all future cross-national crime studies. But what exactly is region capturing? We find that one element of cultures of honor—cultural gender inequality—and, to a lesser extent, the rate of young males, contribute to explaining these regional associations. Human Development Index, female education, and population growth also contribute to explaining sub-Saharan Africa's association. In the final models, we are able to explain 43% of Latin America's association and 28% of sub-Saharan Africa's association with violent crime. The residual relationships likely represent other cultural factors. Finally, while past research emphasizes structural predictors of crime, we theorize and show that a measure of culture has the strongest association with violent crime rates after region. This highlights the need for future studies to incorporate more cultural measures and to further test the culture of honor thesis.

This study is not without limitations. Like prior cross-national crime research, we cannot control for every variable ever theorized. Past studies often theorize one new variable, which captures a country characteristic previously neglected, and then control for a standard set of variables, typically some measure of poverty, inequality, and certain sociodemographic variables. In doing so, the vast majority of this research turns a blind eye to the "new variables" found in other research unless they better measure the standard set of controls or have such a substantial effect that they cannot be ignored (e.g., Latin America). Of course the advantage of this is that these controls are often easily handled by regression models even with small country samples. The disadvantage being that large quantities of research are not in conversation with each other. In this study, we take a different approach and test all major cross-national crime theories. The obvious disadvantage of this approach is the inability to include all 24 variables in one model and the possibility that with so many tests at least one significant result may be due to mere chance. We dealt with this possibility by retesting significant measures with a random subsample of countries, which suggested that two associations were either due to chance or were not robust to changes in the sample. The advantage of this approach is that it allowed us to show strikingly consistent, strong, and robust regional association across samples that attenuate the associations of nearly all operationalizations of cross-national crime theories. Additionally, we used the largest sample possible for each structural variable to provide the most liberal tests of the structural theories, which resulted in different sample sizes across models. It is possible that some of the statistically significant associations could disappear with smaller samples and some nonsignificant associations could become significant with larger samples. The former was in fact the case for two measures, which did not maintain their significant associations with a random subsample of countries. The latter is currently impossible to test as we used data for all available countries for each measure; however, this is important to consider when interpreting the findings.

A second limitation is that we measure only one aspect of the gendered elements of cultures of honor—respect for women. Because perceptions of how women are treated in a society are likely a reflection of the underlying cultural values, this measure is a strong improvement over regional proxies. While using one measure to capture a broader theoretical concept is common in cross-national crime studies (see, e.g., Altheimer 2007; Krahn et al. 1986; Pridemore 2008, 2011), the large

percentage of Latin America's association explained by this variable calls for more research using diverse indicators of cultural gender inequality. A third limitation is the possibility of spatial autocorrelation beyond what is captured by region. Future research would benefit from directly modeling how neighboring countries may influence crime rates, which we do not do here in order for our research to be comparable to past studies. Last, like the majority of prior studies of cross-national crime, the data used in this study are cross-sectional. Given this, we intentionally chose independent variables for years prior to the dependent variable except for GWP variables which are necessarily contemporaneous.

This study is the first to test a gender component of cultures of honor, and we find that it has a large association with cross-national violent crime net of region. This study is also the first to test the associations between both Latin America and sub-Saharan Africa on cross-national violent crime rates for a large diverse country sample. We find that these associations are not principally due to structural factors. Instead, one cultural measure—respect for women—explains the largest percentage of both regional associations; yet large regional associations remain. Additional research is needed identifying what other cultural elements are driving these associations.

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