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Time and Country Variation in Contentious Politics

Multilevel Modeling of Dissent and Repression

ABSTRACT: Previous analyses of the relationship between dissent and repression have turned up mixed, and often conflicting, results. Although research on the effect of repression on dissent has been inconsistent, it becomes obvious that time and country variation does matter: the effects of dissent and repression do not occur in a social vacuum. Our analyses seek to determine what country-level contextual variables influence levels of nonviolent and violent dissent, as well as nonviolent and violent repression. We include a battery of variables describing domestic economic and political conditions, sociodemographics, and global linkages. We test specific hypotheses about these potential determinants of various forms of dissent and repression by using data on 530 event-weeks of the period 1994–2004 across 97 countries. We find that proximity to the center of the world polity network and capacity for state terror have an effect on both dissent and repression, and international, political, and economic factors have an impact when dissent and repression are broken down by violence.

The relationship between the behavior of governments and citizens is dynamic and often contentious. This has been especially true in the case of the relationship between state repression and civil dissent. Governments often use violence and

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sanctions in order to keep citizens in line and to maintain the political and economic security of the state; citizens dissent in order to express their displeasure with the behavior of the state or to make demands for change when they feel that access to the political process is limited or their demands are going unheard. Scholars have shown that the relationship between repression and dissent is sometimes reciprocal in nature—dissidents respond to government action with more dissent, and governments respond to dissident action with more repression (Lichbach 1987; Moore 1998, 2000). However, the relationship between repression and dissent is complicated, as conflict does not always breed more conflict (Lichbach 1987; Lichbach and Gurr 1981). In this article we ask: How does the context in which contentious politics take place affect levels of dissent and repression?

Despite continued research on the dissent–repression nexus, a concrete understanding of the relationship between the two concepts underlying the nexus remains underdeveloped. Scholars have been unable to consistently explain fluctuations in the levels of dissent and repression. In addition, many studies focus on only one or a handful of countries, which makes generalizing across countries and over time elusive. Our research tries to overcome these shortcomings by considering time and by using a large sample of countries, representing a variety of contextual characteristics.

Previous work addressing similar questions has utilized Poisson regression (Rasler 1996), Almon lagged models (Davenport 1996), logistic regression (Ellingsen 2000), and time-series analysis (Davenport 1995). These models have provided significant contributions to the understanding of the dissent–repression nexus in sociology and political science, but the contexts in which these conflicts occur have not been fully integrated into the discussion, especially when comparing across countries.

We carry out multilevel analyses in order to take the variation between and within countries into account when determining how dissent and repression affect each other. We nest “country-weeks” for which we have contentious political activity within units identifying (a) country year and (b) countries. We test effects of time-varying country-year covariates and time-invariant country covariates on contentious country-week events. This method provides a nuanced understanding of the collective effects of both immediate and contextual characteristics without controlling out or minimizing the effects of individual variables on the dependent variable. As a result, our analysis is able not only to elaborate on the effects of dissent on repression but also to place them within a larger social political, economic, and international context.

Theoretical Background

The Dissent–Repression Nexus

Social scientists have long been interested in what causes dissent and what causes repression. Specifically, scholars have tried to uncover how they are interrelated, which is generally known as the dissent–repression nexus. Yet, many studies

examine only one side of this equation at a time. Aside from important theoretical work on the dissent–repression nexus (Lichbach 1987; Lichbach and Gurr 1981), many treatments of these processes were especially concerned with how much and what kind of state repression causes dissent or revolution (Aya 1979; Boswell and Dixon 1993; Francisco 1995; Gartner and Reagan 1996; Gupta, Singh, and Sprague 1993; Khawaja 1993; Moore 1966; Opp and Roehl 1990; Rasler 1996; Skocpol 1979; Tilly 1973). More recent work has tried to unpack the use and timing of repression against dissent (Davenport 1995, 1996; Henderson 1991; Moore 2000) and to understand the reciprocal nature of dissent and repression (Carey 2006; Hoover and Kowalewski 1992; Moore 1998). There are few generalizable conclusions in the literature on repression’s effect on dissent, and the ones we have lead to more questions than answers. Repression can cause dissent if the political opportunity structure is accommodating (Gupta, Singh, and Sprague 1993; Rasler 1996). Repression can shut down dissent in unfavorable political contexts due to the extremely asymmetrical coercive capacities of states and dissidents. In addition, repression can have a curvilinear effect where protest increases until repression gets too strong, and then it drops (McAdam 1996)

One reason for the varied findings is most likely due to the inconsistent use of the term “dissent.” Much of the early research focus was on revolution and violent rebellion against authoritarian states (Boswell and Dixon 1990, 1993; Moore 1966; Skocpol 1979; Tilly 1973), and on the use of primarily violent tactics against government targets. Other work considers dissent in largely nonviolent terms—protest demonstrations, boycotts, marches, strikes, and occupations. These studies pertain mostly to democratizing or democratic countries because the political opportunity structure (Meyer 2004; Meyer and Minkoff 2004) is more favorable to public dissent. The use of violent or nonviolent dissent is treated as a choice in the “rational actor” tradition that dissidents make each time they decide to take action, after evaluating the success or failure of their previous tactics (Lichbach 1987; Moore 1998, 2000). However, actors do not make choices solely on previous state actions; rather, values, norms, and the social and political environment inform their decisions as well.

There has been more consensus around the effect dissent has on repression. It appears that governments use coercive tactics to minimize disruptions to the social order in almost any society. The intercountry differences lie mostly in what *type* of tactic to use. Countries that are more democratic tend to use codified law to deal with nonviolent dissent, while countries that are more authoritarian are quick to use political violence to maintain their hold on society. In this sense, state structure is expected to dictate the type of action taken. However, the repression literature has a corollary “rational actor” line to the dissent literature in the sense that states are supposed to examine their prior repressive action and the dissident response it received before deciding what type of further repressive action to take (Lichbach 1987; Moore 1998, 2000).

Davenport summarizes the literature on the use of direct action repression,

which he defines as “the actual or threatened use of physical sanctions against an individual or organization . . . for the purpose of imposing a cost on the target as well as deterring specific activities and/or beliefs perceived to be challenging to government personnel, practices or institutions” (2007: 2). He draws two main conclusions from his examination of the literature. First, a “Law of Coercive Responsiveness” can be established: States respond to status quo challenges in some fashion, defending it in coercive ways, if needed (2007: 7). Second, a “Domestic Democratic Peace” regularity exists: Stable democracies are less likely to repress and more likely to use softer tactics when they do restrict dissidents (2007: 11). Moreover, two peripheral conclusions are drawn: (1) economics appear to matter, but the relationships of the local and global economy with domestic repression are unclear; and (2) while international linkages, such as treaties and other agreements, sometimes seem to decrease repression and other times have no effect, they are still considered important by scholars.

Context and Contentious Politics

One thing that is clear from our review of dissent–repression scholarship is that *context matters*. Referring to the literature on the subject, we identify four main groups of context characteristics from previous literature that we examine here: domestic economic factors, domestic political factors, sociodemographics, and global linkages. In this section, we examine these contextual characteristics more closely, and hypothesize on their relationships with the dissent–repression nexus. Although previous research has explored some of these effects, it has not analyzed them simultaneously.

1. *Domestic economic factors*. Scholars examining the impact of economic factors have primarily focused on what economic conditions lead dissidents to act against the state. Some scholars (Huntington 1968) have argued that the fast-paced forces of modernization, including economic modernization, led to a disconnect between rising expectations for personal gain and real economic outcomes, which caused state-directed anger. Other scholars have found that the relationship is more ambiguous: sometimes inequality causes dissent or rebellion; sometimes it does not (Hartman and Hsiao 1988; Lichbach 1989; Muller 1985; Muller and Weede 1990; Ortiz 2007; Weede 1986, 1987). Subsequent work (Gurr 1970) found that instead of the pace of change being the cause political strife, illegitimate regimes and other structural factors mattered more for explaining political violence. In this work and others (e.g., Tilly 1973), dissidents are rational actors seeking to effectively maximize their gain, not angry mobs without clear aims. The link between economics and repression is less clear. There is some relationship between democracy and equality, such that authoritarian states tend to be more unequal, with much of the state’s wealth concentrated in the hands of a few. In this sense, high average poverty may be correlated with greater repression, as the ruling elite seeks to maintain the status quo. On the other hand, poverty is often a characteristic of weak states, and

weak states are often unable to quell dissent effectively (Davenport 2007). We therefore make the following hypotheses regarding the moderating effects of the economy on the dissent–repression nexus:

H1: Poor economic conditions increase dissent as a response to repression.

H2: Poor economic conditions increase repressive responses to dissent.

2. *Domestic political factors.* The moderating effects of the political environment on dissent are perhaps more obvious than the economic factors. The dissent–repression nexus is an inherently political process, and research on the relationship between the two has shown that the political characteristics of the state have an impact on this relationship (Gupta, Singh, and Sprague 1993; Rasler 1996; Tilly 1978). Davenport’s (1996) analysis of lagged effects on repression found that political factors had a significant impact on rates of repression. In his analysis, he found that, in the short term, repression was affected by democracy, political conflict, and dependency, and both democratization and political conflict have more long-term effects as well. Gupta, Singh, and Sprague (1993) found that democracies and nondemocracies respond to dissent differently, and dissidents are often hesitant to protest in highly autocratic societies because of the costs of political activity. We hypothesize that:

H3: Countries that are more democratic have more nonviolent dissent as a response to repression.

H4: Countries that are more democratic have more nonviolent repression as a response to dissent.

3. *Sociodemographics.* Demographic characteristics that affect the relationship between dissent and repression are typically long-standing country characteristics such as ethnic and religious heterogeneity, population size, and urbanization. The degree of ethnofractionalization in a country has become even more salient in the past several decades, since the end of colonization and the third and fourth waves of democratization. Groups of all different stripes are attempting to settle differences democratically within the same territory, with varying degrees of success. As Hirschman states, “hostile and threatening behavior based on ethnocentrism is generally directed at supposed manifestations of “otherness.” The underlying logic is that other people are not like us because they have not been socialized into our language and culture” (2004: 388–89).

Hirschman’s explanation of the correlation between ethnocentrism and conflict lies at the core of Ellingsen’s (2000) article on multiethnicity and domestic conflict. Ellingsen tests multiple hypotheses relating to the relative size and makeup of ethnic groups within countries. Focusing on the size of the ethnic majority, the size of the largest ethnic minority, and the number of ethnic minorities within a country shows that multiethnicity and heterogeneity increase contentiousness. Vanhanen’s analysis of ethnic conflict makes a similar argument as it poses that ethnic cleavages based

on differences between racial groups, ethnic groups on linguistic, nationalistic, or tribal differences, and ethnic groups based on stabilized old religious communities lead to ethnic conflict (1999: 57). An extension of these findings in this analysis may show that multiethnicity has an indirect effect on levels of repression within a country since states often respond with repression in order to quell disorder.

Elbadawi points out that demographic characteristics often work together with economic characteristics. He argues that poverty is the key *inherent* cause of civil wars, but “ethnic fractionalization plays an important role as well, because, for a given level of poverty, it influences both the costs of initiating as well as sustaining a rebellion” (Elbadawi 1999). Other research has supported this point, but has demonstrated that conflict emerges from societies that have polarized ethnicities rather than homogenous or diverse societies (Collier and Hoeffler 1998).

As previous research has shown, fluctuations in demographic characteristics, such as power differentials between majority and minority groups, may influence repression indirectly by increasing ethnocentric sentiments and causing conflict (e.g., Fargues 2000). These sentiments and power differentials may increase conflict among ethnic groups, and states may respond with repression in order to maintain the stability of the state, or, in some cases, to preserve the relative strength of one ethnic group over another. Another possibility may be that certain ethnic groups are heavily associated with the state (such as the Sunnis in prewar Iraq), and so repression may increase because of increased tension. We make two hypotheses about the moderating effect of sociodemographics on the dissent–repression nexus:

H5: Larger and more urban countries see greater fluctuations in dissent and repression.

H6: More fractionalized countries see higher back-and-forth dissent and repression.

4. *Global linkages.* A significant amount of research has focused on how participation in global capitalism affects the levels and types of dissent and repression. Boswell and Dixon (1990, 1993) focus on the role of international dependency and they find that domestic and international dependency promote rebellion through their effects on the domestic class and state structure (see also Jenkins and Schock 1992; Walton and Ragin 1990). These processes of income inequality and economic growth contribute to an increasing sense of relative deprivation, and act as a motivator for increases in political violence and rebellion. The effect of international dependency on repressive activities could go either way. First, state governments may be more likely to quell dissent quickly to keep up the appearances of a “safe” arena for investment. On the other hand, global pressures for human rights have been mounting, which may decrease repression of dissent and increase accommodation of dissident demands.

A second important theoretical tradition to consider is world polity scholarship (Boli and Thomas 1997, 1999; Hughes et al. forthcoming; Meyer et al. 1997). The world

polity approach argues that over time state borders are becoming more fluid as people, goods, ideas, and cultures cross them with increasing ease. Connections between individuals and groups are not just made domestically, but internationally, particularly in international nongovernmental organizations (INGOs). Potential domestic dissidents have a greater range of resources to draw upon, especially as in transnational social movements. States, on the other hand, are under increasing scrutiny from every corner of the world. Information about repressive activities flows faster and farther, and as internationalized dissidents gain power, states may be increasingly reluctant to quell dissent. Our hypotheses related to international linkages are:

H7: Increased dependency on global capitalism will increase dissent responses to repression, but the relationship between dependency and repression on dissent is undetermined.

H8: States that are more embedded in the nongovernmental world polity will have more nonviolent dissent in the face of repression, and less repression in the face of dissent.

Data and Methods

Coding Events

The contentious politics data we used are from the *World Handbook of Political Indicators IV* (WHIV) (Jenkins and Taylor forthcoming), which provides indicators on domestic conflict globally. The data set is computer-generated parsed information from Reuters newswires into categories of actors and events. Newswire data from Reuters are beneficial for cross-comparative research because this agency has “approximately 16,900 staff in 94 countries, including 2,400 editorial staff in 196 bureaus around the world” (Reuters 2007). The size and global representation of Reuters ensures that this agency is able to report on a large number of events in every part of the world on daily bases.

Factors such as Reuters’ size, what they consider reportable news, and the intended audience for the news affect the quality and diversity of the data for analysis (Ortiz et al. 2005). This is especially true considering that newswire data are intended to be news stories and inform stock market decisions, not necessarily intended for research purposes. Despite these caveats, this information is excellent for answering the questions posed by this article because the dissent–repression nexus refers to overt forms of both dissent and repression. News data capture overt forms of both extremely well; usually they are not skewed by reporter bias because they are just the brief description of an event.

Sample

Our analysis focuses on four contentious categories aggregated from the computer-generated data, nonviolent dissent, violent dissent, nonviolent repression, and

violent repression. Nonviolent dissent includes protest demonstrations, protest obstruction, protest marches, protest processions, protest altruism, strikes, and boycotts. As shown in Table 1, the mean value of nonviolent dissent is 0.05 events, which means that each of the countries in the analysis have roughly 2.6 weeks of nonviolent dissent for each year in the analysis, and the means for the rest of the dissent and repression measures can be interpreted in this way. More violent events including riots, property damage, disorders, abductions, hijackings, hostage taking, use of force, assassinations, coups, mutinies, suicide bombings, mine explosions, vehicle bombings, civil missile attacks, civil clashes, civil raids, civil shootings, civil grenade attacks, chemical/biological weapons attacks, and weapons of mass destruction are aggregated into a *violent dissent* category.

Repressive events in the analysis include covert monitoring, imposing restrictions, censorship, military demonstrations, armed forces mobilization, refusal to allow, armed forces activation, sanctions, reduced relations, military occupation exile, and political arrests, which are coded as a *nonviolent repression* category. Violent repression includes corporal punishment, physical assault, beatings, sexual assaults, state raids, torture, state clashes, state shootings, state grenade attacks, state missile strikes, crowd control, and state use of force.

Previous studies have used monthly or yearly aggregations of events, which we know to be too high, given the more immediate reciprocation actions of contentious actors. Yet, modeling the dynamic interaction between dissidents and the state at the day level would lead to misspecification of timing. Furthermore, it is likely that in most places, states and dissidents cannot always respond to each other immediately, which makes weeks the more natural time unit (Shellman 2004; Freeman 1989). We use weekly counts of events for these analyses. Theoretically, states and civilians respond to each other in a fairly short time span. We find that weeks provide a more reliable measurement of event counts than days, given that news reports often do not appear on the exact day that the event occurred.

Our sample for this analysis includes the 530 weeks from 1994–2004 for ninety-seven countries.¹ The countries in this analysis correspond to each region of the world and various stages of development. Geographic diversity is obvious.² For evaluating the stage of development we rely on the Human Development index (HDI) as a comparative measure of life expectancy, literacy/education, and standard of living (UNDP 2006). Of the countries in the sample, thirty-six countries have a high HDI, forty-nine have a medium HDI, and eleven have low HDI.³

The independent variables for these analyses are separated into four contextual clusters, domestic economic factors, domestic political factors, sociodemographics, and global linkages. The operationalization of each variable is presented in Table 1.

1. There are two indicators of economic development at the country-year level: gross domestic product (GDP) per capita, and annual GDP per capita growth. The third economic variable is measured at the country time-invariant level: average Human Development index.

Table 1

Operationalization for Independent and Dependent Variables

Variable description	Operationalization	N	Mean	St. Dev.	Source
Nonviolent dissent	Aggregate count of weekly nonviolent dissent events, from 0 to 19 events	55,678	0.05	0.33	World Handbook of Political and Social Indicators IV (WHIV) (Jenkins and Taylor forthcoming)
Violent dissent	Aggregate count of weekly violent dissent events, from 0 to 15 events	55,678	0.07	0.4	WHIV (Jenkins and Taylor forthcoming)
Nonviolent repression	Aggregate count of weekly nonviolent repression events, from 0 to 9 events	55,678	0.05	0.3	WHIV (Jenkins and Taylor forthcoming)
Violent repression	Aggregate count of weekly violent repression events, from 0 to 22 events	55,678	0.11	0.54	WHIV (Jenkins and Taylor forthcoming)
Freedom House Index	Rate of political rights and civil liberties from 1 to 7 (7 = the least amount of rights)	1,067	8.64	3.49	Cross National Research on USAID's Democracy and Governance Programs (USAID-DGP) (Freedom House 2005)
Democracy status	Dummy for Polity Score (polity score greater than 5 = 1)	1,067	0.66	0.47	USAID-DGP (Marshall, Jaggers, and Gurr 2005)
Political rights (FH)	Freedom House measure for political rights. Scale of 1 to 7 (1 = the most rights).	1,067	3.06	1.95	USAID-DGP (Freedom House 2005)
Civil liberties (FH)	Freedom House measure for civil liberties. Scale of 1 to 7 (1 = most liberties)	1,067	3.3	1.63	USAID-DGP (Freedom House 2005)

Country-year characteristics (Level 2)

Freedom of the Press	Ordinal Measure of press freedoms (1 = most freedoms)	1,067	2.14	0.79	USAID-DGP (Freedom House 2005)
Gibney State Terror	Measure of the extent of political repression (5 = the most repression)	1,067	2.49	1.07	USAID-DGP (Gibney 2005)
GDP per capita (PPP)	Purchasing power parities, in thousands of 2000 U.S. dollars.	1,067	9.16	9.19	USAID-DGP (World Bank 2006)
Annual growth	Annual percent change in GDP per capita (based on constant figures in 2000 U.S. dollars).	1,067	2.31	4.44	USAID-DGP (World Bank 2006)
Merchandise exports	Millions of current U.S. dollars (as % of GDP)	1,067	27.41	20.62	USAID-DGP (World Bank 2006)
<i>Country characteristics (Level 3)</i>					
Average population	Average Population in 1000's	97	49750.5	158272.2	USAID-DGP (World Bank 2005)
Size of the country	Land Area in thousands of square kilometers	97	900.42	2019.87	USAID-DGP (World Bank 2005)
Religious fragmentation	Index of fragmentation, (0 = perfect homogeneity)	97	0.38	0.23	USAID-DGP (Annett 2001; Fearon 2003; Fearon and Laitin 2003)
Ethnolinguistic fractionalization	Index of fragmentation, (0 = perfect homogeneity)	97	0.41	0.25	USAID-DGP (Annett 2000; Fearon 2003; Fearon and Laitin 2003)
Urban population (%)	Percent of total population (average 1990–2004)	97	53.71	22.51	USAID-DGP (World Bank 2005)

Table 1 (continued)

Variable description	Operationalization	N	Mean	St. Dev.	Source
Human Development Index	0 to 1 (1 equals high human development)	97	0.69	0.16	USAID-DGP (UNDP, Human Development Report 2004)
Number of elections	Number of elections to the lower house in the three prior decades	97	12.63	5.67	USAID-DGP (Banks 2004)
Percent Protestant	Proportion of the population that is Protestant	97	19.73	27.82	USAID-DGP (World Bank 2005)
Percent indigenous	Proportion of the population that is indigenous	97	4.36	12.38	USAID-DGP (World Bank 2005)
INGO centrality	Measure of INGO centrality (1 equals total centrality)	97	0.64	0.27	Hughes et al. (forthcoming)

Sources: Anthony Annett, "Social Fractionalization, Political Instability, and the Size of Government," IMF Working Paper no. 00/82, April 2000; Arthur Banks, *Cross-National Time-Series Data Archive* (Binghamton, NY: Databanks International, 1997), available at www.databanks.site-hosting.net (accessed July 6, 2001); James D. Fearon, "Ethnic and Cultural Diversity by Country," *Journal of Economic Growth* 8, no. 2 (2003): 195–222; James D. Fearon and David D. Laitin, "Ethnicity, Insurgency, and Civil War," *American Political Science Review* 97 (2003): 75–90; Freedom House, *Freedom in the World Comparative Ratings* (New York, 2005), www.freedomhouse.org/template.cfm?page=15&year=2004 (accessed August 22, 2008); Mark Gibney and Matthew Dalton, "The Political Terror Scale," *Policy Studies and Developing Nations* 4 (1996): 73–84, available at [www.unca.edu/politicalscience/DOCS/Gibney/Political percent20Terror percent20Scale percent201980-2005.pdf](http://www.unca.edu/politicalscience/DOCS/Gibney/Political%20Terror%20Scale%20percent201980-2005.pdf) (accessed May 14, 2008); Melanie Hughes, Lindsey Peterson, Jill Ann Harrison, and Pamela Paxton, "Power and Relation in the World Polity: The INGO Network Country Score, 1978–1998," *Social Forces*, forthcoming; J. Craig Jenkins and Charles Lewis Taylor, *The World Handbook of Political Indicators IV*, preliminary release for 1991–2000 available at www.sociology.ohio-state.edu/~jcj/; Monty G. Marshall, Keith Jaggers, and Ted Gurr, *Polity IV*, 2005, available at www.cidcm.umd.edu/polity/data/; United Nations Development Programme (UNDP), *Human Development Report 2004* (New York: Cambridge University Press, 2004); World Bank, *World Development Indicators 2005* (Washington, DC, 2005).

2. At the country-year level we include the Freedom House index of political rights and civil liberties, a dummy variable of free/not free status, the Freedom House measure of freedom of the press, and Gibney's state terror index (Gibney and Dalton 1996). At the country time-invariant level we tried various measures of constitutional rights, such as the right of association and the right to assemble in various models. Also at the third level we include a measure of number of elections since independence.
3. Our demographic indicators are all at the country time-invariant level: average population, average land area, religious and ethnolinguistic fragmentation, urban population, and percentage Catholic, Protestant, Muslim, indigenous religion, and other religions.
4. Our international linkage variables are an indicator of export dependency at the country-year level, and world polity embeddedness at the country time-invariant level.

Statistical Analysis

In order to assess the importance of contextual determinants of repression, we used hierarchical linear modeling (HLM) to create three-level hierarchical linear models where level 1 refers to week event data ($n = 530$), level-2 refers to country year-varying characteristics ($n = 11$), and level-3 refers to country time-invariant characteristics ($n = 97$). HLM is a way to analyze clustered data such as weeks within years, and both within countries (Raudenbush and Bryk 2002). We employ a constant exposure Poisson regression in the three-level HLM models, and correct for overdispersion by including a scalar variance component σ^2 to act as a level-1 dispersion parameter for the model. This technique is specifically designed for models that use nonnormally distributed count data such as an overdispersion of weeks with no contentious events.⁴

Another advantage of using multilevel modeling is that each model shows how much of the variance in the dependent variable is explained by each level of the data. Thus, for each model we can tell how much unexplained variance in each dependent variable is due to within-country variation across weeks, or between-country variation, as measured by their time-varying or invariant characteristics. Because we are most interested in how context affects levels of dissent and repression, we try to explain as much of the variance in level 2 and level 3 as we can with our independent variables, so that the unexplained variance at these levels is minimized, and most of the unexplained variance is then at the week-level (level 1).

Our analysis followed a series of steps. In order to determine the variance explained without independent variables in the model, our first models were fully unconditional models for each of the dependent variables:

$$\eta_{ij} = \pi_{0j}$$

In the following models we added grand mean-centered predictors to the level-1

model, and left the level-2 and level-3 models unconditional. The focus of our analysis was on the remaining analyses. We ran models that left level 3 unconditional, but included dissent/repression levels as a function of economic, political, demographic, and global level-2 predictors, and random effects:

$$\begin{aligned}\eta_{ij} &= \pi_{0ijk} + \pi_{1ijk}X_{1ijk} + \pi_{2ijk}X_{2ijk} + \dots + \pi_{pijk}X_{pijk} + e \\ \pi_{0ijk} &= \beta_{0jk} + \beta_{1jk}X_{1jk} + \beta_{2jk}X_{2jk} + \dots + \beta_{pj k}X_{pj k} + r_o \\ \beta_{0jk} &= \gamma_{001k} + u_{00}.\end{aligned}$$

Our second set of analyses left level-2 unconditional, and modeled dissent/repression levels as a function of the same categories of non-randomly varying level-3 predictor variables, and random effects:

$$\begin{aligned}\eta_{ij} &= \pi_{0ijk} + \pi_{1ijk}X_{1ijk} + \pi_{2ijk}X_{2ijk} + \dots + \pi_{pijk}X_{pijk} + e \\ \pi_{0ijk} &= \beta_{0jk} + r_o \\ \beta_{0jk} &= \gamma_{001k} + \gamma_{002k}X_{1k} + \gamma_{003k}X_{2k} + \dots + \gamma_{00qk}X_{qk} + u_{00}.\end{aligned}$$

Finally, we modeled each of our dependent variables as a function of combined models with all of the significant level 2 and level-3 predictors included in the model:

$$\begin{aligned}\eta_{ij} &= \pi_{0ijk} + \pi_{1ijk}X_{1ijk} + \pi_{2ijk}X_{2ijk} + \dots + \pi_{pijk}X_{pijk} + e \\ \pi_{0ijk} &= \beta_{0jk} + \beta_{1jk}X_{1jk} + \beta_{2jk}X_{2jk} + \dots + \beta_{pj k}X_{pj k} + r_o \\ \beta_{0jk} &= \gamma_{001k} + \gamma_{002k}X_{1k} + \gamma_{003k}X_{2k} + \dots + \gamma_{00qk}X_{qk} + u_{00}.\end{aligned}$$

We discuss our results in the following section.

Results

Our results are presented in Tables 2–5. We present the results by dependent variable so that the reader can compare the effects of each variable on the dependent variables. Again, the dependent variables are weekly levels of nonviolent dissent, violent dissent, nonviolent repression, and violent repression. The coefficients are event rate ratios, meaning that numbers greater than 1 indicate a positive percent unit change with each standard deviation, and less than one indicates a negative percent change in the level of repression. Due to space considerations, we present only the variables that were significant in each of the models. Variables that were tested but had no impact, such as religious fractionalization, were omitted from the results.

Predicting Nonviolent Dissent

Unconditional models for nonviolent dissent show that without considering contextual factors, 33 percent of the variance is within country-week, 12 percent is

between country year, and 54 percent is across countries. Adding lagged and current measures of violent and nonviolent repression has little impact on the variance at each level even though contemporaneous measures of repression increase the amount of nonviolent dissent (see Table 2).

In the economic level-2 model, GDP per capita increased the likelihood of nonviolent dissent by 3 percent. Political and international factors did not have a significant effect on the likelihood of nonviolent dissent. Our next step was to leave level-2 unconditional, and test the effects of country characteristics. In independent models, the likelihood of nonviolent dissent was positively affected by HDI, the number of elections a country has had since independence, and the INGO centrality score (INCS). However, in the combined model only a country's INCS had a significant impact, increasing the likelihood of nonviolent dissent by a factor of more than 20.

In the fully conditional model, we included the significant level-2 and level-3 covariates, and found that GDP per capita had a negative effect on nonviolent dissent, decreasing the likelihood by more than 4 percent. The INCS score significantly increased the likelihood by a factor of 113. Considering these contextual characteristics had an effect on the variance decomposition as 47.8 percent of the variance is at the country-week level (from 33 percent), and 35.7 percent of the variance is at the country level (from 54.6 percent). These results show that countries that are closer to the center of the INGO network and populations with a lower GDP per capita are more likely to have nonviolent dissent.

Predicting Violent Dissent

In the unconditional model for violent dissent, 26.6 percent of the variance is at the country-week level while 56.9 percent is across countries. Like nonviolent dissent, the inclusion of measures of repression has little effect on the variance explained, but nonviolent and violent repression as well as lagged repression increase the likelihood of violent repression. Including economic predictors shows that annual growth in GDP decreases the likelihood of violent dissent by 2.4 percent. We tested a variety of political country-year indicators and found that a country's freedom (Freedom House score), civil liberties, and capacity for state terror (Gibney state terror) all had a positive effect on the likelihood of violent dissent while freedom of the press had a negative effect. The Gibney state terror measure was the only significant measure, increasing the likelihood of violent dissent by 66.9 percent when the level-2 predictors were modeled simultaneously. A country's involvement in the global economy decreased the likelihood of violent dissent (see Table 3).

In the country-level conditional model the likelihood of violent dissent was significantly affected by the number of elections, population size, proportion of the population that is indigenous, and INCS centrality score. After combining each of these predictors into a model, the population size continued to be significant with no effect. The proportion of indigenous population decreased the likelihood of violent dissent by 3.1 percent, and the INCS score increased violent dissent by a

Table 2

Hierarchical Combined Conditional Models for Nonviolent Dissent

IV	Uncond.	Level 1 Cond.			Level 2 conditional			Level 3 conditional			Full cond.		
		Econ.	Pol.	Intl.	Econ.	Pol.	Intl.	Econ.	Pol.	Dem.	Intl.	Comb.	Full
Fixed effect coefficient (avg. week mean)	0.022 [^]	0.022 [^]	0.022 [^]	0.022 [^]	0.022 [^]	0.022 [^]	0.022 [^]	0.022 [^]	0.022 [^]	0.022 [^]	0.022 [^]	0.022 [^]	0.021 [^]
	<i>Random effect variance components</i>												
Country-week (level 1)	1.040	1.030	1.027	1.033	1.029	1.023	1.035	1.036	1.037	1.041	1.041	1.041	1.054
Country-year (level 2)	0.393 [^]	0.390 [^]	0.403 [^]	0.387 [^]	0.392 [^]	0.409 [^]	0.389 [^]	0.389 [^]	0.390 [^]	0.388 [^]	0.388 [^]	0.391 [^]	0.364 [^]
Country (level 3)	1.720 [^]	1.654 [^]	1.384 [^]	1.588 [^]	1.618 [^]	1.385 [^]	1.330 [^]	1.249 [^]	0.951 [^]	0.756 [^]	0.613 [^]	0.613 [^]	0.788 [^]
	<i>Variance decomposition (% by level)</i>												
Level 1	0.330	0.335	0.365	0.343	0.339	0.363	0.376	0.387	0.436	0.476	0.509	0.509	0.478
Level 2	0.125	0.127	0.143	0.129	0.129	0.145	0.141	0.146	0.164	0.178	0.191	0.191	0.165
Level 3	0.546	0.538	0.492	0.528	0.532	0.492	0.483	0.467	0.400	0.346	0.300	0.300	0.357
	<i>Week-level covariates</i>												
Nonviolent repression	—	1.159 [^]	1.159 [^]	1.159 [^]	1.159 [^]	1.159 [^]	1.159 [^]	1.158 [^]	1.158 [^]	1.160 [^]	1.158 [^]	1.158 [^]	1.161 [^]
Nonviolent repression, lag 1 wk.	—	0.962	0.962	0.962	0.962	0.962	0.962	0.962	0.961	0.962	0.961	0.961	0.963
Nonviolent repression, lag 2 wks.	—	0.993	0.993	0.993	0.993	0.993	0.993	0.992	0.992	0.993	0.992	0.992	0.994
Violent repression	—	1.074 [^]	1.073 [^]	1.074 [^]	1.074 [^]	1.074 [^]	1.074 [^]	1.073 [^]	1.073 [^]	1.074 [^]	1.073 [^]	1.073 [^]	1.074 [^]

Violent repression, lag 1 wk.	—	1.014	1.014	1.015	1.014	1.014	1.014	1.015	1.014	1.014	1.014	1.015	1.015	1.015
Violent repression, lag 2 wks.	—	1.019	1.018	1.019	1.019	1.018	1.018	1.019	1.018	1.018	1.018	1.019	1.019	1.019
		<i>Country-year covariates</i>												
GDP per capita	—	—	1.030#	—	—	—	—	—	—	—	—	—	—	0.957*
GDP annual growth	—	—	0.989	—	—	—	—	—	—	—	—	—	—	—
Freedom of the press	—	—	—	1.159	—	—	—	—	—	—	—	—	—	—
Export dependency	—	—	—	—	0.994	—	—	—	—	—	—	—	—	—
		<i>Country-level covariates</i>												
HDI	—	—	—	—	—	37.012 [^]	—	—	—	—	—	—	—	0.625
Number of elections	—	—	—	—	—	—	1.117 [^]	—	—	—	—	—	—	1.023
Population	—	—	—	—	—	—	—	—	1.000#	—	—	—	—	1.000
Land area	—	—	—	—	—	—	—	—	1.000#	—	—	—	—	1.000
Urbanization	—	—	—	—	—	—	—	—	—	1.021 [^]	—	—	—	1.001
Percent indigenous	—	—	—	—	—	—	—	—	—	—	0.981	—	—	—
INCS ^a	—	—	—	—	—	—	—	—	—	—	—	3.684 [^]	—	2.141 [^]
Likelihood funct. ^b	-22.561	-22.428	-22.426	-22.426	-22.427	-22.427	-22.418	-22.423	-22.427	-22.408	-22.408	-22.415	-22.412	-22.412
σ^2	1.040	1.030	1.027	1.033	1.029	1.023	1.036	1.035	1.023	1.037	1.036	1.041	1.054	1.054
σ^2 std. error	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006
τ (β)	1.720	1.654	1.384	1.588	1.618	1.385	1.249	1.330	1.385	0.951	1.249	0.756	0.613	0.788
τ std. error	0.272	0.263	0.223	0.253	0.257	0.223	0.204	0.216	0.223	0.160	0.204	0.132	0.110	0.136

$p < 0.05$; * $p < 0.01$; [^] $p < 0.001$.

^aDivided by 10.

^bDivided by 1,000.

	0.987	0.987	0.986	0.987	0.987	0.987	0.987	0.987	0.986	0.986	0.986
Violent repression, lag 2 wks.	—	0.987	0.987	0.986	0.987	0.987	0.987	0.987	0.986	0.986	0.986
				<i>Country-year covariates</i>							
GDP per capita	—	1.013	—	—	—	—	—	—	—	—	—
GDP annual growth	—	0.976*	—	—	0.985	—	—	—	—	—	—
Freedom House	—	—	1.088	—	—	—	—	—	—	—	—
Civil liberties	—	—	1.123	—	—	—	—	—	—	—	—
Freedom of the press	—	—	0.902	—	—	—	—	—	—	—	—
Gibney state terror	—	—	1.669 [^]	—	1.592 [^]	—	—	—	—	—	1.753 [^]
Export dependency	—	—	—	0.982 [^]	0.987*	—	—	—	—	—	0.987*
				<i>Country-level covariates</i>							
HDI	—	—	—	—	3.261	—	—	—	—	—	—
Number of elections	—	—	—	—	—	1.107 [^]	—	—	1.046	—	—
Population	—	—	—	—	—	—	1.000 [#]	—	1.000*	—	1.000
Land area	—	—	—	—	—	—	1.000	—	—	—	—
Percent Protestant	—	—	—	—	—	—	0.996	—	—	—	—
Percent Indigenous	—	—	—	—	—	—	0.959*	—	0.969 [#]	—	0.962 [^]
INCS ^a	—	—	—	—	—	—	—	1.282 [^]	0.385 [#]	—	1.265 [^]
Likelihood funct. ^b	-34.680	-33.009	-33.003	-32.980	-33.006	-33.003	-32.998	-33.004	-32.993	-32.969	-32.969
σ^2	0.990	0.940	0.947	0.968	0.939	0.940	0.942	0.939	0.940	0.966	0.966
σ^2 std. error	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006
τ (β)	2.120	2.002	1.957	1.549	1.827	1.680	1.461	1.604	1.283	0.735	0.735
τ std. error	0.335	0.317	0.310	0.250	0.292	0.270	0.239	0.260	0.213	0.131	0.131

$p < 0.05$; * $p < 0.01$; [^] $p < 0.001$.

^aDivided by 10.

^bDivided by 1,000.

factor of 38.5. The full model combining country-year and country characteristics found that within- and across-country characteristics continue to have an impact. The Gibney measure increased the likelihood of violent dissent by 75 percent, the likelihood of violent dissent decreased by 1.3 percent for every unit increase in export dependency and 3.8 percent for every unit increase in the proportion of indigenous population. The strongest effect on the likelihood of violent dissent was a country's position in the INGO centrality network. An increase in a country's position increased the likelihood of violent dissent by a factor of 12.6.

Including these variables increases the amount of variance at level 1 to 43.78 percent (from 26.6 percent), and decreases the variance across countries to 33.2 percent (from 56.9 percent). In sum, countries that have a higher capacity for terror, are more removed from the global economy, have fewer indigenous citizens, and are closer to the center of the INGO network are more likely to have violent dissent.

Predicting Nonviolent Repression

The unconditional model for nonviolent repression showed that 61.7 percent of the variance was between countries, while 29.3 percent was at the country-week level. The level-1 conditional model indicates that both violent and nonviolent dissent have an effect on nonviolent repression, and violent dissent has a stronger effect while nonviolent dissent has a more lasting effect (see Table 4).

In the country-year conditional models the likelihood of nonviolent repression is positively affected by unit increases in GDP per capita and the Gibney state terror score, and negatively affected by unit increases in GDP annual growth and Freedom House score. When combined into a single model, increases in GDP per capita increase the likelihood of nonviolent repression by 8.2 percent. An increase in the Freedom House score decreases the likelihood of nonviolent repression by 10.8 percent, implying that as a state becomes "less free" it is less likely to use nonviolent repression. An increase in the Gibney measure increases the unit likelihood of nonviolent repression by 22 percent as well.

The conditional level-3 models show that unit increases in HDI, the number of elections, population size, urbanization, and the INCS score increased the likelihood of nonviolent repression. In the combined model, only population size and the INCS score were significant. Despite being significant, a unit increase in the population size had no effect on the likelihood of nonviolent repression. However, the INGO centrality score had a strong positive effect on the likelihood of nonviolent repression, increasing the likelihood by a factor of 28 for each unity change in the centrality score.

The fully conditional model shows that the variables that were significant at level 2 and level 3 continue to be significant. Growth in GDP per capita increased the likelihood of nonviolent repression by 3.3 percent. Likelihood was decreased by 13.1 percent for each unit increase in the Freedom House score. The Gibney measure of capacity for state terror increased the likelihood of nonviolent repression by 21.5 percent. Finally, a unit change in countries' centrality score increased the likelihood

of nonviolent repression by a factor of 38. As a result, we conclude that countries with lower GDP, higher freedom house scores, lower Gibney state terror scores, and further from the center of the INGO network will have less nonviolent repression.

Predicting Violent Repression

In the unconditional model for violent repression, 35.4 percent of the variance was at the country-week level and 54.8 percent is between countries. Violent dissent and nonviolent dissent both have a significant effect on the likelihood of violent repression, and violent dissent has a strong effect even when it is lagged one week. This may imply that violent repression is respondent to both, but violent dissent has a stronger and more lasting effect than nonviolent dissent (see Table 5).

Contextually, our tests of the effects of level-2 economic, political, and international characteristics found that civil liberties, Gibney state terror, and export dependency each have a significant effect on the likelihood of violent repression. When they are combined, the likelihood of violent repression is increased by a unit increase in the civil liberties score (which is reverse coded). An increase in the Gibney state terror measure increases the likelihood of violent repression by 31.3 percent as well.

In the level-3 conditional model, the number of elections in a country, population size, land area, proportion of indigenous population, and their INGO centrality score each had a positive effect on the likelihood of violent repression. When these variables were combined into one model, only population size and the INCS score continued to be significant as an increase in the INCS score increased the likelihood of violent repression by a factor of 5.

Finally, the fully conditional model shows that civil liberties, Gibney state terror, population size, and INCS each have a significant effect on the likelihood of violent repression. A unit change in countries' civil liberties (making civil liberties worse) increases the likelihood of repression by 24.8 percent. Aggravating political conditions in the form of the willingness to use state terror increases the likelihood of violent repression by 34.3 percent. An increase in a countries' population size is positive and significant, and yet it has no tangible effect on the likelihood of violent repression. Finally, an increase in the centrality of a country with the INGO network increases the likelihood of violent repression by a factor of 36. Taken together, countries with poor civil liberties, high willingness to use state terror, large populations, and more integration into the INGO network are more likely to use violent repression.

Discussion and Conclusion

Our study finds that dissent and repression are affected by the contexts in which they take place. Overall, dissent in a country is affected by how central the country is in the world polity system, and more diverse economic, political, social, and

Table 4

Hierarchical Combined Conditional Models for Nonviolent Repression

IV	Uncond.	Level 1 cond.			Level 2 conditional			Level 3 conditional			Full cond.	
		Econ.	Pol.	Intl.	Econ.	Pol.	Intl.	Econ.	Pol.	Intl.	Comb.	Full
Fixed effect coefficient (avg. week mean)	0.018 [^]	0.018 [^]	0.018 [^]	0.018 [^]	0.018 [^]	0.018 [^]	0.018 [^]	0.018 [^]	0.018 [^]	0.018 [^]	0.018 [^]	0.018 [^]
<i>Random effect variance components</i>												
Country-week (level 1)	0.906	0.889	0.884	0.888	0.892	0.890	0.890	0.890	0.890	0.892	0.892	0.915
Country-year (level 2)	0.275 [^]	0.274 [^]	0.285 [^]	0.234 [^]	0.269 [^]	0.275 [^]	0.275 [^]	0.277 [^]	0.276 [^]	0.278 [^]	0.278 [^]	0.244 [^]
Country (level 3)	1.905 [^]	1.829 [^]	1.498 [^]	1.994 [^]	1.826 [^]	1.631 [^]	1.472 [^]	1.180 [^]	1.033 [^]	0.830 [^]	0.830 [^]	0.627 [^]
<i>Variance decomposition (% by level)</i>												
Level 1	0.293	0.297	0.331	0.290	0.297	0.383	0.318	0.379	0.405	0.446	0.446	0.512
Level 2	0.089	0.092	0.107	0.075	0.092	0.115	0.098	0.104	0.125	0.139	0.139	0.137
Level 3	0.617	0.611	0.562	0.636	0.611	0.502	0.583	0.558	0.469	0.415	0.415	0.351
<i>Week-level covariates</i>												
Nonviolent dissent	—	1.128 [^]	1.128 [^]	1.129 [^]	1.128 [^]	1.131 [^]	1.128 [^]	1.128 [^]	1.128 [^]	1.128 [^]	1.128 [^]	1.130 [^]
Nonviolent dissent, lag 1 wk.	—	1.071 [*]	1.072 [*]	1.071 [*]	1.073 [*]	1.071 [*]	1.071 [*]	1.071 [*]	1.071 [*]	1.071 [*]	1.071 [*]	1.073 [*]
Nonviolent dissent, lag 2 wks.	—	1.042	1.043	1.042	1.045	1.042	1.042	1.042	1.042	1.042	1.042	1.044
Violent dissent	—	1.145 [^]	1.145 [^]	1.144 [^]	1.145 [^]	1.143 [^]	1.146 [^]	1.145 [^]	1.146 [^]	1.145 [^]	1.145 [^]	1.144 [^]
Violent dissent, lag 1 wk.	—	0.990	0.990	0.989	0.990	0.988	0.991	0.990	0.991	0.990	0.990	0.989

	0.974	0.973	0.972	0.974	0.971	0.974	0.974	0.974	0.974	0.974	0.974	0.974	0.974	0.972
Violent dissent, lag 2 wks.	—	0.974	0.973	0.972	0.974	0.971	0.974	0.974	0.974	0.974	0.974	0.974	0.974	0.972
					<i>Country-year covariates</i>									
GDP per capita	—	—	1.040*	—	1.082 [^]	—	—	—	—	—	—	—	—	1.033*
GDP annual growth	—	—	0.983*	—	0.990	—	—	—	—	—	—	—	—	—
Freedom House	—	—	—	0.935#	0.892 [^]	—	—	—	—	—	—	—	—	0.869 [^]
Democracy status (polity)	—	—	—	1.031	—	—	—	—	—	—	—	—	—	—
Gibney state terror	—	—	—	1.211 [^]	1.221 [^]	—	—	—	—	—	—	—	—	1.215 [^]
Export dependency	—	—	—	—	0.994	—	—	—	—	—	—	—	—	—
					<i>Country-level covariates</i>									
HDI	—	—	—	—	—	13.479*	—	—	—	—	—	—	0.213	—
Number of elections	—	—	—	—	—	—	1.108 [^]	—	—	—	—	—	1.031	—
Population	—	—	—	—	—	—	—	1.000*	—	—	—	—	1.000*	1.000*
Land area	—	—	—	—	—	—	—	1.000	—	—	—	—	—	—
Urbanization	—	—	—	—	—	—	—	1.018*	—	—	—	—	1.002	—
Percent indigenous	—	—	—	—	—	—	—	0.993	—	—	—	—	—	—
INCS ^a	—	—	—	—	—	—	—	—	—	—	3.074 [^]	—	2.818 [^]	3.878 [^]
Likelihood funct. ^b	-9.387	-9.173	-9.168	-9.166	-9.172	-9.161	-9.170	-9.166	-9.166	-9.156	-9.168	-9.158	-9.154	-9.154
σ^2 S	0.906	0.889	0.884	0.909	0.888	0.892	0.890	0.890	0.890	0.890	0.892	0.892	0.892	0.915
σ^2 std. error	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.006
τ (β)	1.905	1.829	1.498	1.994	1.826	1.169	1.631	1.472	1.472	1.180	1.033	0.830	0.830	0.627
τ std. error	0.299	0.288	0.239	0.312	0.288	0.191	0.259	0.236	0.236	0.193	0.172	0.142	0.142	0.111

$p < 0.05$; * $p < 0.01$; [^] $p < 0.001$.

^aDivided by 10.

^bDivided by 1,000.

Table 5

Hierarchical Combined Conditional Models for Violent Repression

IV	Level 1		Level 2 conditional			Level 3 conditional			Full cond.			
	Uncond.	cond.	Econ.	Pol.	Intl.	Comb.	Econ.	Pol.	Demo.	Intl.	Comb.	Full
Fixed effect coefficient (avg. week mean)	0.040 [^]	0.040 [^]	0.040 [^]	0.040 [^]	0.040 [^]	0.040 [^]	0.040 [^]	0.040 [^]	0.040 [^]	0.040 [^]	0.040 [^]	0.040 [^]
<i>Random effect variance components</i>												
Country-week (level 1)	1.190	1.132	1.135	1.157	1.134	1.157	1.132	1.133	1.133	1.133	1.133	1.158
Country-year (level 2)	0.331 [^]	0.300 [^]	0.296 [^]	0.255 [^]	0.298 [^]	0.256 [^]	0.300 [^]	0.300 [^]	0.301 [^]	0.301 [^]	0.302 [^]	0.259 [^]
Country (level 3)	1.845 [^]	1.727 [^]	1.707 [^]	1.589 [^]	1.671 [^]	1.598 [^]	1.686 [^]	1.396 [^]	1.133 [^]	1.218 [^]	0.956 [^]	0.716 [^]
Level 1	0.354	0.358	0.362	0.386	0.365	0.384	0.363	0.401	0.441	0.427	0.474	0.543
Level 2	0.098	0.095	0.094	0.085	0.096	0.085	0.096	0.106	0.117	0.114	0.126	0.121
Level 3	0.548	0.547	0.544	0.530	0.539	0.531	0.541	0.493	0.441	0.459	0.400	0.336
<i>Week-level covariates</i>												
Nonviolent dissent	—	1.079 [^]	1.078 [^]	1.080 [^]	1.079 [^]	1.080 [^]	1.078 [^]	1.078 [^]	1.078 [^]	1.078 [^]	1.078 [^]	1.080 [^]
Nonviolent dissent, lag 1 wk.	—	0.988	0.988	0.989	0.988	0.989	0.988	0.987	0.987	0.987	0.987	0.989
Nonviolent dissent, lag 2 wks.	—	1.048#	1.048#	1.050#	1.048#	1.050#	1.046#	1.048#	1.048#	1.048#	1.048#	1.050#
Violent dissent	—	1.245 [^]	1.245 [^]	1.244 [^]	1.245 [^]	1.245 [^]	1.245 [^]	1.245 [^]	1.245 [^]	1.245 [^]	1.245 [^]	1.244 [^]
Violent dissent, lag 1 wk.	—	1.091 [^]	1.090 [^]	1.090 [^]	1.091 [^]	1.090 [^]	1.091 [^]	1.091 [^]	1.090 [^]	1.091 [^]	1.090 [^]	1.090 [^]

	1.026	1.026	1.025	1.026	1.026	1.026	1.026	1.026	1.026	1.026	1.026	1.025	1.026
Violent dissent, lag 2 wks.	—	1.026	1.026	1.025	1.026	1.026	1.026	1.026	1.026	1.026	1.026	1.025	1.026
				<i>Country-year covariates</i>									
GDP per capita	—	1.004	—	—	—	—	—	—	—	—	—	—	—
GDP annual growth	—	0.989	—	—	—	—	—	—	—	—	—	—	—
Democracy status (polity)	—	—	0.881	—	—	—	—	—	—	—	—	—	—
Political rights	—	—	0.896	—	—	—	—	—	—	—	—	—	—
Civil liberties	—	—	1.200*	1.125*	—	—	—	—	—	—	—	—	1.243 [^]
Freedom of the press	—	—	0.944	—	—	—	—	—	—	—	—	—	—
Gibney state terror	—	—	1.328 [^]	1.313 [^]	—	—	—	—	—	—	—	—	1.343 [^]
Export dependency	—	—	—	0.988*	—	—	—	—	—	—	—	—	—
				<i>Country-level covariates</i>									
HDI	—	—	—	3.695	—	—	—	—	—	—	—	—	—
Number of elections	—	—	—	—	1.109 [^]	—	—	—	—	—	—	—	1.043
Population	—	—	—	—	—	1.000#	—	—	—	—	—	—	1.000#
Land area	—	—	—	—	—	1.000#	—	—	—	—	—	—	1.000
Percentage indigenous	—	—	—	—	—	0.973*	—	—	—	—	—	—	0.988
INCS ^a	—	—	—	—	—	—	—	—	—	1.598 [^]	—	—	0.549 [^]
Likelihood funct. ^b	-47.875	-46.246	-46.233	-46.246	-46.234	-46.240	-46.245	-46.241	-46.232	-46.241	-46.228	-46.220	-46.220
σ^2	1.190	1.132	1.135	1.134	1.157	1.132	1.132	1.133	1.133	1.133	1.133	1.158	1.158
σ^2 std. error	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007
τ (β)	1.845	1.727	1.707	1.589	1.671	1.598	1.686	1.396	1.241	1.218	0.956	0.716	0.716
τ std. error	0.283	0.265	0.262	0.245	0.257	0.246	0.259	0.217	0.195	0.192	0.153	0.118	0.118

$p < 0.05$; * $p < 0.01$; [^] $p < 0.001$.

^aDivided by 10.

^bDivided by 1,000.

economic characteristics have an effect when the type of dissent is taken into account. Repression is affected by more contextual factors than dissent overall. A state's capacity for terror, population size, and its position within the world polity significantly affected both violent and nonviolent repression, but more factors were relevant once the form of repression was taken into account. We stated eight hypotheses concerning the economic, political, demographic, and global factors that influence dissent and repression, and our results provide support for many of these hypotheses depending on different forms of dissent and repression.

We proposed two hypotheses related to the effects of the economic characteristics within and between countries on dissent and repression. They stated:

H1: Poor economic conditions increase dissent as a response to repression.

H2: Poor economic conditions increase repressive responses to dissent.

Our results supported the first hypothesis, and contradicted the second. An increase in GDP per capita had a negative effect on the likelihood of nonviolent dissent supporting the hypothesis that dissent was more likely when citizens were poorer. Our findings showed the opposite of the second hypothesis. GDP per capita had a positive effect on nonviolent repression and no significant effect on violent repression. These results show that as GDP per capita in a country goes up, nonviolent dissent decreases and nonviolent repression increases. These results seem to contradict the arguments for rising expectations, and potentially indicate that citizens are less willing to dissent when economic conditions are improving and states are interested in using nonviolent means to ensure that the status quo is not disrupted.

Dissent and repression are often treated as inherently political actions. Dissent is intended to gain political rights and power, and states repress in order to retain political power. This dynamic is often played out through the political structure of the state and the freedoms allotted to the citizens in the state. Our third and fourth hypotheses tested this treatment.

H3: Countries that are more democratic have more nonviolent dissent as a response to repression.

H4: Countries that are more democratic have more nonviolent repression as a response to dissent.

Our findings on the effects of Gibney state terror, Freedom House, and civil liberties measures show some support for hypothesis 3, and confirm hypothesis 4. The political structure of a country had some effect on the likelihood of violent or nonviolent dissent, but it had a significant effect on the likelihood of repression. A state's capacity for terror had a positive effect on violent dissent, nonviolent repression, and violent repression, indicating that states that have a history of terror and repression are likely to continue their behavior, and citizens are more likely to reflect the behavior of the state by turning to violent means of dissent.

The Freedom House measures show that this relationship is likely to play out in less democratic environments because the Freedom House measure had a negative

effect on the likelihood of nonviolent repression, and the measure for civil liberties had a positive effect on violent repression. These results indicate that as civil liberties get worse violent repression increases, and as the amount of freedom in a country gets worse the amount of nonviolent repression decreases. So as countries become less free and offer fewer civil liberties they are more likely to rely on violent repression than nonviolent repression. Once states show a capacity for repression, they are more likely to continue to use it, and to drive citizens to use more violent forms of dissent as well.

In our demographic hypotheses we predicted that urban countries and religiously and ethnically fractionalized countries would see higher amounts of back-and-forth dissent and repression.

H5: Larger and more urban countries see higher back-and-forth dissent and repression.

H6: More fractionalized countries see higher back-and-forth dissent and repression.

The results of our analyses provide minimal support for these hypotheses. The size of the population in a country was significant for violent and nonviolent repression, but it had no effect on the likelihood of repression. Some argue that states rely more heavily on repressive tactics as the population increases, but our findings do not provide strong support for these claims. The proportion of the population living in urban areas had a small positive effect on nonviolent events, but they were not significant when they were included in the combined models. Our findings rejected hypothesis 6, as religious and ethnic fractionalization had no effect in any model that we ran. However, the proportion of the population that was indigenous had a negative effect on the likelihood of violent dissent. This may be because indigenous populations are disempowered in society, and they are thus less willing to use more contentious forms of dissent. These results, especially the combined models, show that demographic characteristics have a limited and erratic effect on levels of dissent and repression. This may be because the effects of demographic characteristics are, as Elbadawi (1999) argues, working with other characteristics to increase the likelihood of dissent and repression.

Finally, our hypotheses for the effects of global characteristics stated that an increased involvement in the global economy and world polity would have an effect on the likelihood of dissent and repression.

H7: Increased dependency on global capitalism will increase dissent responses to repression, but the relationship between dependency and repression on dissent is undetermined.

H8: States that are more embedded in the non-governmental world polity will have more nonviolent dissent in the face of repression, and less repression in the face of dissent.

Our results reject hypothesis 7 and partially confirm hypothesis 8. Instead of

increasing dissent, as we hypothesized, increases in export dependency decreased the likelihood of violent dissent, and had no effect on the likelihood of repression. This finding contradicts previous research that international dependence promotes rebellion, and indicates that potential dissidents may be less willing to include violence actions in their repertoires of contention. The strongest and most consistent findings in our analysis show that a country's position relative to the center of the INGO network has a strong positive effect on all forms of contentious behavior. The measure had the strongest effect on the likelihood of dissent (increasing the likelihood by 113 times), and this may indicate a sense of relative deprivation among citizens and provide further support for the argument that international linkages and influences are increasingly important (Meyer et al. 1997; Schock 1999). The increased likelihood of dissent then increases the likelihood of repression. Countries with large numbers of contentious events tend to have humanitarian problems and attract INGOs that focus on human rights and conflict resolution (e.g., Israel). As a result, the correlation between contentious events and INGO centrality may indicate clustering within the measure.

In conclusion, the broad findings across models and variables indicate that contextual characteristics have a significant effect on when and how dissent and repression affect one another, and these effects varies across types of contentious behavior. As a result, simplified explanations for the relationship between dissent and repression or analyses that focus solely on political or economic factors need to be expanded and specified. Future research needs to move further down the path of expansion and specification by continuing to disaggregate temporal units and to establish a firmer grasp on how contextual characteristics mediate one another.

Notes

1. Because of the nature of event data, a "zero week" is included for each year in the analysis.

2. The countries included in the analyses are: Albania, Algeria, Argentina, Armenia, Australia, Austria, Bangladesh, Belgium, Bolivia, Botswana, Brazil, Bulgaria, Cambodia, Cameroon, Canada, Chile, China, Colombia, Croatia, Cyprus, Denmark, Dominican Republic, Ecuador, Egypt, El Salvador, Ethiopia, Fiji, Finland, France, Georgia, Ghana, Greece, Guatemala, Guyana, Haiti, Honduras, Hungary, India, Iran (Islamic Republic of), Israel, Italy, Jamaica, Japan, Jordan, Kenya, Lao People's Democratic Republic, Lesotho, Madagascar, Malawi, Malaysia, Mauritius, Mexico, Mongolia, Morocco, Nepal, Netherlands, New Zealand, Nicaragua, Nigeria, Norway, Panama, Papua New Guinea, Paraguay, Peru, Philippines, Poland, Portugal, Republic of Korea, Republic of Moldova, Romania, Rwanda, Serbia and Montenegro, Singapore, Slovenia, South Africa, Sri Lanka, Swaziland, Sweden, Switzerland, Syrian Arab Republic, Thailand, former Yugoslav Republic of Macedonia, Trinidad and Tobago, Tunisia, Turkey, Uganda, United Kingdom, and United Republic of Tanzania.

3. One country, Serbia and Montenegro, is not ranked because it does not have all of the indicators needed to provide a score.

4. The data and code that we used to create our files is available upon request.

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