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Abstract

We examine the global rise of environmental protest events reported in major news outlets from 1970 to 2010, based on a new cross-national dataset. The paper addresses conventional arguments regarding resources and political opportunities, but focuses principally on the international dynamics that affect local protest and its visibility. World society theory as well as scholarship on transnational movements and advocacy networks suggests that international organizations and institutions play an important role in bringing resources, opportunities, and global media attention to local movements. We argue that international forces will be especially important in nondemocratic countries. Cross-national quantitative analyses suggest that nations with strong organizational ties to the international community have more protests that get covered in international media, and that the effects of international forces are stronger in less democratic societies.

Keywords

social movements, globalization, world society, environmentalism, protest

Introduction

Despite a governmental ban on public assemblies, activists throughout Ogoniland, Nigeria held a massive protest on January 4, 1993. Holding green twigs to symbolize their struggle against Shell Oil’s destruction of their land, 300,000 citizens and Greenpeace observers protested on what is now commemorated as “First Ogoni Day.” The protest garnered massive international news coverage and Shell pulled out of Ogoniland shortly afterwards.

The Shell oil company had been under intense scrutiny for destructive practices in Nigeria for more than a decade, and local grassroots movements had organized against Shell throughout the 1980s (Nwankwo 1982). However, the struggle initially failed to gain traction with the Nigerian state or the global news media. It was not until the 1990s that international media focused global attention on what had previously been a silent struggle, ultimately bringing new pressures to bear on the Nigerian state.¹

We seek to explain cross-national and historical variations in environmental protest events that appear in major media outlets. We focus on the role of international pressures and organizations in supporting domestic protest and attracting international attention. As the Nigerian

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example demonstrates, domestic social movements increasingly have global dimensions—such as the presence of international partners like Greenpeace (Smith 2001; Tsutsui, Whitlinger, and Lim 2012).

We use the term “globally visible protest” to refer to collective action that garners international media attention, often by being especially disruptive and dramatic and/or by tapping into global organizations and networks that facilitate media coverage. Global visibility—which during the historical scope of our study generally meant international media attention—may have important consequences such as attracting new resources to local activists and/or bringing external political pressures to bear on states or firms that are targets of movement mobilization.

We draw on, and bridge, two macro-level arguments that explain international diffusion of norms, such as the use of extra-institutional protest tactics: social movement society (D. S. Meyer and S. Tarrow 1998) and world society theory (J. W. Meyer et al. 1997). Although local movements can gain international visibility without international assistance, we suggest that international norms, institutions, and actors make it more likely that local environmental campaigns garner international attention through the use of extra-institutional protest tactics, like road blockades, demonstrations, banner hangs, and other actions that are dramatic and disruptive. Specifically, global norms, institutions, and actors support local environmental protest and facilitate global media attention by (1) providing material and intangible resources (e.g., media expertise, network ties to global media), (2) creating favorable international political opportunities for local movements, and (3) diffusing new movement frames for interpreting and mobilizing around local environmental issues.

We develop these arguments to help explain patterns of globally visible environmental protest around the world from 1970 to 2010. Our dataset contains environmental protest events covered by media reports for a large set of countries. Internationally visible environmental protests were uncommon in the 1970s, especially in the global South, but grew rapidly in the 1990s and are now routine in all parts of the world. Figure 1 shows the overall global trend (we will discuss the similar trend in the global South and nondemocracies in the next section of the article).

Previous research has examined newspaper coverage of environmental protest activity for two or three countries within a limited time frame (Giugni 2002). We utilize data on a large number of countries over 40 years to examine the macro-level factors associated with globally visible

Figure 1. Globally visible environmental protests, 1970–2010.
protest. A study on this scale provides several opportunities to advance the literature. We offer the first global study of visible environmental protest, whereas prior large-N work has focused mainly on antigovernment protest or ethnic protest (e.g., Caren, Gaby, and Herrold 2017; Olzak 2006). The project offers a quantitative exploration of recent arguments linking world society theory with social movement society theory. Finally, we examine how national-level political institutions (here, democracy) interact with strengthening global organizational structures, which can be difficult to discern from case studies; a macro-comparative approach provides leverage.

**Explaining Globally Visible Environmental Protest**

**Domestic Sources of Protest**

D. S. Meyer and Tarrow (1998) conceptualize the increasingly ubiquitous nature of protest tactics used during episodes of contentious politics as evidence of a growing social movement society. Addressing the increasing use of extra-institutional protest forms, like picketing, strikes, civil disobedience, and marches, the authors propose that these social movement activities are patterned in the fabric of social change. The increasing use of extra-institutional protest globally against environmental degradation follows this conceptualization. There are three primary arguments within social movements research for explaining the emergence of social movement societies, and we use these theories to inform the following hypotheses.

An extensive literature addresses the domestic factors that give rise to mobilization and protest, a necessary condition for global visibility. Material and organizational resources are required for activists to garner support and push for mobilization (McCarthy and Zald 1977; for review, see Edwards and McCarthy 2007). A society’s overall level of economic development is a basic starting point. Long-term development can translate to higher levels of societal resources of many kinds, including greater individual income, wealth, and leisure time that may be devoted to social movement participation (it should be noted that, for countries with high levels of inequality, these resources are not available to all citizenry). In addition, prior work highlights the crucial role of education in facilitating individual political and civic involvement (e.g., Verba, Schlozman, and Brady 1995). Societies with higher levels of education are likely to have more individuals who have skills and resources to organize and participate in protest.

Finally, classic work points to organizational infrastructure as a critical resource for movement mobilization (e.g., McAdam 1982; V. Taylor 1989). Although most of the empirical literature focuses on Western societies, studies suggest that this argument may apply to the global South (e.g., Pilati 2011). Domestic environmental organizations and civic capacity have also been found to play a key role in mobilizing individuals to participate in protests (McAdam and Boudet 2012), especially the large-scale protest events that are most likely to be captured by major media outlets (Andrews and Caren 2010; McCarthy, McPhail, and Smith 1996; McCarthy and Zald 1977; Rohlinger 2002, 2015). Therefore, we expect the following:

**Hypothesis 1:** Domestic resources, such as wealth, education, and organizations, will be positively associated with a country’s level of globally visible protest.

Second, the domestic political environment shapes social movement activity, defining the opportunities and constraints for political action (Amenta 2006; McAdam 1982; D. S. Meyer 1990; for review, see D. S. Meyer and Lupo 2010). In comparative context, the most relevant domestic structure is a society’s overall level of democracy. Nondemocratic societies typically have high levels of state repression that sharply limits movements. Key issues may include the absence of legal protections for speech and association, the absence of checks on state power, and routine use of violent state repression against movements and their supporters and allies. Also,
nondemocratic regimes often control the press and limit the flow of information, which may prevent protests from gaining media coverage. By contrast, democratic societies are both more open (though repression still occurs) and tend to have strong norms supporting political participation, which affords activists much more latitude to organize and engage in protest. Consequently, we expect the following:

**Hypothesis 2:** Domestic political opportunities, especially a country’s level of democracy, will be positively associated with the level of globally visible protest.

Of course, this hypothesis is just a starting point and does not fully capture the complex relationships between democracy, repression, and protest. Efforts to repress protest may spark responses and reactionary protests (Schock 1999). We lack fine-grained data on repression to fully explore the issue, but we consider possible nonlinearities. For instance, repression at low- or mid-levels of democracy may prompt reactions that elevate the level of protest, whereas regime responsiveness and reduced repression in highly democratic contexts may avert protest (Kriesi, Koopmans, Duyvendak, and Giugni 1995; Schock 1999; Tarrow 1994).³

**Hypothesis 2a:** The relationship between democracy and globally visible protest may be nonlinear.

Finally, we consider the effect of environmental grievances as a potential motivator of social movement protest. Social movements scholars have sometimes been skeptical of the view that grievances alone are sufficient to spark major social movements (Brenton 1994; D. S. Meyer and Rohlinger 2012). This point was reinforced in the work by D. McAdam and H. S. Boudet (2012) who provided a rare comparative study based on negative and positive cases of mobilization. They found that mobilization against environmental threat was low across communities in the United States where environmental threat was substantial, and that civic capacity and organizational infrastructure represented a more powerful explanation than the existence of a threat. However, threats and grievances are different phenomena. Scholars have also found that the disruption of daily routines and more immediate threats are often important factors in explaining protest emergence (Caren et al. 2017; Snow et al. 1998; for a review, see Almeida 2018). Specifically, other scholars have found that objective environmental degradation, as opposed to the threat thereof, is often a force that drives environmental mobilization and protest, at least for domestic-level analyses (e.g., Johnson and Frickel 2011; Pellow 2007; Shriver, Adams, and Longo 2015; B. Taylor et al. 1993). Thus, we expect the following:

**Hypothesis 3:** Environmental degradation will be positively associated with a country’s level of globally visible protest.

**International Dynamics and Domestic Protest**

In states with strong domestic social movement resources and favorable opportunities, global factors may not have much impact on the level of mobilization and protest (Johnson and McCarthy 2005). However, in states with low levels of resources and nondemocratic political structures, global factors may be integral to supporting protest and rendering it visible to international audiences. For instance, the Czech Republic had a “long tradition of conservation and ecological consciousness,” and although social movement activity was robust on underground and cultural levels (Shriver and Adams 2010), state repression presented obstacles to domestic activists
during the height of the Communist regime due to a legacy of state repression and weak civil society (Fagin 2000:141).

Although Greenpeace International as an umbrella organization would not establish an official affiliate in the communist context, logics for mobilization gleaned from Greenpeace bolstered local activism. For instance, in 1989, a student-run organization called The Rainbow Movement, or Hnuti DUHA, was established before the collapse of communist rule in November. This reference to “rainbow” is based on a Native American historical reference that was co-opted within the hippie movement and environmentalists in the 1970s. In 1978, Greenpeace named its ship that was used for international campaigns, “The Rainbow Warrior,” based on this reference. The Rainbow Warrior was bombed by French intelligence officials in 1985 during a campaign against nuclear testing in French Polynesia. International media coverage of the bombing was prolific and The Rainbow Warrior became an internationally recognized name and symbol for environmentalist direct action, like that of The Rainbow Family in the Czech Republic.

Following democratization, a Czech Republic Greenpeace affiliate was officially established and acquired funding, tactical advice, and other support from its international parent organization to develop their campaigns. Greenpeace organized direct action events in the Czech Republic that gained international attention. As a large international organization, Greenpeace supported domestic activists symbolically before democratization, and materially after democratization, in their use of disruptive protests and institutional routes to influence change (Fagin 2000).

It is telling that activists reached out to Greenpeace for support during the Communist regime, given the organization’s reputation for disruptive collective action. Local activists who take substantial risks to mobilize against environmental destruction within a repressive context are an important part of the domestic story. That said, international organizational networks and logics for mobilization both before and after domestic collective action efforts are part of the international story. They can provide resources that support the emergence of protest when domestic opportunities are in flux or are closed, as was the case in the Czech Republic.

World Society Theory and Globally Visible Protest

Several theoretical perspectives speak to the importance of global norms, institutions, and actors for local movements. We draw heavily on world society theory, which has focused extensively on the global spread of environmentalism (Frank, Hironaka, and Schofer 2000; Hironaka 2014). However, the arguments overlap substantially with scholarship in political science, such as the literatures on transnational advocacy networks and movements. Classically, M. Keck and K. Sikkink (1998) highlight ways that international actors bring pressure to bear on states when local groups find themselves unable to influence the state, via the “boomerang effect.” Political scientists have also emphasized the role that local activists have played in environmental mobilization cross-nationally (Baver and Lynch 2006; Christen et al. 1998; della Porta and Tarrow 2005; Lee and So 1999; O’Neill 2012; Steinberg 2001).

World society scholars have developed an extensive literature exploring the impact of international institutions, organizations, and norms on the global diffusion of policy in domains such as education, human rights, and the environment (Frank et al. 2000; J. W. Meyer et al. 1997). In recent years, scholars began connecting the world society and social movement literatures to better understand the emergence of movements and protest (Cole 2006; Josselin 2007; Tsutsui 2006, 2018; Tsutsui and Shin 2008; Tsutsui et al. 2012). K. Tsutsui (2006) argues that global institutions and cultural shifts, which legitimized human rights issues, led to national-level mobilization and protest (Tsutsui and Shin 2008). Likewise, Murdie and Bhasin (2011) show that international human rights nongovernmental organizations (NGOs) provide key resources for antigovernment protest.
We extend this work to further explore how global norms, ideas, and resources, often transmitted by international organizations, facilitate the emergence and visibility of protest. This argument dovetails with recent theoretical work on the unequal position of nations in world society. Variability in links to international nongovernmental organization (INGO) networks may be seen as an important source of inequality (Beckfield 2003), which can compound disadvantages for peripheral societies and the activists within them. More generally, the dynamics discussed here hinge on the relatively less privileged position of domestic actors compared with their international counterparts (Keck and Sikkink 1998). Peripheral regimes are often desperate for external resources and legitimacy, and thus are particularly vulnerable international pressures (J. W. Meyer et al. 1997).

The Global Environmental Regime: Frames and Opportunities

The historical emergence of a global environmental movement involved the establishment of new norms and cultural frames that legitimated proenvironmental movements everywhere, creating new possibilities for domestic-level protests (J. W. Meyer and Jepperson 2000). World society theory is rooted in the idea that social reality and social problems are constructed (Berger and Luckman 1966; Gusfield 1976). Glaring environmental issues are sometimes ignored or seen as in-actionable, depending on the way the issues are constructed in the public sphere. The establishment of environmental issues as a legitimate type of social problem in world society is an important foundation for mobilization. Institutionalization of a globalized environmentalism, which includes treaties and intergovernmental organizations such as the United Nations Environment Program (UNEP), involved the construction of new cultural frames for understanding environmental problems, which played an important agenda-setting role, empowering local actors to mobilize around environmental issues (Hironaka 2014).

The agenda-setting effects of international institutions—such as UNEP and environmental treaties—have important consequences for the opportunity structures that national-level movements face (Tsutsui 2006). “Naming and shaming,” for instance, is more effective in the presence of strong international norms. And, national subscription to those norms—for example, ratification of environmental treaties—makes states further vulnerable to naming and shaming if they fall short of their formal commitments. States sometimes sign treaties without an intent to implement them (Hafner-Burton 2005), but even insincere ratification brings new pressures to bear on states (Hironaka 2014).

In sum, the expansion of the international proenvironmental regime and growing national commitments to address environmental problems may encourage protest and media attention. Thus, we expect the following:

Hypothesis 4: The growth of international environmental institutions and increasing national commitment to the global agenda—for instance, via national ratification of environmental treaties—will have positive effects on the rate of globally visible environmental protest in a country.

International Proenvironmental NGOs

Along with the growth of international institutions and treaties, the international community has seen tremendous expansion of INGOs (Boli and Thomas 1999). We argue that international environmental organizations, such as Greenpeace and Friends of the Earth, carry and transmit global cultural frames, political connections, and resources that support protest and bring it into the international spotlight. In addition, we explore the distinctive role international organizations might play in nondemocratic political contexts.
First, INGOs provide tangible funding and intangible support that supports local organizations and mobilization efforts, making protest more likely and larger in scale. Most obviously, international proenvironmental groups transmit important material resources, for instance, providing grants and engaging in local “capacity-building” efforts, which directly support local environmental organizations and their activities (e.g., Longhofer and Schofer 2010). Larger protests and those organized by major NGOs are more likely to gain media coverage (and may also spark repression, which further generates coverage) (e.g., Earl et al. 2004). Equally or more important, however, is the knowledge and organizational resources that international organizations transmit. Gallo-Cruz (2012), for instance, finds that INGOs can spread knowledge about specific repertoires and tactics, particularly those tactics that are likely to be picked up by the media and gain broad attention. Local citizens and activists in disparate regions of the globe may not have practical experience of organizing the kinds of strategic and dramaturgical acts that are most likely to garner favorable coverage in the international press. Large INGOs have a wealth of expertise in gaining major national and international media coverage, and oftentimes have long-standing connections with members of the media.

These points were illustrated in conflicts over oil extraction in the Peruvian Amazon in the early 2000s. Peru was another major site for Shell oil operations where local groups mobilized to resist both environmental pollution and human rights violations. International nonprofit organizations played a key role in supporting local mobilization and efforts to publicize the struggle. “On January 20th, scores of Machiguenga protested hearings in the Native community of Shivankoreni by banging rusty oil barrels left behind by Shell in the 1980s” (Amazon Watch 2005). The event was announced by a press release put forward not by local actors, but by Amazon Watch, an INGO focusing on deforestation and other environmental issues in the Amazon. Indigenous activists disrupted public hearings that were deliberating extending contracts with oil companies that operated in areas of the Peruvian Amazon. Part of the complaint was that a 4,000-page Environmental Impact Report was distributed without enough time for indigenous groups to read and respond to it. Amazon Watch and Earth Rights International worked together on the issue and prepared a report to support and substantiate grievances made by indigenous communities affected by the oil and gas industries. This example underscores the ability of INGOs to both provide valuable resources like institutional knowledge and also utilize connections with other organizations, political and legal officials, and the media.

Another way that proenvironmental INGOs promote protest actions is using global connections and alliances. In many cases, INGOs function as umbrella organizations that link local groups from a wide variety of countries. According to Greenpeace International’s Web site, there are “28 national and regional offices around the world, providing a presence in over 40 countries” (Greenpeace.org). With this kind of scope and influence, INGOs often create movement alliances between issues, for instance, connecting environmental groups with human rights organizations.

Rainforest Action Network’s (RAN) campaign against the palm oil industry (specifically Cargill, Inc.) exemplifies the way that environmental movements may be more effective and consequential through a Web of alliances and connections. Cargill is the world’s largest producer of palm oil, which involves industrial-scale monocrop agriculture that is responsible for massive amounts of deforestation. Palm oil production causes habitat loss, dislocation of farmers, as well as noxious pollution. RAN framed their campaign against all these fronts. The organization reached out to animal advocate organizations with pictures of orangutans orphaned or harmed as forests were being destroyed, while simultaneously reaching out to human rights groups working against dispossession of indigenous groups. Through these bridging strategies, RAN increased the legitimacy and urgency of the palm oil issue beyond environmental concerns. Obviously, local movement organizations can attempt to bridge issues, but they rarely have the size, organizational scope, and connections to do so as effectively as large INGOs like RAN.
Finally, the presence of international organizations increases the likelihood that domestic activists will access international networks of support. When a country is singled out by transnational activists and named for not abiding by accepted global norms, like environmental protection or human rights, that country may then be shamed by the international political, economic, and transnational organizational community. The targeted country’s working connections with other nations become vulnerable, which becomes a valuable form of leverage for activists.

S. Tarrow (1994, 2001) conceptualizes INGOs as “insider” participants in politics on behalf of a movement constituency, rather than a causal factor for why domestic actors choose to engage in “outsider” protests, or extra-institutional protest. Emphasizing the agency of individual domestic activists, Tarrow (2001) argues that “rooted cosmopolitans”—those individual actors who branched out internationally and bring ideas back to the domestic context in which they are rooted—are the conceptual link illuminating why repertoires of contention diffuse transnationally. Among multiple cases, he uses the labor campaign against a garment producer, Kukdong International, in Mexico and the coalition between domestic actors and American NGOs to exemplify how “mobilization on the ground was the necessary springboard of the campaign, but coalition formation was a distinct process that gave it legs” (Tarrow 2001:170). In the case of cross-national environmental protest, the emergence of extra-institutional protest as a tactic is the “legs” that INGOs can help provide. When the analysis homes in on global visibility of extra-institutional protest, we suggest that INGOs may encourage and facilitate protest in divergent contexts that normalize extra-institutional protest as well as contexts that are hostile to these protest forms.

We suggest that INGOs and domestic actors, like rooted cosmopolitans and NGOs, are more often inextricably linked for explaining the successful use of outsider tactics in environmental protest, where INGOs can provide resources, connections, and frames that encourage protest activity and empower domestic activists to engage in sustained high-risk activism. Similar to how global framing of domestic issues “signals to overworked and isolated activists that there are people beyond the horizon who share their grievances and support their causes” (Tarrow 2005:76), INGOs and the media attention they garner also provide this psychological support as well as material support to expand domestic activists’ tactical repertoire to include new protest forms. In this way, INGOs leverage their international legitimacy and resources to both embolden domestic activists to engage in “outsider” protest activity, as well as work through more conventional institutional channels that reflect INGO’s “insider” status. Thus, we expect the following:

**Hypothesis 5:** Countries that have more connections to the international proenvironmental INGOs will have higher levels of globally visible environmental protest.

**World Society, International Organizations, and Protest in Nondemocracies**

Although social movements scholars have focused mainly on affluent Western democracies, a growing literature addresses social movement mobilization and civic participation in nondemocratic and repressive contexts (Alimi 2009; Almeida 2003; Boudreau 1996; de la Luz Inclan 2008; D. S. Meyer 2012; Pilati 2011). Political opportunity structures within one state are “nested” in a broader international context, and consequently changes in the international context may open or close opportunities for domestic activists (D. S. Meyer 2003). Models derived from research on the global North may not always apply to the emergence of protest in the global South (for a detailed review, see Boudreau 1996; Reddy 2014). Nondemocratic societies generally provide an unfavorable context for domestic social movements, as discussed above. Indeed, this is reflected in our data on environmental protests. Figure 2 illustrates the disparity in levels of protest in countries with high levels of democracy versus countries with low levels of democracy. Although there is a marked gap in the number of environmental protests, there is a significant emergence and increase of globally visible protest in nondemocracies over the examined time period.
We suggest several reasons that international actors may be particularly important for facilitating protest in nondemocratic societies and rendering it visible to global audiences. First and foremost, international actors may be critical to supporting mobilization when local civil society is weak, typically due to a long history of repression. The discussion of the Czech Republic, above, is illustrative.

Second, international actors can be absolutely critical for bringing international visibility to struggles that occur in countries lacking a free press. When local media is absent, it often falls upon intermediaries to bring attention of local struggles to the international press, as the example of Amazon Watch in Peru (above) illustrates.

Third, the presence of international participants may create new political opportunities for local movements. Authoritarian governments are often hesitant to crack down on a social movement protest that is being aided by an INGO or involves international observers. International organizations often have networks of contacts internationally, both with political officials and with other environmental or human rights organizations. These networks provide substantial leverage to INGOs because abuses and grievances can be widely exposed and could potentially bring external pressures to bear on repressive regimes. Simply put, the possibility of international scrutiny greatly raises the potential costs of engaging in violent repression. International attention to repression can potentially prompt rebukes, embargos, and other repercussions. When INGOs are present, repressive regimes are likely to reconsider violent responses, which makes activists more willing to engage in protest.

**Hypothesis 6:** International proenvironmental organizations will be especially important in generating visible protest activity in nondemocratic countries.

### Data and Methods

**Environmental Protest Event Data**

We collected a new cross-national dataset containing counts of environmental protest events that gained media attention from 1970 to 2010 at five-year intervals. We identified protest events across countries (see Appendix for a list of countries in the sample) and time from reports that
appeared in LexisNexis. As we describe in detail below, events were hand coded to verify that they met our definition of an environmental protest and to avoid duplicates. Prior cross-national studies typically either were limited to a single media source or used automated searches to code large databases. Our approach seeks to combine the best of both worlds: We searched many sources electronically but had coders evaluate each report to create accurate protest counts.

Reports of a protest in the LexisNexis database, which sources predominantly from U.S. and international wire services, reflect that protest’s ability to attract global attention that extends its impact, bringing it into the global public sphere. A protest in Brazil that receives coverage by the Associated Press International or New York Times means that the protest is globally visible at that moment, and has a much higher chance of becoming consequential in both national and international affairs—for instance, potentially bringing new pressures to bear on a regime.

We follow a long lineage of social movements research that uses media reports, an approach that has well-known strengths and weaknesses. Media data are valuable as both proxies for and producers of what is important and salient politically and culturally (Ferree et al. 2002; Gamson and Modigliani 1989). However, reported events are drawn from a larger population of environmental protests, many of which did not attract media attention. Media outlets select events for coverage (McCarthy et al. 1996), for instance, emphasizing large, dramatic, and violent occurrences and focusing on political events like elections or ongoing policy debates (Ferree et al. 2002; Gitlin 1980; Rohlinger 2015). This limitation can lead to difficulties in evaluating causal arguments (Earl et al. 2004). We lack alternative data sources that could identify protests that failed to garner media attention, and so we cannot speak to the question of why some protests are covered and not others. Rather, we seek to shed light on the growth of globally visible environmental protest.

Extra-institutional protests were defined as collective actions that sought to disrupt as opposed to using institutional pathways to seek change. These actions included picketing, marches, civil disobedience, and dramaturgical actions that focused on claims related to the environment. We did not include citizen efforts to voice concerns in public forms like press conferences, op-eds, or letter writing campaigns, which are often described as in the media as “protests.”

The dataset contains all environmental protests captured in media reports drawn from LexisNexis.5 We conducted extensive testing of different keywords to collect media reports of environmental protest. We found that a small number of keywords were surprisingly effective at capturing the great majority of protest events in test samples. We searched for variations of the world environment, conservation, and ecology in combination with the word protest. Additional search keywords (e.g., “pollution,” “clash,” “march,” “resistance,” etc.) produced very few additional protest events in a given country (but greatly increased the number of duplicate reports of a given event).

Our searches yielded document batches averaging 1,200 pages per year with about two article abstracts per page. These documents were hand coded and events were then individually examined to remove duplicates and to determine whether the event fit the definition of an environmental protest. Protest events that were held over multiple days were coded as a separate protest per day only when each day required increased resources and planning that distinguished each day of protest. This means that multiday protests like hunger strikes or strikes were not coded as separate protests per day, whereas protests like those against French nuclear testing in Polynesia, which were held in synchronicity by separate groups in separate territories, were coded as separate protests.

Independent Variables

Population. We control for the natural log of a country’s population, as more populous countries may have more capacity for protest. Data are from the World Development Indicators (World Bank 2017).
Media coverage. We control for a general measure of overall media attention focused on each country. Some countries may be disproportionately covered in the international media, for historical or idiosyncratic reasons, which could make protest events more likely to gain international coverage. For instance, English-speaking countries may be more apt to get covered in the predominantly English-speaking international media. Also, countries vary in their many ways that affect their press coverage, such as their geostrategic importance, the presence of major international press offices in their territory, or the occurrence of notable historical events that may draw attention to particular countries (e.g., a revolution or war). We control for such effects with a measure that captures the total number of times a country appears in the LexisNexis database in a given year, which we log to reduce skewness. A limitation in the LexisNexis search engine causes our measure to be top-coded at 3,000 articles per year. Consequently, our measure lacks variation at the high end and cannot distinguish between countries that get mid-level coverage versus those that garner extremely high levels of attention. As a robustness check, we utilized an alternate measure of media coverage from N. Caren et al. (2017) that is not top-coded (but is limited to the New York Times newspaper); results were consistent.

Environmental degradation: Log CO\textsubscript{2} production per capita. Popular accounts depict protest as a response to environmental problems. A variety of cross-national measures of environmental degradation are available, most of which are highly correlated. We measure degradation using a country’s CO\textsubscript{2} production per capita (World Bank 2017). We log the measure to reduce skewness (adding one prior to logging to avoid negative values). Although CO\textsubscript{2} is not the most tangible measure of environmental damage, it is a good correlate and proxy for the many forms of environmental damage that accrue with industrialization, and it is available for a large sample of countries and years. Alternative measures of environmental degradation are discussed below; results were similar.

Real gross domestic product per capita, log. Cross-national differences in income are very large and may help explain variation in key resources for social movement activity. Also, Inglehart (1990) and others suggest that environmental concern may be greater in affluent countries. Our measure of real gross domestic product (GDP) is taken from the Penn World Table version 8.0 (Feenstra et al. 2015).

Education. The level of education in a society—which brings literacy, skills, and knowledge that facilitate citizen participation in the public sphere—is measured by the secondary school enrollment ratio (World Bank 2017).

Domestic proenvironmental NGOs. Classic scholarship highlights the importance of organizations as a critical infrastructure for movement mobilization. Drawing on an updated version of the dataset from W. Longhofer et al. (2010, 2016), we employ an organizational measure of domestic proenvironmental groups to capture the strength of local movement resource mobilization. Specifically, the measure reflects the total number of proenvironmental groups in a country (logged to reduce skewness, adding one beforehand to avoid taking the log of zero), based on the Gale Group’s Associations Unlimited database. The database includes information on more than 40,000 organizations around the world, about 1,000 of which are devoted to environmental causes. The database mainly includes large, resource-rich organizations that are active in the public sphere and thus is not a full census. In particular, small organizations are generally overlooked by the measure. Results should be interpreted with these limitations in mind. Nevertheless, the measure yields cross-national data that correlate well with more detailed sources that are available for a subset of countries (see Longhofer and Schofer 2010; Longhofer et al. 2016).
**Table 1.** Descriptive Statistics ($N = 713$ Observations, 89 Countries).

<table>
<thead>
<tr>
<th>Variable</th>
<th>$M$</th>
<th>SD</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental protest</td>
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<td>31.47</td>
<td>0.00</td>
<td>366.00</td>
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<td>Population (log)</td>
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<td>1.47</td>
<td>3.52</td>
<td>11.80</td>
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<td>Media coverage (log)</td>
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<td>1.59</td>
<td>0.00</td>
<td>8.01</td>
</tr>
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<td>1,205.28</td>
<td>0.00</td>
<td>3,000.00</td>
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<td>Environmental degradation ($CO_2$) (log)</td>
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<td>0.88</td>
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<td>GDP p/cap (log)</td>
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<tr>
<td>School enrollment</td>
<td>66.93</td>
<td>31.89</td>
<td>2.65</td>
<td>162.61</td>
</tr>
<tr>
<td>Domestic environmental organizations</td>
<td>6.41</td>
<td>19.96</td>
<td>0.00</td>
<td>158.00</td>
</tr>
<tr>
<td>Domestic environmental organizations (log)</td>
<td>1.05</td>
<td>1.04</td>
<td>0.00</td>
<td>5.11</td>
</tr>
<tr>
<td>Democracy</td>
<td>13.92</td>
<td>6.80</td>
<td>0.00</td>
<td>20.00</td>
</tr>
<tr>
<td>Democracy squared</td>
<td>239.80</td>
<td>156.31</td>
<td>0.00</td>
<td>400.00</td>
</tr>
<tr>
<td>Environmental treaty ratification (log)</td>
<td>2.35</td>
<td>0.74</td>
<td>0.00</td>
<td>3.58</td>
</tr>
<tr>
<td>Environmental INGOs (log)</td>
<td>1.75</td>
<td>0.87</td>
<td>0.00</td>
<td>3.61</td>
</tr>
<tr>
<td>Environmental INGOs × High democracy</td>
<td>1.30</td>
<td>1.19</td>
<td>0.00</td>
<td>3.61</td>
</tr>
</tbody>
</table>

*Note. GDP = gross domestic product; INGOs = international nongovernmental organizations.*

**Democracy and democracy squared.** We use a country’s level of democracy as a key measure of political opportunities and repression. We use the “polity” score, an index from −10 to +10, but rescale the measure from 0 to 20 because negative values make it difficult to examine nonlinear effects (democracy squared; Marshall et al. 2014).

**Nondemocratic country (dummy).** For the purposes of examining interaction effects, below, we also employ a “nondemocratic country” dummy variable, defined as a polity democracy score below 6, which distinguishes between highly democratic societies versus middle and low.

**International environmental treaty ratifications.** We measure the growth of international proenvironmental institutions and national subscription to proenvironmental norms with a measure of environmental treaty ratification. Specifically, we drew upon historical sources (International Environmental Agreements Database Project and ECOLEX) to count the total number of environmental treaties a country has ratified for each year. The measure is logged to reduce skewness (adding one beforehand to avoid taking the log of zero).

**International environmental organizations (environmental INGOs).** We measure the influence of international organizations in a conventional manner, using individual memberships in INGOs taken from the Yearbook of International Organizations (UIA 1970-2014). The data are based on a 12.5 percent sample from the population of environmental INGOs and are taken from previous work on cross-national environmental INGOs (Longhofer et al. 2016). Country membership was coded for each organization in each year, which was aggregated to produce a cumulative count of environmental INGO memberships. We take the natural log of the measure to reduce its skew (adding one beforehand to avoid taking the log of zero).6

Descriptive statistics for variables used in the analyses are shown in Table 1. Missing data were handled with listwise deletion, which reduced our sample to 89 cases.7

**Methods**

We analyze cross-national and longitudinal variation in annual protest counts reported in the media. We use a negative binomial model because our dependent variable is a count that is
potentially subject to overdispersion. The panel structure of the dataset violates the independence assumption of conventional regression models. Common solutions for cross-national panel data include models with country random or fixed effects (Brown and Halaby 1984). In our case, a Hausman test suggested that country fixed effects are appropriate. Additional diagnostics and robustness checks are discussed below.

### Results

Table 2 presents results of negative binomial regression models with country fixed effects examining environmental protests recorded in international media. Models 1–3 introduce variables in groups: grievances, domestic resources and political opportunities, and measure of international pressures.

We see in Model 1 that countries with greater environmental degradation tend to have more protest (though the effect is only marginally significant in our full model). This supports the idea that grievances play a role in environmental protest mobilization.

Models 2 and 4 include several measures of resource mobilization and one of domestic political opportunity structure—level of democracy. With regard to resource mobilization, we include overall societal wealth, as affluent citizens may have more resources to devote to environmental activism.
movements and greater environmental concern. Although GDP has no significant effect in Model 2, once additional variables are controlled the effect of GDP is negative. However, the coefficient for GDP is not significant in some alternate specifications (see the “Robustness Checks” section), so we are cautious about drawing strong conclusions. It does seem clear that affluence is not positively associated with protest, once other factors are controlled. This fits with prior scholarship on environmental attitudes: Affluence, alone, does not do a good job of predicting proenvironmental attitudes across countries (Dunlap and York 2008).

We observe in Table 2 a significant effect of education on globally visible protest, consistent with the idea that highly educated societies have more citizens with relevant skills to participate in the public sphere, and greater capacity to organize and mobilize protest. We also see that domestic proenvironmental organizations, which may be an important infrastructure for movement mobilization, are positively associated with globally visible protest, consistent with conventional resource mobilization arguments.

Domestic political opportunity structures are measured with a variable for level of democracy in Models 2 and 4. As one would expect, democratic societies—which are less likely to violently repress speech, association, and protest—have significantly higher levels of visible environmental protest. We also include the square of democracy, to address a potential nonlinear effect. The square of democracy is significant in Model 4 (though the effect is not wholly robust), suggesting that the effect of democracy tapers. Model predictions suggest that protest rapidly increases with democracy until the far end of the scale, and then falls back slightly (not presented here; available upon request). This is aligned with arguments that, as social movements are incorporated into political decision making, or institutionalized, through structures like protective laws and regulatory agencies, the level of extra-institutional protest may decrease (for a review, see D. S. Meyer and Laschever 2015).

Finally, we turn to international dynamics in Models 2 and 4. Environmental treaty ratifications have a large and significant effect on the annual count of globally visible environmental protest in a country. International treaty ratification reflects both expanding international concern for environmental problems and national subscription to international norms, which may make states more vulnerable to pressures (e.g., naming and shaming).

We also look at the effect of international environmental INGOs, which, we argue, provide resources and support for protest mobilization and help protests get covered in the international media. The effect of environmental INGO membership in Model 4 is positive and highly significant, consistent with the idea that international organizations play a role in supporting environmental protest and rendering it globally visible. The effect is large. A one-unit change of log INGOs is associated with an almost doubling of the number of protests (exp(0.64) = 1.89).

Model 5 turns to a different question: Does the INGO effect differ in democratic societies versus nondemocratic ones. We use a dichotomous democracy interaction, to simplify interpretation and visualization. We observe a negative interaction between democracy and environmental INGOs, indicating that INGOs have a smaller effect in democratic countries and a larger effect in nondemocratic countries. The coefficient for the main effect of environmental INGOs, which indicates the effect size for nondemocracies (when the main democracy dummy is 0), is roughly 1.1. The interaction term has a large negative effect of approximately −0.33, which reflects the amount that the INGO effect is reduced in democratic countries (democracy dummy = 1) compared with nondemocracies. Thus, the effect of environmental INGOs in democratic countries is roughly 0.77 (1.1 − 0.33 = 0.77). This is consistent with Hypothesis 6, which argues that INGOs may play a distinctive role in supporting globally visible protest in countries with repressive regimes.

Figure 3 illustrates the interaction by presenting the predicted number of protest events by level of environmental INGOs for democratic and nondemocratic countries. Overall predicted counts are fairly low because our dataset includes the 1970s and 1980s, when environmental
protest was less common. It can be seen from Figure 3 that predicted protest events grow as the number of logged environmental INGOs increases. The presence of environmental INGOs is more important in less democratic societies. In nondemocracies with few environmental INGOs, the rate of protest is lower than that in comparable democratic societies (the left side of the graph is somewhat compressed because protests are generally uncommon in societies with few environmental INGOs, but if one looks closely the predicted number of protests for democracies is higher than that for nondemocracies in that region of the graph). However, as the number of INGOs increases, the predicted number of protests in nondemocratic societies actually surpasses that in democratic societies. In other words, nondemocratic countries that are “hotbeds” of international attention, such as Nigeria in the 1990s, may have more globally visible protest events than even some highly democratic societies. To be fair, few nondemocratic countries have such high levels of environmental INGO activity (and conversely few democratic societies have low levels of environmental INGOs), so it is rare that nondemocratic societies in our dataset would actually surpass democratic societies in the level of protest. But the general point is clear: High levels of environmental INGOs are associated with high levels of globally visible protest in nondemocratic contexts.

**Robustness Checks**

We conducted diagnostics to identify influential cases; none were egregious, and removal of minor outliers did not change the results. We looked at alternative model specifications including different lags of independent variables, additional control variables for time (which might be associated with greater media coverage, generally), civil war, interstate war, natural disasters (which might cause media coverage), the years of major Earth Day events, and alternative measures of democracy (Freedom House, as well as dummies for change in democracy). We included measures of international economic integration (exports, exports to high-income countries, foreign direct investment [FDI]). Finally, we examined alternative measures of degradation, including some that are more visible than CO₂ emissions: nitrous oxide emissions, particulate matter pollution, and deforestation. Results were consistent (not presented here; available upon request).

**Figure 3.** Predicted globally visible environmental protest counts versus environmental INGOs for less democratic versus highly democratic countries.

*Note. INGOs = international nongovernmental organizations.*
There is debate regarding the optimal strategy for implementing negative binomial models with fixed effects (Allison 2012; Green 2007; Hausman, Hall, and Griliches 1984). P. D. Allison (2012) points out that common implementations are not “true” fixed-effects models because the fixed effect is implemented in the dispersion parameter rather than with respect to the mean, and recommends the inclusion of dummy variables for each country. However, A. Greene (2007) suggests that Allison’s solution suffers from the incidental parameter problem. We used the conventional Stata implementation of negative binomial regression with fixed effects (xtnbreg) but conducted several robustness checks including Allison’s recommendation to use an array of dummies to estimate a fixed-effects model. We further examined Poisson regression models with fixed effects (which does not suffer from the issues raised above, but cannot address potential overdispersion) and zero-inflated models (which could be appropriate, as our dependent variable has a substantial number of zeros in the early period, though the models do not address the panel structure of our data). Overall, the main findings were quite robust, though analyses with interactions did not converge using Allison’s approach, and we note some differences (detailed results available upon request): The negative effect of GDP observed in the Stata implementation (xtnbreg) can be replicated with a zero-inflated model, but the effect is positive when using Allison’s approach and a fixed-effects Poisson regression; the effect of domestic NGOs was smaller in the Stata implementation (xtnbreg), but highly significant in using Allison’s approach, zero-inflated models, and fixed-effects Poisson models; the interaction between democracy and environmental INGOs is larger and more strongly significant in Poisson models and Stata’s implementation of xtnbreg, compared with the results based on Allison’s approach; also the effect of international treaties was larger in all negative binomial models and smaller in Poisson models. Overall, we conclude that our most important findings are generally robust.

Discussion and Conclusion

The literature on environmental protest focuses on affluent democracies, in large part due to the challenges of collecting systematic cross-national data. We add to the literature by offering a large cross-national study of media-reported environmental protest events, which brings much-needed attention to the global South and nondemocratic contexts (Christen et al. 1998; Lee and So 1999; Steinberg 2001; B. Taylor et al. 1993). Consistent with prior work, we observe that domestic grievances, resources, and political opportunities are positively associated with globally visible environmental protest.

Our main contributions are to highlight the importance of global factors and to explore how they operate in nondemocratic societies. We argue that international norms, institutions, and organizations place new issues on the global agenda, provide opportunities and resources for protest, and provide skills and network connections that increase the likelihood that protests will get reported in the global media. We provided examples of globally visible environmental protests in Nigeria and Peru, which illustrated some of the dynamics involved. We then provided quantitative evidence that international organizations (as well as treaties) are strong correlates of cross-national variation in environmental protest events.

There is much interest in grassroots environmental mobilization and domestic political dynamics, for good reason. Our findings suggest that the international community can play an important role in supporting local mobilization and focusing international attention. Findings provide large-N support for the case-oriented work of Tsutsui and colleagues, which seeks to bridge world society theory with the social movements literature, and we extend those ideas to better address nondemocratic societies. Results are also consistent with related work in political science, which attends to the interplay of domestic movements and international allies, dating back to the classic Keck and Sikkink boomerang argument. To the extent that international organizations may help us understand variations in protest visibility (and the pressures on states that
may result), structural inequalities in world society (e.g., Beckfield 2003) may shape the future contours of environmental injustice. Future work might explore these dynamics in other movements and might examine if the process of gaining global visibility has changed with the explosion of social media in recent years.

Our study may underestimate the impact of global forces because our study controls for domestic factors that, in fact, reflect indirect global influences. For instance, education is often presumed to be a “domestic” phenomenon, but contemporary school curricula are highly globalized, diffusing new cultural frames on many issues, including environmentalism (Frank et al. 2011). Likewise, many domestic proenvironmental associations are spin-offs of the global environmental movement, building upon global organizational models and movement frames—and sometimes drawing directly on resources from the international community (Longhofer and Schofer 2010). In a globalized world, it becomes harder to cleanly distinguish between domestic factors and global ones, as global dynamics penetrate deeply into local political contexts.

### Appendix

**Countries Included in the Analysis (N = 89).**

- Argentina
- Australia
- Austria
- Bangladesh
- Belgium
- Bolivia
- Brazil
- Bulgaria
- Canada
- Chile
- China
- Colombia
- Costa Rica
- Cyprus
- Denmark
- Dominican Republic
- Ecuador
- Egypt
- El Salvador
- Ethiopia
- Finland
- France
- Germany
- Ghana
- Greece
- Guatemala
- Honduras
- Hungary
- India
- Indonesia
- Iran

(continued)
Appendix (continued)

Ireland
Israel
Italy
Japan
Kenya
Korea
Lebanon
Luxembourg
Malaysia
Mexico
Mozambique
Myanmar
Namibia
Nepal
Netherlands
New Zealand
Nicaragua
Nigeria
Norway
Pakistan
Panama
Peru
Philippines
Poland
Portugal
Romania
South Africa
Spain
Sri Lanka
Sudan
Sweden
Switzerland
Syrian Arab Republic
Tanzania
Thailand
The Gambia
Turkey
Uganda
United Kingdom
United States
Uruguay
Venezuela
Vietnam
Zimbabwe

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Notes
1. Tragically, the Nigerian government responded with a series of violent repressive actions against local villages that had participated in the movement. Greenpeace and Amnesty International campaigned heavily on behalf of the Ogoni exposing attacks on villages. These repressive efforts came to a boiling point when the government executed nine activists on November 10, 1995. Following reports in the international media, protests against the Nigerian executions erupted in several countries, and multiple world leaders advocated for oil embargos and other forms of economic pressure against Nigeria. Today, the Nigerian government is still under intense scrutiny by the United Nations for human rights violations during this conflict.
2. The rise of social media likely alters the process of garnering global visibility.
3. Shifts in democracy might also prompt responses. We examined this in our analyses (not presented; available from authors) but did not find significant results.
4. We lacked the resources to collect annual data in recent years. However, we collected data annually up through 1990, which was feasible because there are few events early on. This allowed us to get some sense of year-to-year noise (which was less than we expected) and to analyze other years besides those in our main tables. The findings were robust.
5. The database scrapes articles from all wire services, select world news outlets, an array of U.S. outlets, including state based, and select domestic sources that are non-English (Dutch, French, German, Italian, and Spanish.) We used the English-only function, which resulted in a sample that was heavily dominated by international wire services and U.S.-based news outlets, both of which reflect events that are more likely to be globally visible. Based on these articles, we generated a list of countries based on when an event in that country appeared. This means that each year the list of countries grew as the environmental protest spread globally. More details on the number of cases represented in the final models are included in the “Methods” section.
6. Some scholars divide INGO ties by population, but a per capita measure drastically penalizes populous countries and boosts the count for tiny islands, producing massive outliers. Moreover, protests often occur in a country’s capital city and target state policy. It is not obvious that a large national population (which includes many people in rural areas) would affect the role of INGOs in facilitating such events.
7. Our full sample consisted of 121 countries with at least one protest. We do not use a full list of all countries because (1) countries with all zero values cannot be included in a fixed-effects model, including, for example, Barbados and Grenada; (2) some measures have missing data, causing us to lose additional cases; for instance, the environmental NGO variable is not available for Vanuatu and Guinea-Bissau. The net effect is that our sample lost about additional 20 cases, bringing the sample to 89, which is still a sizable sample.
8. We retain the continuous measure of democracy as the main effect, to be consistent with other tables, but results are similar with a dichotomous main effect (that exactly matches the interaction).
9. Comments in Stata’s online forum suggest that the applied statisticians working at Stata agree with Greene.

References


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