

# Effects of International Affairs News Reporting on Knowledge and Perceptions – A Study of U.S. Residents and Foreign Affairs Elite\*

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## Abstract

U.S. residents and international affairs elite surveyed for this project report significant reliance on news reporting for information on international affairs. They also acknowledge major gaps in international affairs coverage. Do these gaps predictably influence fundamental knowledge and perceptions of international affairs? We begin by analyzing tens of millions of recently published articles and find that 1) many major international issues receive minimal major news media attention, and 2) that many international issues, when they are reported on, are depicted in a manner that deviates from underlying empirical realities (e.g. reporting effectively stops even as crises continue). Through a series of surveys, we then analyze how these reporting patterns influence the knowledge and perceptions of international affairs of two distinct populations: 1) U.S. residents; and 2) international affairs professionals consisting of a) international relations faculty at colleges and universities across the United States, b) current and former senior U.S. government officials who collectively served across (at least) three presidential administrations on issues relating to U.S. trade, development, or national security, and c) international affairs-focused staffers at major U.S. think tanks. Results point to significant causal effects of news media reporting practices on respondents' knowledge and perceptions of international affairs. More broadly, we argue that the major news media's role as an international affairs actor is omitted in much international relations theorizing and empirical work.

**Key Words: News Media; International Affairs; Reporting Bias**

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*“The people must know before they can act, and there is no educator to compare with the press.”*

*Ida B. Wells*

## 1 Introduction

Although much has been written on the major international news media’s effects on foreign policy attitudes and processes, the extent of these effects is largely underappreciated. This is in large part due to the subtle way in which particular media effects manifest. As consequential as direct effects of news reporting are, we argue that press reports inform how academics, government analysts, and others understand global affairs in nuanced but significant ways that have largely escaped the focus of research on this subject. For instance, as the revolution in “data science” continues, media reports are being compiled into an increasing number of widely used—but predictably skewed—datasets that inform how academics, government analysts, and others understand (and potentially respond to) various important international phenomena (Croicu and Eck, 2022; Shaver et al., 2020; Weidmann, 2016). In this article, we focus on the news media’s more fundamental influence on basic knowledge and perceptions of members of the public and foreign policy elite alike of international affairs.

This research is both based on, and motivated by, the results of approximately 166 semi-structured interviews with current/former foreign affairs professionals from across the U.N. system; many of the world’s largest international non-governmental organizations; major philanthropic organizations; think tanks/research institutes; the U.S. and foreign governments; and other organizations (**Interview Set 1**); 16 semi-structured interviews with current/former media executives, international news correspondents, and freelance journalists (**Interview Set 2**); and independent surveys of U.S. residents (**Survey 1**); international relations faculty at colleges/universities throughout the United States (**Survey 2**); current/former U.S. government officials who have served in senior foreign policy/national security positions across at least the past three presidential administrations (**Survey 3**); and staffers at major U.S.-based think tanks who work on international issues (**Survey 4**). It is also based on analyses conducted across tens of millions of news articles published by leading international online news outlets. We describe all of these efforts in greater detail later but note them here as they are referenced throughout this introduction.

Our first claim is that many important international issues receive minimal major news media attention, and, separately, that many international issues, when they are reported on, are depicted in a manner that deviates from underlying empirical realities (e.g. reporting effectively stops even as crises continue). Our interviews and surveys indicate this clearly, and our empirical analyses of tens of millions of news articles confirm this. From reporting on refugee and asylum-seeker populations, communicable diseases, and separately, natural disasters in other countries, as well as death sentences handed down by foreign governments, the number of individuals harmed or killed only weakly

predicts the level of reporting such issues receive.

Our second claim is that the major international news media are perhaps the single greatest educator of both the public and international affairs elite on matters of international affairs. Again, the results of our interviews and surveys alike provide strong evidence of this.

Following from these claims, we argue, and provide empirical evidence, that patterns of news media reporting strongly predict what U.S. residents and U.S.-based foreign policy elite (do not) know and (mis)perceive about the world. We then build on this finding and generate precise empirical estimates of how the intensity of news media reporting on international affairs translates into population-level knowledge of the issues themselves.

Finally, to better understand the broader consequences of patterns of international affairs reporting, we included questions related to causal impacts in both our interviews and surveys. Collectively, both depict significant causal impacts of news media reporting, and the interviews particularly make clear how important major news media coverage is to humanitarian, development, and other efforts globally and especially how coverage can—and frequently does—divert resources away from areas in which professionals assess the needs to be greatest. By highlighting the significant, pervasive effects of media reporting, the interviews call into direct question the nature of reporting patterns and misalignment in media coverage and objective human need/suffering. In the conclusion and Appendix B, we share relevant quotes from these interviews highlighting these effects. More generally, we claim that the major international news media’s role as an actor in international affairs is underappreciated. Specifically, in a final, separate survey of international relations faculty across the United States (**Survey 5**), we find that, although a majority of respondents indicate relying on news media materials in their teaching and research, only a minority indicate treating the major international news media as an actor in international affairs in their teaching.

## **2 Major Undercovered Issues in International Affairs**

Our starting point is the claim that many major international issues receive minimal major news media attention. First, in our surveys, a majority of current/former senior government officials and think tank staffers ( $\approx 65.6\%$  and  $\approx 59.0\%$ , respectively) indicated so, agreeing with the statement that “[m]ajor news media reporting on international affairs often leaves out major global issues.”<sup>12</sup> (See Figure 1.) Foreign affairs professionals who participated in our in-depth interviews corroborated this, providing a wide variety of specific major international issues that have

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<sup>1</sup>Specifically, they were asked whether “the issues that [they] worked on during [their] time in office as a senior government official [were] generally covered by the major international news media?” The percentages indicated correspond to the number of respondents who either agreed or strongly agreed with this question.

<sup>2</sup>U.S. residents answered similarly. Just shy of half ( $\approx 45.14\%$ ) also agreed or strongly agreed with this statement.

effectively fallen through the news reporting cracks. More generally, the literature supports this with various specific examples/cases—from the systematic underreporting of particular humanitarian disasters (Eisensee and Strömberg, 2007) to undercoverage of particular violent conflicts (Segev, 2015).

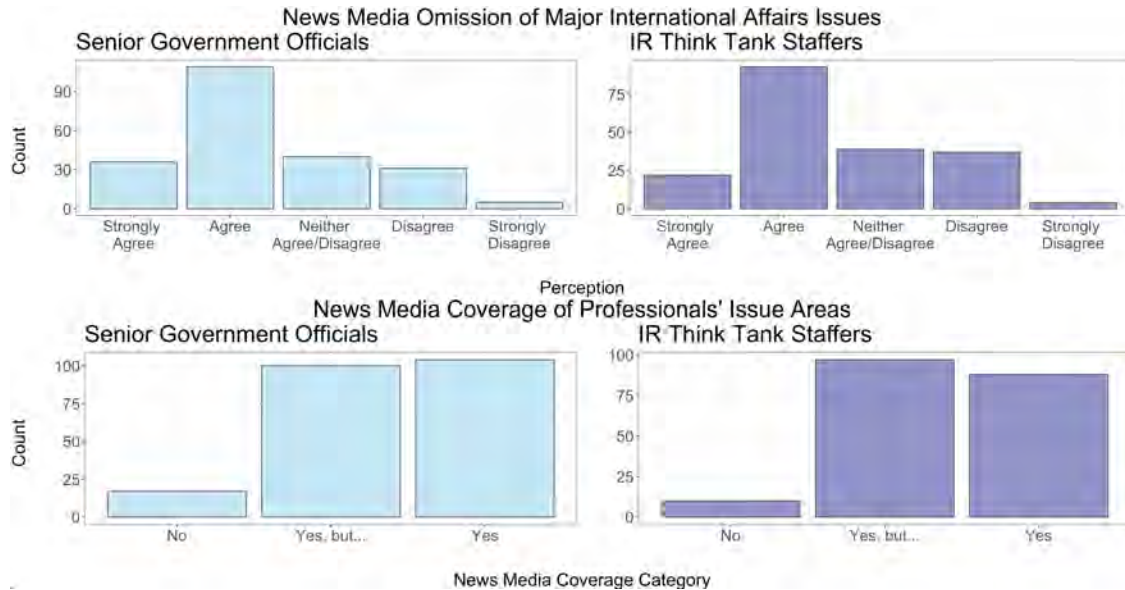


Figure 1: This figure displays the responses of international affairs professionals surveyed when asked about perceptions of major news media reporting on international affairs. The top figure displays perceived gaps in news media coverage of international affairs. A majority of current/former senior government officials and think tank staffers agreed or strongly agreed that “[m]ajor news media reporting on international affairs often leaves out major global issues.” The bottom figure displays responses to a question asking the professionals whether the issues that they work(ed) on are/were generally covered by the major international news media. A majority of current/former senior government officials ( $\approx 52.94\%$ ) and think tank staffers ( $\approx 54.87\%$ ) indicated that they either were not covered or were covered “but generally not in a manner reflecting the importance, trends, nuances, costs, etc. of the issues.”

We build on this body of findings, establishing empirically across a range of global issues that major issues are frequently underreported. To do so, we analyze tens of millions of news articles published by leading international online news outlets, including digital native online sites (e.g. *Politico*) and newspaper websites (e.g. *Washington Post*),<sup>3</sup> over roughly the past decade.<sup>4</sup> We then draw on various datasets capturing human costs of different international events—including communicable diseases; natural disasters; state executions of its citizens; refugee and asylum seeker flows (using newly released global data on dyadic flows by the United Nations Refugee Agency)—to study how closely the intensity of media reporting tracks with events’ associated costs. As reported in Section 6.1, across these

<sup>3</sup>We focus on both these kinds of outlets in an effort to cover much of the foreign news reporting that occurs within the U.S. and because the types of news media consumed vary along demographic lines (Mitchell et al., 2016).

<sup>4</sup>The precise time period of coverage varies across statistical tests and depends upon the availability of data used in these analyses. In general, however, our study covers January 01, 2010 through the end of that decade.

issues, we find that, collectively, major international news outlets tend to report on international issues in a manner that bears little resemblance to their associated prevalence measured in terms of individuals killed or significantly harmed.

### 3 The Role of the Press in Educating the Public & Foreign Affairs Elite

Our second point is that the major international news media are perhaps the single greatest educator of both the public and international affairs elite on matters of international affairs. Amongst members of the public, “[f]oreign affairs events most often take place beyond the realm of personal experience—if we learn about these events, it is almost surely the product of media coverage ” (Soroka, 2003, p. 43). Gallup, Inc (2019, p.64) confirms this expectation, finding that the overwhelming majority of Americans report learning about international affairs from internet sources like “Yahoo News, Huffington Post, Drudge Report, [and] websites of newspapers and TV networks...” Our survey of U.S. residents updates this:  $\approx 93.46\%$  of respondents indicated that the news media are a primary source of information about foreign affairs.<sup>56</sup>

With respect to the influence of the news media on foreign affairs professionals, Avey et al. (2020) find in a survey of 563 current/former U.S. policymakers engaged on development, national security, or trade issues that these individuals ranked newspapers and news magazines as their second most important source of information just behind classified information. Notably, the importance surveyed policymakers attached to news media increased with their rank. Relatedly, Erdos & Morgan (2015) find that outlets including the *New York Times*, *Wall Street Journal*, and *Washington Post* are some of the most influential media sources amongst international affairs professionals sampled across “the executive and congressional branches of government, state and local government, executives of trade and professional organizations,” and beyond.

The three groups of international affairs professionals in our surveys (IR faculty; current/former senior government officials; and think tank staffers) reported similar reliance on news media reporting: at least 95% of respondents in each group listed the major international news media as a primary source of their information on international affairs. Critically, sizeable minorities listed *only* major international news media as a primary source. (See the dark blue bars in Figure 2.)

Surprisingly, in spite of the central educational role of major international news media, little research exists on

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<sup>5</sup>Furthermore,  $\approx 59.48\%$  indicated relying only on news media. Though, as Shaver et al. (2023) note, this “figure is almost surely conservative. For instance,  $\approx 17.20\%$  of respondents indicate learning about international affairs from family members, friends, or acquaintances; presumably, a very large share of these individuals within their social networks themselves keep up with international affairs through the news.”

<sup>6</sup>The respondents not only rely heavily on the news media for their information on international affairs but indicated tuning into the news frequently. Specifically, we asked respondents to provide names of up to three news outlets they engage with most for information on international affairs and how often they access those outlets. 67.25% responded that they access those sites either daily or multiple times per day.

this topic. Notable exceptions include Iyengar et al. (2009); Aalberg et al. (2013); Soroka et al. (2013).<sup>7</sup> The first two compare differences in foreign affairs knowledge across particular countries, focusing on differences in soft and hard news reporting. The third compares public broadcasters with commercial news. Our research is unique in exploring the effects of major international news reporting broadly—not just on knowledge but also on perceptions—with a focus extending beyond members of the public to the foreign affairs elite responsible for conducting, advising on, and teaching/researching international affairs.<sup>8</sup>

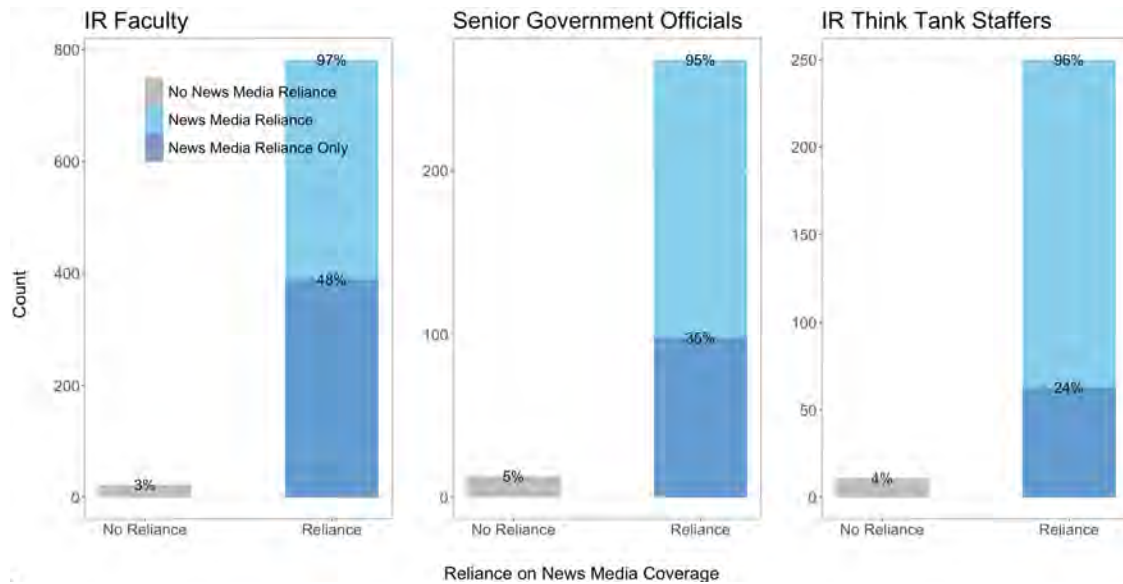


Figure 2: This figure displays international affairs professionals’ self-reported dependence on major international news media reporting as primary source of international affairs information. Specifically, the professionals were asked: “What are your main source(s) of information about international events/affairs? Please select up to 3.”, where news media were listed amongst a large set of options.

## 4 Effects of Reporting on International Affairs Knowledge and Perceptions

Given the major international news media’s central role in the continuing education of both members of the public and foreign affairs professionals, we hypothesize that patterns of news media reporting will broadly predict what civilians and foreign policy elite (do not) know or (mis)perceive about the world. In short, the news media act

<sup>7</sup>Other work, like Cohen and Green (2012)’s focus on ‘information politics’ indirectly add this topic in highlighting cases of under/skewed reporting.

<sup>8</sup>Instead, a great deal of the literature on media effects in the international affairs space tends to focus on influences on attitudes and behaviors, from the media’s effects on foreign policy through the public (Baum and Potter, 2008; Entman et al., 2004; Foos and Bischof, 2022; Balmas, 2018) to effects on violent conflict (Burgoon et al., 2015). Yet, antecedent to the effects of what is reported on (and/or how that reporting is done) are the selection processes driving realized reporting in the first place. Our work encourages focus on not only the origins but consequences of such selection dynamics.

as a filter that influences both what and how information on international affairs flows to these sets of individuals, with aggregate, predictable effects on knowledge and perceptions.

We focus on two related but separate *patterns* of reporting. The first is the overall attention afforded issues. The second concerns reporting that deviates from underlying empirical realities of the issues being covered. We describe both categories along with our expectations in turn.

## 4.1 Intensity of Attention

International affairs vary dramatically in the levels of news media attention they receive. Attention manifests in different forms, from article placement within news outlets' physical or digital pages to minutes of broadcast to the number of words afforded a given issue or the total number of articles devoted to such issue. For instance, in the month following Nepal's 2015 earthquake—which killed over 9,000 people and damaged more than 600,000 buildings (Rafferty, 2023)—we estimate<sup>9</sup> that the major international news media referred to this event in  $\approx 1,000$  articles (comprising  $\approx 0.6\%$  of all publications by these outlets over this period). In contrast, during the month following Queen Elizabeth's death, the monarch was also mentioned in  $> 10,000$  articles ( $\approx 5.1\%$  of all these outlets' publications).

As attention paid to an issue increases, we generally expect knowledge of that issue to increase in amongst both the public and international affairs professionals. This expectation may appear to contrast with models of news reporting in which foreign affairs professionals are assumed to be aware of issues occurring globally, influencing patterns of media coverage through the issues they choose to elevate (e.g. Chaudoin (2023); Peake (2001)).<sup>10</sup> We contend—and, indeed, see very clear evidence in our interviews—that both dynamics are at play. Many of the foreign affairs professionals interviewed described concerted efforts to influence media reporting patterns in a bid to drive attention to particular issues. Yet, many others highlighted the effects of reporting on basic levels of awareness amongst decision-makers, who are reportedly often then driven to action as a result, as one World Health Organization interviewee clearly describes:

*“If we get a lot of [news] attention [on an issue of importance], then countries and the philanthropies that fund us will be more aware of the issue. They will pay more attention to it. The politicians will pay more attention to it. And then they will give us money for these issues. [S]o often, you have these meetings with these high level [politicians or philanthropists] who don't really know the epidemiological research—and they just [read] in the newspaper [a story] the night before about a particular problem that kinda catches their fancy and they decide to fund it.”*

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<sup>9</sup>As explained in depth in the Appendix, we estimate the number of articles about a given topic through queries of keywords and relevant terms in Media Cloud, an open data platform that tracks and stores news content and allows users to conduct various analyses using that content.

<sup>10</sup>Endogeneities between news reporting and the efforts of strategic actors to influence it (or otherwise adjust their behavior to it) are substantial. For instance, strategic actors may time their behaviors to coincide with expected news coverage to hide their own activities (Durante and Zhuravskaya, 2018).

Perhaps no case better illustrates the potential influence of even single news articles producing substantial foreign policy changes than the case in which a news article featuring the photo of a child soldier reportedly prompted then-President George W. Bush to push for responsive government action, eventually culminating with his signing the Child Soldier Prevention Act into law (Zacharia et al., 2017).

Yet, our focus lies not only with such discrete news reports but on the more subtle, cumulative influence of reporting intensity on levels of knowledge. In short, as issues are covered more extensively, they are more likely to enter into collective awareness. (Indeed, we not only provide evidence of this but later provide empirical estimates of the functional relationship between reporting intensity and knowledge.) This does not exclude the (near certain) possibility that particular segments of these communities understand issues beyond the ways that they are reported in the news media. (Again, this explains the concerted efforts that many make to influence reporting patterns.) However, our logic follows from two central premises: 1) Much international affairs reporting is exogenous to Western “national interests”; and 2) members of the public and foreign affairs elite alike live in an attention economy in which, faced with increasingly large information streams, they tend to form implicit assumptions about global affairs from the broad patterns of reporting they observe. We discuss these in turn:

First, the news reporting process is a complex one, influenced only partially by the content foreign affairs professionals might seek to elevate. Thus, much of what is reported is exogenous to “national interests” and other such considerations. Our interviews with journalists and media executives depict various outside influences on their reporting processes, and we reflect on just several below:

**Restrictions on Reporting:** Many issues receive less attention than they otherwise might as a direct result of high costs, dangers, or impediments associated with reporting on those issues relative to others. One interviewee, previously responsible for reporting on Yemen for one of the world’s largest news agencies, described the extremely limited nature of reporting on that country, contrasting it with Ukraine:<sup>11</sup>

*“I worked on Yemen for 18 months and I was never able to [gain access to the country]... This was at the beginning of the Saudi intervention in Yemen. It was a very important, bloody period... and it was very difficult to report on. Whereas, if you look at Ukraine, there are probably 3000 foreign journalists*

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<sup>11</sup>Similar examples came up frequently throughout our interviews—some, like the previous interviewee, highlighted significant differences between countries: “[T]he threshold to actually gain access to [Afghanistan and Iraq during the wars] were a lot higher because you need to be embedded; because it was very expensive; because you needed networks...”; in contrast, during the war in Libya, “you could just fly to Cairo or to Tunis, and you could be there very quickly” (Interviewee 12). Others highlighted differences within countries—e.g. the challenges of reporting within regions of China, Colombia, Philippines, Iraq, and Ukraine. Even for the largest news agencies, budgetary pressures can result in restricted reporting: “We have not had the ability to cover most, or almost like all but one, of the protests that we have in Sudan with video and TV and photos because of the budget” (Interviewee 21). Another interviewee described the potential for retaliation to limit coverage of particular topics. Interviewee 6 spoke of the “potential for retaliation from some of these groups to track you down or track your family down and exercise some sort of retaliation or revenge on you. That’s always at the back of your mind when you’re reporting on these issues... [E]specially in Colombia and Venezuela, that can come from any side of the conflict... from paramilitary groups... from guerillas... from the government itself...”



*[there]... I could tomorrow get a flight to Poland and then cross over the border relatively easily.”<sup>12</sup>*

**Historical Path Dependencies:** Patterns of contemporary reporting appear to be influenced by historical path dependencies, increasing the likelihood of coverage of some events over others in a manner not necessarily reflecting the importance news outlets would otherwise assign to both sets of events. A significant case of this, potentially resulting in persistent differences in reporting across countries over years, is the historical placement of foreign bureaus. Multiple journalists described the importance of physical offices to how much reporting a given country received.<sup>13</sup> Of particular note, however, is one’s description of the sticky nature of historical bureau placements, which effects years later on country-specific reporting:

*“The Times has only three offices in Africa... Whereas compared to Europe... because of the legacy of other reporters that have been here largely since World War II there are many offices... it’s just more extensively covered... [I]n the twentieth Century, a lot of places sent these organizations out after World War II to set up offices and the offices are still around... Part of the reason why some of these bureaus stay for as long as they do [is that] there might be a news assistant and a secretary and a driver that work in this place and they have worked at the times maybe for twenty-five years **and we can’t just let go of that person because the news has shifted**... Sometimes the bureau is in a country because it’s easier to live there and the correspondent might have children and that has to be taken into account too. So there are a lot of practical issues related to where the office is going to be.”<sup>14</sup>*

Indeed, in a supplementary quantitative analysis to this paper, we find strong evidence of an independent and substantively large effect of foreign bureau presence on country-level reporting patterns after accounting for a variety of potential confounders, depicted in Appendix Figure 12. We describe this analysis in detail in Appendix Section L.

**Novelty and Short-Term Scale:** News media interviewees also repeatedly highlighted the importance of novelty to reporting choice. In effect, particular issues may receive only limited coverage after initial reporting has subsided. Others may not receive coverage in the first place. They also repeatedly highlighted the significantly greater likelihood of news outlets covering events when large numbers of people are affected over short periods of time. Slower moving crises may ultimately often result in many more costs than their temporally acute counterparts. But, they are significantly less likely to receive attention. “One example of that the refugees drowned in Mediterranean [Sea]. That was a story that was in the media in 2013, 2014, 2015 when it was kind of new. Today, you know, there [are] thousands of people [drowning]. Nobody reports on it anymore.”<sup>15</sup>

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<sup>12</sup>Interviewee 3, Journalist with a Major Wire Service

<sup>13</sup>Interviewee 8, Interviewee 21, Interviewee 25

<sup>14</sup>Interviewee 31, Staff Writer at the New York Times Magazine. Bolding applied by the authors.

<sup>15</sup>Interviewee 146, international freelance reporter.

Our goal here is not to provide an exhaustive list of factors but to simply and clearly demonstrate that much that is (not) reported is orthogonal to what foreign affairs elite (or members of the public) might otherwise promote coverage of. Indeed, recent experimental research finds significant demand for major undercovered news items (Shaver et al., 2023).

Beyond these arguments, we have strong empirical evidence that issues are generally not covered by the major international news media in a manner reflecting the nuances, trends, costs or other characteristics of those issues because both our survey respondents and interviewees consistently indicated so. (Again, see Figure 1.) And the overwhelming majority of interviewees described major issues related to their areas of expertise that are largely un-/under-reported.

Our second premise is that members of the public and foreign affairs elite alike live in an “attention economy” in which, as “information is [increasingly] abundant, human attention becomes [an increasingly] scarce resource and, hence, an object of economizing” (Pedersen et al., 2021, p. 311). Following DellaVigna and La Ferrara (2015)’s observation that studies of media effects “cannot just focus on the direct effect of exposure but [should] take into account the crowding-out of alternative activities”, we hypothesize that news consumers are likely to form perceptions of events that reflect the empirical distributions of news reporting associated with those events. Specifically, many news consumers read news headlines or only parts of articles (Ward et al., 2023)—a trend surely exacerbated by the use of social media platforms and news aggregators. (Indeed, we confirm this in our survey of U.S. residents and specifically regarding international affairs news. See the footnote for details.)<sup>16</sup> We expect that, in response to very large streams of news and commentary, readers will tend to forgo reading about many issues (the activity that is crowded out), forming judgments about issues based on the patterns by which such news material is presented.

We expect issues that receive greater attention to be generally better known to members of the public and foreign affairs elite. We consider this expectation against the backdrop of conflict and human rights crises around the world, which, amongst other major costs, have produced tremendous displacement. From the Democratic Republic of the Congo to Myanmar<sup>17</sup> to Syria, such crises have left more than one hundred million individuals around the world displaced as refugees, asylum seekers, and internally displaced persons.<sup>18</sup> Following years of engagement with the

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<sup>16</sup>We asked a subset of our survey takers: “Take a few minutes to think about how you typically catch up on the news around the world when you are online. Please reflect on the websites or platforms that you usually visit. These could be news organizations’ websites (e.g. cnn.com), news aggregators (e.g. Google News), or social media platforms (e.g. Twitter). Which of the following describes the best way you engage with news articles?” We then gave the following answer options: “I tend to skim titles and headlines only, rarely or never reading actual articles.” “I tend to open to read each article that I encounter.” “I tend to read a select set of articles in their entirety but only skim the titles and headlines of the others.” “Other:”. Just under half indicated skimming some or all articles.

<sup>17</sup>Our choice of “Myanmar” and not “Burma” does not reflect any normative judgments of the authors but follows the name used by the United Nations, the Political Violence Lab’s default approach to the use of country names.

<sup>18</sup>See: [unhcr.org/refugee-statistics](https://unhcr.org/refugee-statistics).

United Nations Refugee Agency, resulting in newly released detailed data on yearly refugee and asylum seeker flows by country (see Shaver et al. (Conditionally Accepted) for details), we measure the number of new displacements a variety of crises around the world produced. Notably, as we show later, these displacements bear little resemblance to the levels of coverage afforded them. Particular refugee crises like those of Eritrea, the Central African Republic, and Nigeria received particularly limited coverage even as they resulted in some of the largest international displacements in contemporary history.

This motivates our first hypothesis:

**hypothesis 1 (H1):** *Members of the public and foreign affairs elite are more likely to identify correctly major refugee crises that were extensively covered by the news media than those major crises that were not.*

## 4.2 “Skewed Reporting”

We define skewed reporting processes as those that involve deviation from the underlying empirical realities of the issues being covered. These may involve differences in temporal distributions. For instance, many crises persist long after reporting on those events has effectively ceased. They may involve differences in spatial coverage distributions. For instance, a region of the world that is particularly affected by an issue may receive less coverage than another, less affected one. In such cases, we expect the “skewed” coverage to produce perceptions of events or issues reflecting the reporting patterns rather than the facts of the cases. We motivate this section with an example.

### 4.2.1 2022 Pakistan Floods

Last year, Pakistan experienced devastating floods, which, according to the United Nations, “is widely regarded to have been Pakistan’s greatest climate disaster”—forcing an estimated eight million people to flee and destroying “2.2 million homes... 13 per cent of all health facilities [and] 4.4 million acres of crops” (UN NEWS, 2023). Even after flooding had ended, the disaster’s effects persisted as “vast swathes of cropland and villages remain[ed] under water, while nearly 10 million girls and boys remain[ed] in need of immediate, lifesaving support” (UNICEF, 2022).

Yet, major news media coverage of the crisis did not begin in earnest until *months* after the crisis had started, spiking dramatically on the 29<sup>th</sup> of August 2022, three days after a declaration of emergency by Pakistan’s government and the release of statistics detailing the costs. (See Figure 5.) (Later, we describe how we identify reporting intensity across time.) Critically, between the 14<sup>th</sup> of June and the 1<sup>st</sup> of September, most of the costs had already been generated: 1,208 individuals had been killed, 472,313 displaced persons had been moved to camps, and 1,172,549 houses had been damaged (ERCC, 2022; National Disaster Management Authority, 2022-2023).

Given the very late nature of reporting on the disaster, do members of the American public and its foreign policy elite generally understand the temporal nature of the disaster? Such details were written about in the articles that were ultimately produced. However, as discussed in the previous section, news consumers face a barrage of information. Did they engage with the details to form a true understanding of the sequence of events, or did they implicitly assume, based on when the articles were published, that this later date represented the start of the flooding? We hypothesize that many news consumers drew basic inferences from reporting patterns themselves, rather than carefully attending to the details of articles. This example, and also our first case, provides our first hypothesis in this section:

**hypothesis 2 (H2):** *Members of the public and foreign affairs elite are more likely to believe that the flooding began when the reporting began (29<sup>th</sup> of August 2022) than when it actually began, nearly 2.5 months earlier.*

A variety of other such cases—major international issues that were covered in clearly skewed patterns—motivate similar hypotheses. (See Table 3, in which we report each event collectively.) From these, we derive specific hypotheses, which we present in turn below. Our process for selecting these cases involved restricting focus not only to major international issues but to issues that are substantively varied—from humanitarian crises (Pakistan’s floods, Ukraine’s refugee crisis) to significant human rights violations in two of the world’s most significant geopolitical actors (India and Saudi Arabia) to security and conflict (modern maritime piracy and ISIS’ persecution of Yazidis).

These represent hard cases for our tests. As we will show, the skewed media reporting patterns that we present strongly predict patterns of knowledge. Yet, we might expect patterns of knowledge on such major issues to be less influenced by reporting patterns given that foreign affairs professionals, in particular, are likely to be especially attentive to such cases, expending more time and energy to understand them (than they might for smaller humanitarian crises, etc.). Additionally, that such skewed patterns can occur on issues as major as those we present in this section strongly suggests that such skewed perceptions prevail across a wide range of international issues that individually may be less significant but collectively are central to international affairs. Indeed, we find skewed reporting to be widespread.<sup>19</sup>

#### **4.2.2 Ukraine’s Pre-2022 Refugee Crisis**

Before Russia’s wholesale invasion of Ukraine, which prompted the largest outflow of refugees in a single year in recorded history (Shaver et al., Conditionally Accepted), Ukraine had already produced hundreds of thousands of refugee and asylum seekers—one of the largest cases of international displacement over the past decade—as the Donbas War raged. Nevertheless, media attention to these outflows was extremely limited, particularly relative to

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<sup>19</sup>International news media reporting pattern seldom perfectly matches with the temporal and spatial realities of the events in question.

that received by Ukraine's refugees following Russia's 2022 invasion. (See Figure 5.) Why? First, much of this displacement during this period involved the flow of individuals not to Western countries but Russia (UNHCR, 2020a), complicating Western narratives pitting Russia as the aggressor. Second, Western journalists were largely prevented from on conflict dynamics from within Russian held areas of Ukraine.<sup>20</sup> Like the case of Pakistan's flooding, media reporting on the crisis does not begin until long after the crisis had started. Accordingly, we Pakistanthesize that members of the public and foreign affairs elite are likely to misunderstand the empirical nature of Ukraine's refugee crisis; specifically:

**hypothesis 3 (H3):** *Members of the public and foreign affairs elite likely to believe that Ukraine's contemporary refugee crisis began in 2022 and not 2014.*<sup>21</sup>

In the next two cases, we focus on crises that deviated from media reporting in a different manner than the last two. In these, media attention followed immediately after the crises had begun but then dropped off sharply even as both crises persisted. We suspect that the steep decline in coverage is likely to lead news consumers to believe that the crises had concluded as they (at least implicitly) assumed the lack of reporting to indicate resolutions to the crises.

#### **4.2.3 India's Communications Blackout and Security Lockdown of the Jammu and Kashmir Region**

In August 2019, India—the world's largest democracy but recently re-classified as an "electoral autocracy" (Lindberg et al., 2014)—imposed a lockdown of the Jammu and Kashmir administered region, consisting of the removal of the region's constitutional autonomy, the implementation of lockdowns and curfews, and a communications blackout under which internet access was removed. While India's lockdown received significant news media attention when it initially went into effect, coverage drops sharply shortly thereafter. (See Figure 5.) Although there were some modest changes to the lockdown (e.g. after six months, India restored access to 2G services for access only to approved government sites (Perrigo, 2020)), we estimate that the lockdown effectively took place for seventeen months, continuing until internet access was restored in February of 2021. Generally, we expect that news consumers are more likely to believe that India's lockdown of Jammu and Kashmir Region region ended much earlier than it did. Specifically:

**hypothesis 4 (H6):** *Members of the public and foreign affairs elite are more likely to believe that India's lockdown of the Jammu and Kashmir region ended shortly after it began, effectively following the patterns of media reporting.*

<sup>20</sup>Interviewee 151, French freelance journalist

<sup>21</sup>To be sure, the levels of displacement beginning in 2022 significantly exceed those from the years preceding. Though, we note that refugee crises similar in size to Ukraine's pre-2022 crisis received significant media attention.

#### 4.2.4 Saudi Arabia’s “Hotel Arrest” of Political Elite

In early November, 2017, Saudi Arabia detained hundreds of the country’s “most powerful people, among them princes, tycoons and ministers”, which *The Guardian* described as “the biggest and most contentious purge in the modern kingdom’s history” (Chulov, 2020). Those detained were “subject to coercion and physical abuse...” resulting in at least “17 detainees [who] were hospitalized for physical abuse and one [who] later died in custody with a neck that appeared twisted” (Hubbard et al., 2018). While it is not entirely clear when the detentions ended, the *Washington Post* reports sources indicating that, one year after they began, “45 Ritz detainees [were] still locked up” (Sullivan and Fahim, 2018). Yet, as with the India case, media reporting subsided quickly after the detentions began. (See Figure 5.) As before, we expect that news consumers are likely to believe that the detentions ended much earlier than they. Specifically:

**hypothesis 5 (H6):** *Members of the public and foreign affairs elite are more likely to believe that Saudi Arabia’s elite detentions ended shortly after they took place, effectively following the patterns of media reporting.*

#### 4.2.5 The Disposition of Iraq’s Yazidi Population

A third, related case involves ISIS’ persecution of Iraq’s Yazidi population and their ultimate disposition. The persecution of the Yazidi began in 2014 when ISIS sieged Sinjar in Northern Iraq. During this period, thousands are estimated to be killed, kidnapped, enslaved or condemned to starvation on Mount Sinjar (Cetorelli et al., 2017). The United Nations Commission of Inquiry on Syria has condemned the event as a “crime against humanity” (UNITAD, 2016), and Karim Khan, Special Adviser and Head of the investigator team, concluded that “there is clear and convincing evidence that the crimes against the Yazidi people clearly constituted genocide” (UN NWES, N.d.).

Although the major international news media were attentive to this issue when the persecution began, the reporting quickly and significantly declined, even as many Yazidi have remained displaced, held in indentured servitude, or remain missing. Indeed, the Norwegian Refugee Council estimates that approximately 200,000 Yazidi remained displaced as recently as 2018 (Jenssen, 2018). Accordingly, we expect that news consumers are likely to implicitly assume that the lack of significant continued coverage on the Yazidis indicates that their situation had been largely resolved:

**hypothesis 6 (H6):** *Members of the public and foreign affairs elite are likely to believe that the most Yazidis have returned home or found other durable solutions to their plight.*

Whereas the previous sets of tests relate to reporting patterns that deviate from the temporal realities of the crises involved, a third class involves deviation across other characteristics. For instance, as we explore in the following case,

particularly geographies are underrepresented in reporting, with potential impacts on perceptions.

#### 4.2.6 Global Distribution of Modern Maritime Piracy Attacks

Ninety percent of the world's goods are transported by sea, often along ocean routes are beyond states' territorial waters (Interpol). Contemporary maritime piracy targeting such operations occurs globally and is estimated to result in losses of \$1.2 billion annually (Bell, 2021). The costs of piracy manifest variously. They include naval expenditures, counter-piracy operations, and vessel acquisitions. They include costs of supplying an entire sector by adding extra fuel costs, insurance charges, additional equipment to harden the vessels for protective purposes, and hiring armed safeguards. They include psychological costs to those affected: 25.77% of the former hostages have shown symptoms of Post-Traumatic Stress Disorder (Joubert, 2018). And they include spillover effects. For example, Besley et al. (2012) observe that, in 2012, for every \$120 million seized by pirates, the shipping industry and the end consumers incurred an extra \$0.9 to \$3.3 billion—enough to employ one million Somalis for a year.

Despite the importance of maritime piracy, media attention to the issue has remained highly concentrated on the case of Somalia's pirates. Yet, contemporary incidents of piracy off the coasts of various countries including Bangladesh, and Indonesia, Nigeria are far more substantial (Benden et al., 2021). Accordingly, we expect:

**hypothesis 7 (H7):** *Members of the public and foreign affairs elite are more likely to believe that Somalia has experienced more pirate attacks off its coast than others countries.*

## 5 Empirical Strategy

We carry out four broad set of tests. First, we explore the extent to which major international news media reporting across various global issues tracks with measurable frequencies and/or costs associated with such topics. Second, we explore how the intensity of reporting on various issues maps onto U.S. and international affairs professionals' knowledge of those issues. Specifically, we carry out these tests comparing the world's largest refugee crises, comparing knowledge of those with high levels of coverage to those with low levels. Third, following the cases of skewed coverage described above, we assess whether perceptions of those events tracks with the patterns of reporting or the underlying objective empirical characteristics of those issues. Fourth and finally, building on our work linking reporting intensity to knowledge, we estimate the functional relationship between these variables. To do so, we measure U.S. residents' knowledge of 165 discrete world events that occurred between January, 2010 and January, 2023 and then estimate changes in knowledge as a function of major international news media attention paid to each event.

Given that our tests all rely on patterns of major international news media reporting, we first describe our

general approach to developing measures of reporting intensity. Second, we briefly describe our survey samples upon which much of the empirical results are based. We then describe each set of tests in turn.

## 5.1 Rates of Reporting on International Affairs

First, we identify dozens of top online news outlets consisting of both digital-native sites and newspapers.<sup>22</sup> We consider reporting by the top online news outlets identified through Media Cloud’s Top Online 2015 and 2017 lists Media Cloud (2015, 2017). We add to this list of outlets “top” U.S. newspapers (Media Cloud, 2018), removing duplicates like the *New York Times*.<sup>23</sup> Combined, this set consists of 78 news outlets.

Then, for each issue (e.g. Iraq’s refugee crisis), we calculate the level and rate of reporting (reports per 10,000 articles). For chronic issues (e.g. communicable disease crises), we calculate attention over roughly the past one decade.<sup>24</sup> For discrete events, we calculate levels/rates over the relevant period. The process of identifying relevant news reporting involves running thousands of searches, involving various strategies, for words and expressions that have appeared in news articles. Given the extensive set of searches performed across these topics, and the large number of outside datasets secured for the purposes of developing searches, we detail our approach in Appendix E. However, we briefly discuss here how we contend with possible false positives (i.e. counting articles that should not be) and, separately, false negatives (i.e. not counting articles that should have been).

Let  $C$  denote the universe of articles published by a set of outlets over our study period. Then, let  $A$  denote the complete set of responsive article for a given search. Further, let  $c \subset C$  represent the set of articles identified through a given search. We thus seek to maximize the precision and recall of a given search resulting in  $c$ :

$$\text{Max}\left\{\frac{\sum_{i=1}^n \mathbb{1}_{c_i \in A}}{|c|}, \frac{\sum_{i=1}^n \mathbb{1}_{c_i \in A}}{|A|}\right\}$$

We implement an approach that gives plausible upper and lower bounds by running two searches. The first (our lower bound) maximizes precision but is likely to produce false negatives while the second (our upper bound) maximizes recall but is likely to produce false positives, such that  $|A| \in [L, U]$ .

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<sup>22</sup>This is described in much greater detail in Appendix C.

<sup>23</sup>This list also comes from Media Cloud.

<sup>24</sup>We choose this time period because the volume of content collected by Media Cloud is substantially more limited before this period.



## 5.2 Survey Respondents

Our sample of U.S. residents was recruited by Cint, which uses an online platform that provides multiple survey panels to collect data relatively representative of the U.S. population. This sample consists of 5,383 respondents who reside in a U.S. state or territory (we do not impose a U.S. citizenship requirement) and are at least 18 years old.<sup>25</sup> Appendix A.1 reports the demographics and other characteristics of our survey respondents. Overall, our respondents vary across gender, age, political identification, education backgrounds, race and ethnicity, income level and working status.

In partnership with William and Mary's (W&M) Teaching and Research in International Politics (TRIP) research lab (Avey et al., 2023), we conducted surveys resulting in responses from 805 IR scholars at U.S. universities and colleges, 281 senior current/former foreign policy officials who served during the Bush II, Obama, and Trump administrations (and potentially others), and 261 think tank staffers with an international affairs focus who are employed by major think tanks in the U.S. The response rate across the three communities was  $\approx 10.6\%$ .

The IR scholars consisted primarily<sup>26</sup> of professors (including emeritus) in political science departments (or their equivalents) with transnational research interests (e.g. international political economy, international security, and foreign policy).<sup>27</sup> Overall, assistant, associate and full professors made up 9.35%, 30.42%, and 43.89% of respondents, respectively.<sup>28</sup>

The senior government officials worked during the administrations of George W. Bush, Barack Obama, and/or Donald Trump, across approximately 17 federal departments and independent agencies<sup>29</sup> related to national security, international trade, and international development and held positions equivalent to or above the rank of "assistant/deputy director". (89% of the respondents held positions at the GS/GG 15/Band 5 level (18.57%) or were Senate confirmable policy or department/agency leaders (22.14%), political appointees not-confirmable (21.07%), or SES-level civil servants (22.14%). In addition, 5% were military officers.)<sup>30</sup><sup>31</sup> Of the respondents,  $\approx 49.82\%$  worked on issues related to international security,  $\approx 29.89\%$  on international trade, and  $\approx 20.28\%$  on international development.

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<sup>25</sup>This number is restricted to the set of individuals who successfully completed two attention checks within the survey.

<sup>26</sup>They also included political scientists who teach international relations or are engaged in research on the subject at professional schools.

<sup>27</sup>See Shaver et al. (2023), for the qualification criteria and outreach process.

<sup>28</sup>See Appendix A.2 for detailed information.

<sup>29</sup>The number varies by year.

<sup>30</sup>See Shaver et al. (2023); Avey et al. (2022, 2023) for the foreign policymakers' list and sampling strategy.

<sup>31</sup>See Appendix A.2 for more information.

For think tank professionals, we surveyed researchers, leadership staff as well as other personnel with experience working within international relations focused, U.S.-based think tanks. W&M TRIP relied on Global Go To Think Tank's lists of the top think tanks in the U.S. (McGann, 2021) to manually identify think tank professionals by desk research—a total of 75 think tanks focused on international affairs were compiled, and a list of research fellows or research related professionals regarding international relations or U.S. foreign policy.<sup>32</sup> More than 60% of the think tank professionals surveyed served as senior or board members in one or more of the identified think tanks.<sup>33</sup>

Finally, our second interview of IR scholars involved reaching out to the same set described above (in this second case, independently of TRIP). 1,713 scholars responded. For this survey, personally identifiable information was not collected, and additional details on the respondents themselves is unavailable.

### **5.3 Reporting on Major Global Issues: Interreality Bias**

In our first set of tests, we analyze whether major international news media, collectively, tend to report on international issues in a manner that reflects underlying costs or frequencies.<sup>34</sup> Specifically, we identify four specific issue areas on which objective measures of issue costs or frequencies can be compared against reporting levels: 1) the number of refugees and asylum seekers displaced each year from their home countries; 2) annual country deaths resulting separately from various communicable diseases (diphtheria, HIV/AIDS, malaria, measles, and tuberculosis); 3) annual country deaths associated separately with natural disasters previously listed; and 4) annual death sentences issued by individual state governments.<sup>35</sup>

In addition to being measurable, these issues represent tremendous human cost. The U.N. estimates that more than 108.4 million individuals are currently displaced from their homes as refugees (roughly 35.3 million), asylum-seekers (5.4 million), or internally displaced persons (62.5 million).<sup>36</sup> Millions of individuals around the world die each year from communicable diseases. For instance, in 2022 alone, some 630,000 individuals are estimated to have died from HIV-related causes (World Health Organization, 2023a). In the year of 2021, about 247 million individuals

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<sup>32</sup>We include think tank professionals in our list if they meet the criteria: 1) they are officially affiliated with the think tank; 2) they engage in the process of producing research or analysis on international relations or U.S. foreign policy, including research agenda setting, producing, or distributing research (Shaver et al., 2023).

<sup>33</sup>See Appendix A.2 for more information.

<sup>34</sup>Such approach follows research in other settings in which objective costs are compared with reporting (Frost et al., 1997).

<sup>35</sup>These topics and their data sources are described in the Appendix.

<sup>36</sup>See: [unhcr.org/us/about-unhcr/who-we-are/figures-glance](https://unhcr.org/us/about-unhcr/who-we-are/figures-glance).

contracted malaria worldwide, 619,000 of whom died (World Health Organization, 2020).<sup>37</sup> In 2021, measles were responsible for more than 128,000 deaths around the world. Again, most of the victims were children under five, despite vaccine availability (World Health Organization, 2023b). Finally, again in 2021, tuberculosis was responsible for 1.6 million deaths, 187,000 of whom were also individuals with HIV (World Health Organization, 2023c).

Natural disasters pose another major threat to human security. For instance, according to Centre for Research on the Epidemiology of Disasters (2023), “in 2022, 387 natural hazards and disasters worldwide resulting in the loss of 30,704 lives and affecting 185 million individuals.” Meanwhile, governments around the world continue to sentence their citizens to death. In 2022, Amnesty International (2023) reported that, across twenty countries, some 883 executions were carried out.

We consider whether media collectively tend to report in a manner that reflect these topics’ respective costs. With objective measures of the costs of each of these issues (e.g. the number of individuals who flee a given country in a given year), we assess whether and to what extent news reporting reflects the quantifiable human costs of each issue (e.g. given the numbers of individuals forced to flee Eritrea and Syria in 2015, did the media report on these two communities at rates roughly corresponding to the numbers of individuals affected?).

For this analysis, we consider reporting starting January 01, 2010, running through the following decade; dates of coverage vary across statistical tests depending on the availability of data used in the analyses. For each outlet, we identify the number of articles per year containing specific key words and phrases corresponding to each issue area. We then aggregate article counts to the country  $i$  and year  $t$ . Next, we similarly aggregate to the country-year cost measures for each issue area: deaths (communicable diseases and natural disasters); persons affected (natural disasters); persons forcibly displaced (refugees and asylum seekers); and persons sentenced to death. These measures are described in detail below.

We calculate only plausible upper bounds (electing not to carry out separate searches restricting counts to cases where search terms are included in titles—see the appendix). Given the focus of this exercise, using upper-bounded estimates gives the benefit of the doubt to news outlets, helping to ensure that we are not missing references that would generate artificially low article counts relative to relevant human costs. In using upper bounds, we risk over-estimating actual levels of attention that the news media paid to the topics of interest. Even under this approach, we estimate very modest levels of reporting.

We then estimate the following general equation, for  $C_{i,t} > 0$ :  $R_{i,t} = \zeta C_{i,t} + \eta_t + \varepsilon_{i,t}$ . To account for changes in reporting across time, we include year-fixed effects ( $\eta_t$ ) in each model. For reporting on communicable diseases

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<sup>37</sup>Malaria is particularly costly to societies as children under 5 are the most likely to be affected. Africa, where carries 96% of malaria deaths, the children under 5 accounted for about 80% of deaths in the region (World Health Organization, 2022). (274,000 of the 409,000 malaria deaths globally in 2019 were children under five (World Health Organization, 2020).)

and, separately, natural disasters, we also add fixed effects to account for differences across disease and disaster types ( $h$ ):  $R_{i,t} = \zeta C_{i,t} + \eta_t + \xi_h + \varepsilon_{i,t}$ . Journalists might justifiably strategically limit reporting on a subject. Editorial staff recognize audiences’ possible empathy fatigue from repeated reporting on an issue (Zacharia et al., 2017). We, therefore, test a second specification, in which we re-scale the number of individuals harmed or killed by applying a natural logarithmic transformation. Doing so effectively compresses the distance between large numbers, giving more weight to increases at low levels of death or displacement and less weight to similar increases when levels are already high:  $R_{i,t} = \zeta \ln(C_{i,t}) + \eta_t + \varepsilon_{i,t}$ .

To carry out this analysis, we interface with Media Cloud’s open-source application programming interface,<sup>38</sup> using a combination of R and Python code, to generate all relevant article counts.<sup>39</sup> Media Cloud collects its data by extracting the RSS feeds of each of its media sources, then allows users to search its entire corpus of articles for particular words, phrases, or combinations thereof (Media Cloud, 2011). Using this platform, we consider responsive any article whose complete text (for plausible upper bounds) or whose title only (for plausible lower bounds) contains the word, phrase, or set of terms included in a given query. Again, precise search details are provided in the appendix.

## 5.4 Awareness of the World’s Refugee Crises

For the next sets of tests, we make use of data newly released by the United Nations Refugee Agency on yearly directed dyadic flows of refugees and asylum seekers (UNHCR, 2020a; Shaver et al., Conditionally Accepted; Fearon and Shaver, 2020). From this dataset, we aggregate to the sending country, identifying over roughly the past decade (2010-2020) the world’s largest refugee crises. The UNHCR data indicate that 34,226,832 individuals around the world were newly displaced either as refugees or asylum seekers during this period, and each large-scale refugee crisis we identified produced  $\approx 157,238$  displaced persons per year on average.

We then break these crises into two categories. The first consists of those crises that received high levels of aggregate news media attention. We calculate, based on the upper bound count, that these crises were referenced in 56,852 articles (approximately 4,380 articles per crisis). The other consists of those that received significantly less attention. We calculate that these crises were referenced 2,346 times (180.5 articles per crisis).

We prepared a set of nine potential questions. In all nine questions, survey respondents were asked:

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Over roughly the past decade (from 2010 to 2020), which of the following

<sup>38</sup>Media Cloud is an “open source platform” based on “a consortium research project across multiple institutions, including the University of Massachusetts Amherst, Northeastern University, and the Berkman Klein Center for Internet & Society at Harvard University” (see: <https://mediacloud.org/about>). The platform collects information from tens of thousands of news outlets and make it accessible to researchers through its API.

<sup>39</sup>For more details, see: <https://github.com/mediacloud>

countries had the greatest number of its citizens flee as refugees?

For each question, a correct answer choice was displayed along with three incorrect answer choices.<sup>40</sup> In all cases, the incorrect answer choices corresponded to countries with exceedingly fewer refugee and asylum seeker outflows (in contrast, these smaller-scale crises displaced  $\approx 17,193$  individuals annually on average). In short, they are plausible alternative answer choices—cases of countries that do produce refugee/asylum seeker flow. However, from a human-cost perspective, each question has a clear correct answer. For four of the nine questions, the correct answer choice was pulled from the set of refugee crises that received significant news media attention. For the remaining five questions, the correct choices corresponded to crises with much lower coverage.<sup>41</sup>

For U.S. residents and IR faculty, respondents were randomly assigned to either a high-coverage or low-coverage refugee question. Amongst current/former senior government officials and think tankers staffers, respondents were randomly assigned both one high-coverage and one low-coverage question.<sup>42</sup> We estimate the predicted probability of a correct response using Bayesian logistic regression:  $P(R_i = 1 | \mathbb{1}[i \in \mathbf{H}]) = \text{logit}^{-1}(\gamma \mathbb{1}[i \in \mathbf{H}])$ , where  $R_i$  captures whether a given question  $i$  was answered correctly or not. The indicator variable denotes whether the question dealt with a high-coverage refugee crisis. We used quasi-Bayesian Monte Carlo simulation to generate uncertainty estimates.

## 5.5 Skewed Media Reporting and Perceptions

For most major international issues reported in a skewed manner, we developed one direct question to assess whether respondents' understanding of the case aligned with reporting patterns or the objective empirical reality. (We

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<sup>40</sup>Unless the otherwise is specified, for any/all cases of multiple answer questions described in this study (including but not limited to these refugee questions):

- (i) Respondents were presented with one correct answer and three incorrect answer choices;
- (ii) Answer choices position was randomized ensuring that answer placement did not influence study results;
- (iii) Half of the respondents received questions with an additional response option of “Unsure/I do not know”. The other half did not. In future revisions to this project, we will compare the forced guess vs. non-forced guess questions to more precisely identify estimates.

<sup>41</sup>For those crises that received high levels of news media attention, we chose incorrect answer choices that also received significant levels of media attention in spite of having much small refugee crises. Similarly, we compare low-coverage, large-scale crises to low-coverage small-scale crises. We did this because this approach holds our tests to a stricter standard. Specifically, had we instead compared high-coverage large-scale crises with low-coverage low-scale crises, we would expect respondents to be even more likely to correctly identify the high-coverage large-scale crises. By a similar logic, had we instead compared low-coverage large-scale crises with high-coverage low-scale crises, we would expect respondents to be even less likely to correctly identify the low-coverage large-scale crises. Thus, under the approach we have adopted, we are estimating a lower bound on absolute difference mean correct response rates between the high- and low-coverage groups. Thus, if we observe a difference (we do), we would expect the actual difference to be at least that large.

<sup>42</sup>These differences were based on the sample sizes of the populations and number of available survey questions.

Low-Media Reporting		High-Media Reporting	
Refugee Crises	Alternative Answers	Refugee Crises	Alternative Answers
DRC	Libya	Iraq	Bangladesh
Eritrea	Yemen	Syria	Kenya
CAR	Indonesia	Afghanistan	Egypt
Nigeria	Malaysia	Myanmar	Palestine
Ukraine (2010-2021)	Liberia		Uganda
	Rwanda		Mexico
	Egypt		Sudan
	Nepal		Somalia
			Iran

Table 1: This table displays the four sets of potential answer choices to the questions related to refugee crises taken place over the last decade around the globe. The left side of each column represents the correct answer choices. Each correct answer is randomly drawn and presented along with three randomly selected alternative answer choices -right side list within the same block. If a case has more refugees than its alternatives, we did not present them together.

discuss two exceptions below.) For instance, to assess when respondents believed the flooding in Pakistan began, we asked:<sup>43</sup>

Please provide your best estimate of when the flooding currently affecting Pakistan began. Please enter a valid month (1-12) and date (1-31).

In Table 3, we provide the specific question text associated with all of the cases. U.S. residents were asked about six skewed topics. Given survey space constraints, we asked the international affairs professionals about five.

We administered the questions to U.S. residents and international affairs professionals in slightly different ways. We did not expect U.S. residents to be aware of all of the issues we selected. Thus, randomly asking them about skewed coverage cases might have introduced error to results had they guessed. Instead, for the residents, we first asked about their awareness of each issue. Only those respondents who indicated knowledge of cases were asked a subsequent question. Specifically, they were randomly assigned a question relating to one of the events the expressed knowledge of. (Respondents who indicated knowledge of only one event were simply assigned a question about that event.) In contrast, we expected the international affairs experts to be generally aware of all of the major issues included. Thus, this set of respondents was asked to answer one question corresponding to the events selected at random.

In the case of maritime piracy, our approach differed slightly. For that issue, we prepared three questions. The wording of every question was the same but the possible answer choices varied. Specifically, we asked:

Over roughly the past decade (2010 through 2021), which of the following countries

<sup>43</sup>Note that the surveys were administered between September 2, 2022 and March 23, 2023; so, the question wording “flooding currently affecting Pakistan” was appropriate at that time.

experienced the most pirate attacks closest to its borders?

In the first and second versions of the question, we included Somalia as an answer choice. In the first question, Somalia is the correct answer, being compared against country cases with significantly less piracy. The second question is identical except that Somalia is the incorrect answer and is compared with country cases with significantly more piracy. In the third case, only other countries were included amongst possible responses.

In short, given how prominently Somalia features in news reporting on maritime piracy and how infrequently other cases feature, our expectations are that: 1) when Somalia is the correct answer, it will be selected much more often than the wrong answer choices; 2) when Somalia is the incorrect answer, it will be selected much more often than the correct answer choices; and 3) when Somalia is not an answer choice, the probability of that the correct answer is chosen will be much lower, perhaps approaching the rate of 25%—the predicted probability if respondents were simply guessing.<sup>44</sup><sup>45</sup>

Unlike the preceding sections, there are no formal statistics tests associated with these analyses. Instead, as readers will see in the results, respondents' perceptions of events generally line up so closely with patterns of media reporting that we think the graphical depiction of results speaks for itself.

## **5.6 Reporting on and Knowledge of Discrete International Events**

Finally, to estimate more precisely how the intensity of media coverage of international events maps onto news consumers' knowledge/memory, we identified and developed questions pertaining to 165 discrete world events occurring between 2010 and the end of 2022. We focus specifically on discrete events as the overwhelming majority of survey respondents learned about these events from the news media. (We know because we asked them directly in the survey how they learned about the events we asked about.) Consequently, the causal linkage between reporting on and knowledge of these events is clear. Accordingly, we use these events to estimate the functional relationship between reporting intensity and knowledge/memory of events.

The questions were designed to assess survey respondents' basic awareness of the events, which span a wide variety of international issues—from coups, assassinations, and terrorist attacks to earthquakes, typhoons, and other

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<sup>44</sup>We hold no specific expectations of precise average response rates across the three questions. Although we expect media reporting patterns to strongly influence responses, we do not presume that respondents do not have access to other information sources, which will surely lead to variation across responses. Thus, we articulate our expectations in terms of general patterns—not precise rates or magnitudes.

<sup>45</sup>For the analysis of maritime piracy, we used a different collection of Media Cloud's Top Media Sources due to data availability concerns related to Media Cloud's transitioning and the consequent shutdown of API access to the database.

Skewed Media Cases	Survey Questions	Answer Choices/ Input	Objective Data Source <sup>46</sup>
Saudi Arabia Corruption Crackdown	In November of 2017, Saudi Arabia carried out mass arrests of princes, government ministers and officials, and others, detaining them in the Ritz-Carlton in Riyadh. Within how many month(s) do you estimate had all but a handful of these individuals had been released? Please provide your best estimate in the box below.	[Numeric Data Input]	Sullivan and Fahim (2018)
Yazidi Genocide	In 2014, ISIS began their assault on Iraq’s Yazidi population. Some 200,000 Yazidis are estimated to have been displaced as a result. Please provide your best estimate of the percentage of the displaced Yazidi who have since returned home (or found other durable solutions to their plight—e.g. resettlement within a third country, local integration into the areas to which they fled)?	[Numeric Data Input (%)]	Jenssen (2018)
Pakistan Flood	Please provide your best estimate of when the flooding currently affecting Pakistan began. Please enter a valid month (1-12) and date (1-31).	[Month-Day Data Input]	ERCC (2022), National Disaster Management Authority of Pakistan (NDMA)
Ukraine Refugee Crisis	Please provide your best estimate of the date on which tens of thousands of Ukrainians began to flee fighting in Ukraine. Please enter the date in a valid month (1-12) and year (YYYY) format.	[Month-Year Data Input]	UNHCR (2020a); Shaver et al. (Conditionally Accepted)
Piracy Questions	Over roughly the past decade (2010 through 2021), which of the following countries experienced the most pirate attacks closest to its borders?	[Multiple Answer Choices]; See Table 4	Benden et al. (2021)
Jammu and Kashmir Lockdown	Beginning in August 2019, Indian forces imposed a lockdown of the Jammu and Kashmir region that involved restricting internet access, imposing curfews, and making a series of arrests. Approximately how many month(s) after it started did the Indian lockdown end? Please give your best estimate. <sup>47</sup>	[Numeric Data Input]	Business Today (2021)

Table 3: This table displays six skewed media cases, associated survey questions, expected answer inputs, and alternative data sources that we used to identify the objective temporal, spatial, or other key details of each event. For India’s lockdown in Jammu and Kashmir region, in addition to the question displayed here, we developed two alternatives. We varied questions by providing different levels of specification as to the gradual removal of the lockdown measures. Respondents who reported knowledge of the issue randomly received one of these three questions. For the alternative phrases of the question, see Appendix F4. All three Jammu and Kashmir questions had the same correct answer.



<b>Somalia Answer Choice Included</b>		<b>Somalia Answer Choice Excluded</b>	
<b>Randomized Incorrect Answers (x3)</b>	<b>Randomized Correct Answers (x3)</b>	<b>Randomly Selected Correct Answer (x1)</b>	<b>Randomized Alternative Answers (x3)</b>
Iran Madagascar Algeria Saudi Arabia Greece Guatemala Myanmar Mauritania Panama Papua New Guinea Senegal South Africa	Indonesia Nigeria Yemen Malaysia India Bangladesh	Indonesia Nigeria Yemen Malaysia India Bangladesh Oman	Iran Madagascar Algeria Saudi Arabia Greece Guatemala Myanmar Mauritania Panama Papua New Guinea Senegal South Africa

Table 4: This table displays the three sets of potential answer choices to questions related to maritime piracy randomly assigned to U.S. residents who reported knowledge of the issue. In the first question, Somalia is the correct answer choice, and three alternative incorrect answer choices are drawn at random from the list in column one (cases with significantly less piracy off their coasts than Somalia over the study period). In the second, Somalia is the wrong choice, and the alternative answer choices—with significant more piracy off their coasts than Somalia over the study period—are drawn randomly from the list in column two. Finally, the third and fourth columns present the potential answer choices for the question in which Somalia is not an answer choice. One correct answer is randomly drawn from column three and presented alongside randomly drawn incorrect answer choices from column four.

natural disasters to major sporting events and international conferences. For instance, to assess awareness of the Nepal’s devastating earthquake, we asked:

In 2015, which South Asian country was struck by a severe earthquake, resulting in significant damage to its capital city?

From the set of 165 questions, approximately ten were randomly assigned to each U.S. resident survey taker. We also estimated levels of attention paid to each discrete event (for a two week period starting on the date of the event) by each of the 78 news outlets in our primary major news media outlet sample. Finally, in the survey, we asked each respondent to provide “up to 3 traditional news sources (news websites, newspapers, news channels) that you access the most for international affairs.”

With this information, we then carried out two analyses. The first is at the micro, event-respondent level and involved matching each respondent to event reporting levels specific to the outlets they engage. The second is a macro-level analysis with which we estimate the relationship between overall major news media ecosystem reporting on the events (proxied by the 78 news outlets in our primary outlet sample) and aggregate survey community event knowledge. We describe these in turn:

The micro analysis involved matching each respondent ( $i$ ) to their preferred sources' ( $\mathbf{O}_i \subset \mathbf{O}$ ) estimated reporting levels on the discrete events about which they were asked ( $\mathbf{E}_i \subset \mathbf{E}$ ). Our goal is to establish the micro-foundations of reporting and knowledge patterns, linking respondents as closely as possible to their individual information sources.<sup>48</sup> Specifically, we developed two measures of reporting intensity: i) the mean of responsive articles per discrete event ( $a_e \in \mathbf{A}_e$ ) across the preferred outlets:  $\bar{Y}_{i,e} := (\sum_{a_e \in \mathbf{A}_e: o \in \mathbf{O}_i} a_e) / |\mathbf{O}_i|$ ; ii) maximum event-level attention across the preferred outlets:  $Y_{i,e\max} := \max_{o \in \mathbf{O}_i}(a_e)$ . We then used Bayesian logistic regression to estimate media reporting intensity, regressing the respondent's score on each question to the level of reporting intensity, including a large set of demographic controls as well as month fixed effects:  $P(Q_{i,e} = 1 | \bar{Y}_{i,e}, \mathbf{D}, v_m) = \text{logit}^{-1}(\alpha \bar{Y}_{i,e} + \boldsymbol{\beta}' \mathbf{D} + v_m)$ . As robustness checks, we generated linear probability model results in which we include a large number of additional controls, including U.S. state/territory, week (instead of month), and unique-respondent fixed effects.<sup>49</sup> We use quasi-Bayesian Monte Carlo simulation to generate uncertainty estimates.

For the macro analysis, we estimated aggregate (society-level) knowledge/memory as a function of overall media reporting intensity. Specifically, we associated aggregate (survey-population level) discrete event scores<sup>50</sup> with the log of estimated media reporting (across the set of identified major news outlets) over the same two week period following each event. We rounded average scores so that they can be modeled as counts and analyzed the relationship using quasi-poisson regression, generating expected community level scores as a function of reporting intensity. We adopt the same technique as above for generating uncertainty estimates.

## 6 Results

### 6.1 Interreality Bias

Overall, aggregate human costs appear to have little influence on how frequently issues are reported on by mainstream media. The number of articles referencing a topic generally increases with the associated human cost. (See Figure 3, which plots estimated new displacements, deaths, and death sentences against media references using log scales.)

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<sup>48</sup>This exercise is, of course, approximate as respondents are may have received information about some discrete events from sources other than those they listed—e.g. in the case that they switched preferred news outlets.

<sup>49</sup>Given the large number of parameters introduced in these robustness checks, we use efficient fixed effects models that allow for such computations but which are impractical using generalized linear models.

<sup>50</sup> $\forall e \in E$ , where  $j$  denotes each respondent  $\{1 \dots j\}$  in the subset individuals assigned  $e$  and  $r_{j,e}$  is a dichotomous variable reflecting a correct/incorrect answer choice,  $(\sum_1^j r_{j,e}) 100j^{-1}$ .

At issue is the extremely limited number of references made by the media.<sup>51</sup> For instance, a one standard deviation increase in the number of persons forcibly displaced ( $\approx 132,486$ ) is associated with approximately 121 additional, responsive news articles (or  $\approx 0.0009$  articles per refugee/asylum-seeker). Across 94 news outlets, that amounts to an average increase of just over one article per outlet per year. Given Syria's prominence in the news and how substantial its outflows have been, we also replicate our results excluding Syria. The same one standard deviation increase in displacement (now  $\approx 66,152$ ) is associated with roughly 20 additional news articles ( $\approx 0.0003$  articles per refugee/asylum-seeker, or about one fifth of an article per outlet) per year.<sup>52</sup>

When we instead regress reporting against refugee stocks (the total population of displaced individuals from a country rather than new displacements from that country—e.g. the total population of Afghan refugees/asylum-seekers in a given year, the large majority of whom are living in protracted displacement), reincluding Syria, results are mostly unchanged: a one standard deviation increase in a refugee stock ( $\approx 593,501$  individuals) is associated with  $\approx 125$  additional articles per year ( $\approx 0.0002$  articles per refugee/asylum-seeker or about 1.33 articles per outlet per year on average). This result is even more striking considering that the vast majority (77%) of the world's refugees live in protracted displacement.<sup>53</sup>

Results are similarly pronounced when considering costs associated with communicable diseases and, separately, natural disasters. In levels, a one standard deviation increase in disease-related deaths ( $\approx 20,787$  fatalities) is associated with fewer than six (5.718695) additional responsive news articles, an average increase of less than one tenth of an article per outlet per year.<sup>54</sup> For natural disasters, a one standard deviation increase in deaths and, separately, persons harmed (approximately,  $\approx 7,079$  fatalities and 10,790,170 individuals affected, respectively) is associated with about 110 and 54 additional responsive news articles, respectively (average increases of 1.2 and, separately, 0.6 articles per outlet per year). Finally, a one standard deviation increase in death sentences ( $\approx 89$  individuals) is associated with approximately 60 additional responsive news articles, or roughly 0.64 articles per outlet per year.

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<sup>51</sup>Regression results can be found in Appendix Tables 5 and 6.

<sup>52</sup>Although Syria has been a major source of displacement over the past decade, it is not alone. Millions of individuals have also been driven from their homes and across international borders in South Sudan, Myanmar, Ukraine, Afghanistan, Venezuela, Somalia, Pakistan, Iraq, Burundi, and Côte d'Ivoire, (the countries other than Syria with the top ten highest country-year outflows, listed from highest to lowest; all ten counts are in the hundreds of thousands to millions)

<sup>53</sup>Defined formally as cases in which “25,000 or more refugees from the same nationality have been in exile for at least five consecutive years” (UNHCR, 2020b).

<sup>54</sup>We also explore whether results vary across diseases, generating and reporting disease-specific regression results in Appendix Table 6. (Positive country-year observations of natural disaster costs are far rarer than of disease costs, and we lack the data to carry out individual disaster-specific regressions.) Results are largely consistent. Fatalities account for very little variation in reporting. However, we observe differences across diseases. In particular, in seven of eight cases, reporting on HIV/AIDS is more likely to increase with fatalities than is reporting on all other diseases. Again, however, overall levels of increased reporting are trivial, making comparisons of coefficients less meaningful.

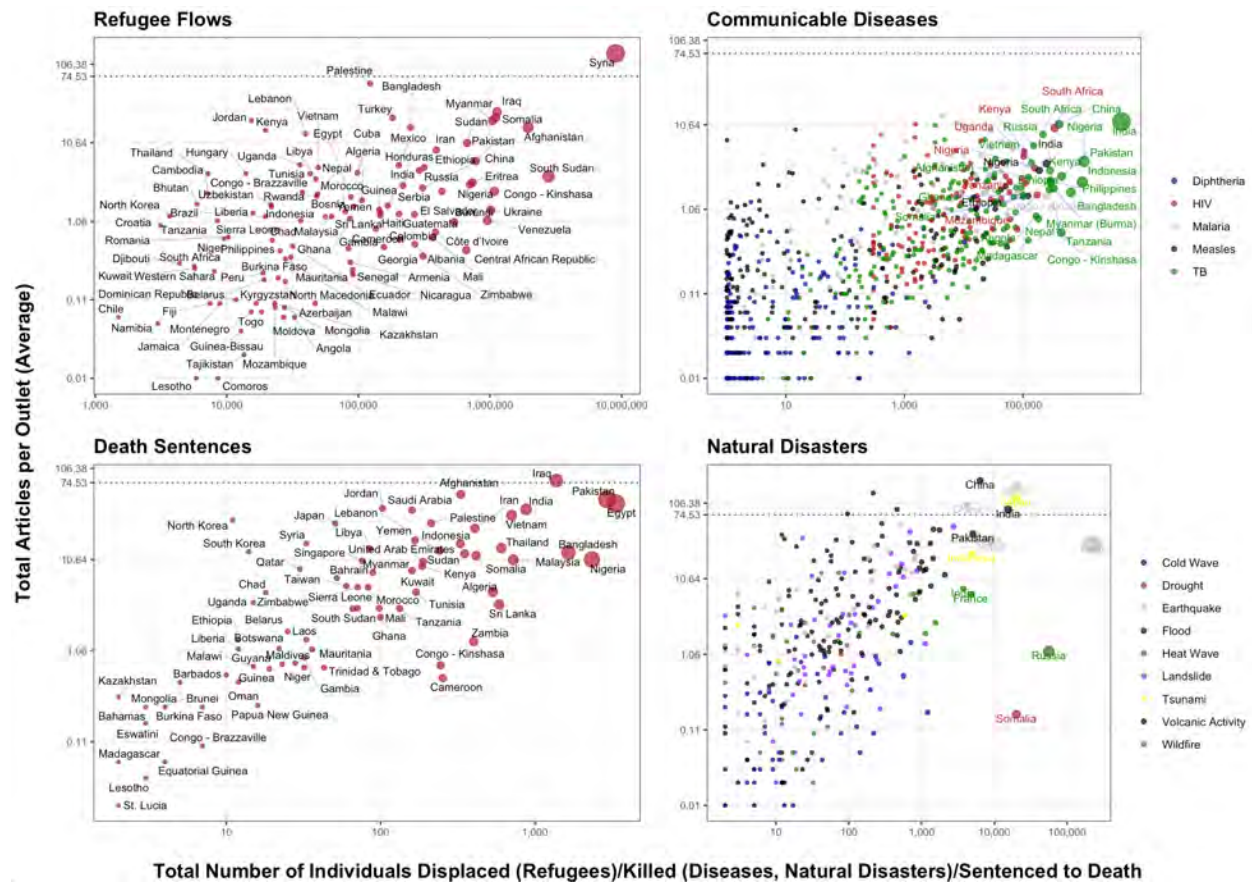


Figure 3: This figure plots the number of articles referencing i) refugee and asylum seeker populations (by country of origin); ii) communicable diseases by country; iii) natural disasters (by country); and iv) death sentences (by country) against i) the actual displacement levels of such populations; the number of individuals killed per country ii) by these diseases and iii) and by these natural disasters; and iv) the number of individuals sentenced to death in each country. The unit of analysis is the country-year for all years between 2010 and 2020, except for communicable disease deaths for which temporal coverage varies across diseases given available data on disease fatality estimates. For purposes of substantive comparison, the dotted horizontal blue line provides the mean total number of article references to a single major celebrity across the study period per major news outlet. Data on responsive article counts come from the authors' calculations using Media Cloud; data on refugee and asylum seeker outflows come from UNHCR (2020a); Shaver et al. (Conditionally Accepted). Data on disease fatalities come from World Health Organization (2021); Global Burden of Disease Collaborative Network (2018). Data on the costs of disasters comes from CRED (2020). Data on death sentences comes from Amnesty International (2020).

There is substantial variation across cases. In many cases, references given by the media are roughly comparable across cases with drastically different levels of human cost. This result can be seen in the  $R^2$  values reported in Appendix H.<sup>55</sup> Consider, for instance, the small number of references to tuberculosis and, separately, malaria in the Democratic Republic of the Congo. Each of these is independently responsible for more than 100,000 deaths over the

<sup>55</sup>These values are larger than they would have been had we run individual year-level regressions given the inclusion of fixed effects.

past decade, relative to other countries' disease references. Similarly, see the case of South Sudan, whose millions of refugees have received references comparable to many smaller refugee/asylum-seeker populations.

To further contextualize our results, we compare media reporting on refugee flows, communicable diseases, natural disasters, and death sentences to reporting on a *single* celebrity each year (e.g. Miley Cyrus, Kanye West).<sup>56</sup> Only in the most extreme cases (e.g. Syria's refugee crisis) the number of articles meets or exceeds the celebrity reference point (still, only modestly).<sup>57</sup> This reference point is displayed in Figure 3 as the dotted blue line with the associated value of 74.53 (average articles per outlet per year).

Again, our inclusive search approach means that we are likely calculating the upper bound of reporting on these issue areas.<sup>58</sup> In some cases, responsive articles may simply mention the issue areas tangentially, technically covering an issue without giving it substantial attention. In other cases, false positives mean that estimated levels are inflated. We expect the sparse changes we estimate following major increases in human costs would decrease further if only articles directly addressing the subject were considered.

How stable are our estimates of  $\hat{\zeta}$ ? We replicate our analysis controlling for a range of potential omitted variables that might skew the relationship between reporting and human costs. We control for a broad range of country  $i$  and dyadic (U.S.-country  $i$ ) specific variables. These results are reported in the Appendix. The magnitude of the relationships reported previously are largely unchanged. While some coefficients vary, whether this effect is driven by the controls themselves or from the loss of particular country-year observations that results from including such a broad set of controls is unclear. Again, however, these relative changes correspond to minimal changes in practical levels of media reporting.

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<sup>56</sup>We use Google Trends (2021) to identify the set of individuals Googled the most often within the U.S. each year between 2011 and 2020. We then search the same set of news outlets as used in the interreality analysis for yearly references to each individual who appears on one or more Google trend lists. For each year, we select the number of references corresponding to the individual who received the most that year. We remove from the search any/all individuals who i) were politicians, ii) died that year or iii) were featured in the news regarding their association with some broader political/social issue, indicating references stem less from celebrity than from broader social dialogue. The resulting list comprises actors, musicians, and professional athletes.

<sup>57</sup>Although this celebrity line reflects yearly (single celebrity) article references, for presentation purposes, references for refugee flows, disease and natural disaster deaths, and death sentences are aggregated over all years of their respective study periods. Although the number of years varies across cases, most cases' time spans represent most years of a decade. Thus, the difference in celebrity reporting is significantly more dramatic than the visual comparison suggests.

<sup>58</sup>This is particularly true regarding natural disasters, communicable diseases, and death sentences, where our flexible article searches are highly inclusive. Identifying references for refugees and asylum seekers is more difficult, and we refer readers to the appendix where we describe our search approach in detail and identify its limitations.

## 6.2 Media Reporting Intensity and Knowledge

The results of our tests associating knowledge of the world's largest contemporary refugee crises with levels of reporting on those crises depict clear apparent causal effects of the latter on the former. Both U.S. residents and international affairs elite are more likely to have identify correctly those major crises that were featured prominently in the news media and much less likely to identify those that were not.

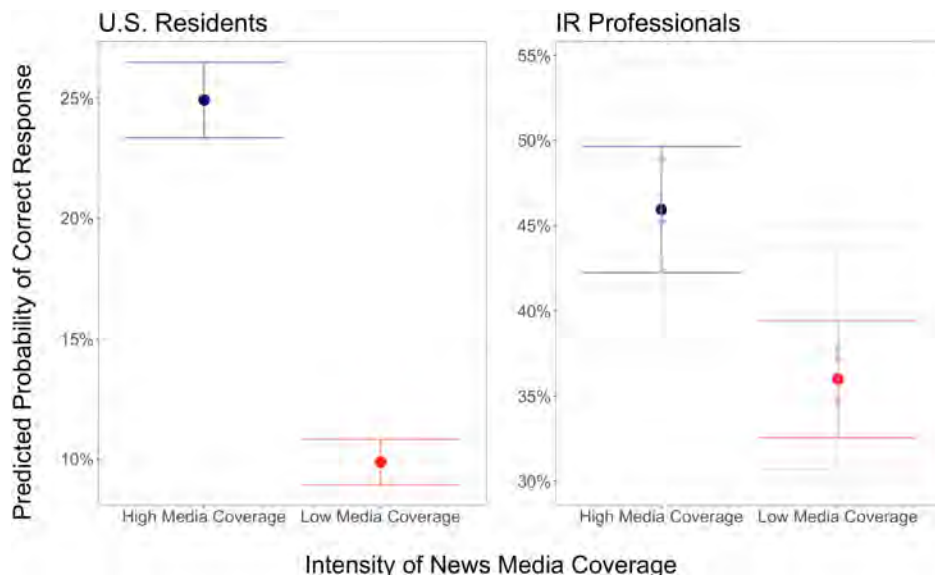


Figure 4: This figure displays predicted probabilities of correctly identifying major refugee crises for both U.S. residents results. Results show statistically significant and substantively large differences in probabilities between those major crises that received significant news media coverage and those that received much more limited attention. The gray points and confidence intervals for IR professionals display results when subsetted to the three separate groups of professionals.

## 6.3 Skewed Media Reporting and Perceptions

Results also reveal clear expected patterns of skewed perceptions of major international issues tracking patterns of major international news media reporting. In Figure 5 and 6, we display results for U.S. residents and international affairs professionals, respectively. Overall, we find strong evidence consistent with our expectations. For instance, perceptions of Ukraine's refugee crisis nearly perfectly coincide with reporting patterns. Similarly, when it comes to perceptions of contemporary piracy, consistent with media reporting patterns, U.S. residents overwhelmingly perceive Somali to be affected. (And when Somalia is not an answer choice, they answer correctly nearly as frequently as would be expected under simply guessing.)

In some cases, the distinct effects of media appear clearly alongside correct perceptions. For instance, perceptions of Pakistan's historic flooding reveal that while perceptions of largest number of respondents (amongst both the

U.S. residents and international affairs professionals) tracked directly with media reporting patterns, a separate set of respondents were aware of the actual start date of the crisis.

The only case that does not provide clear evidence of our expectations is that of Iraqi’s Yazidi population. U.S. residents display a wide range of answers. While many believe (as we expected) that most or all of Iraq’s Yazidis had found a resolution to their situation, many others provided lower numbers. And the international affairs professionals generally and correctly predicted that the Yazidis had not found a resolution nearly one decade later. Clearly, the professionals had access to details of the case beyond what we would have expected from the news coverage.

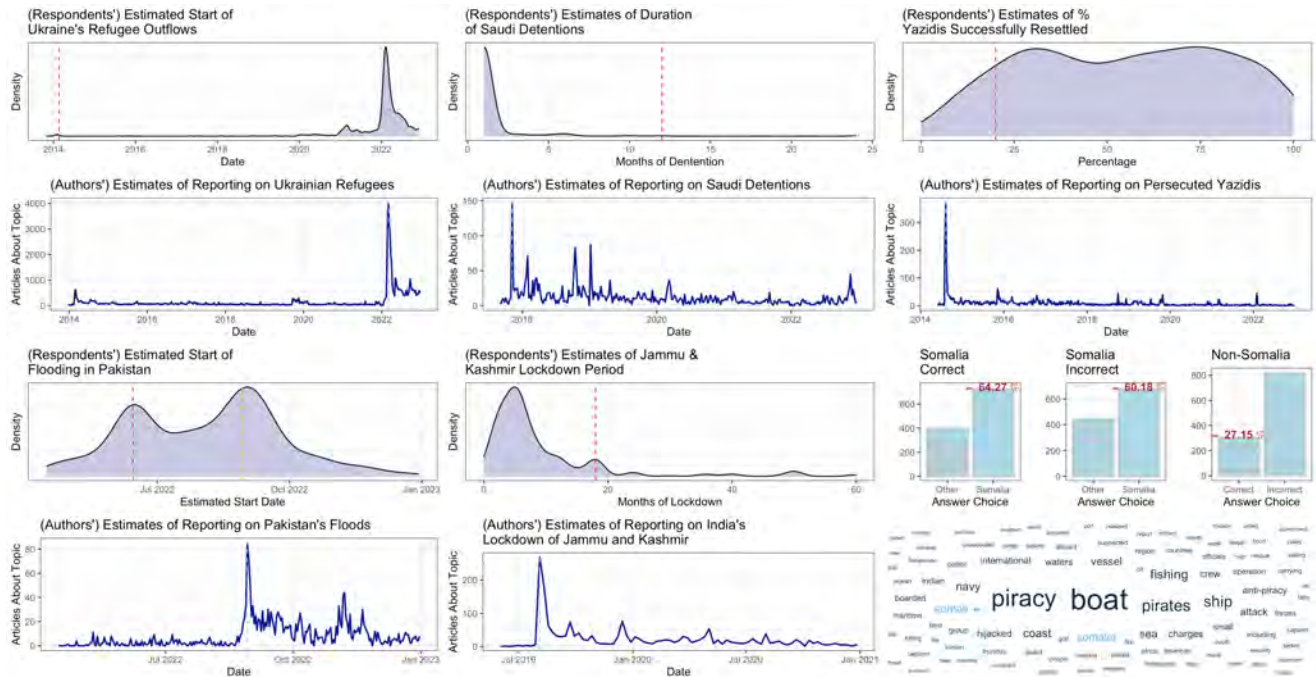


Figure 5: This figure shows across a variety of cases that U.S. residents perceptions of major international events tend to track with news media reporting patterns on those issues—and not the underlying empirical realities. Distributions of respondents’ answers displayed as densities. News media reporting patterns are depicted with weekly time series, save for the case of reporting on contemporary piracy, in which the word cloud depicts most commonly associated words.

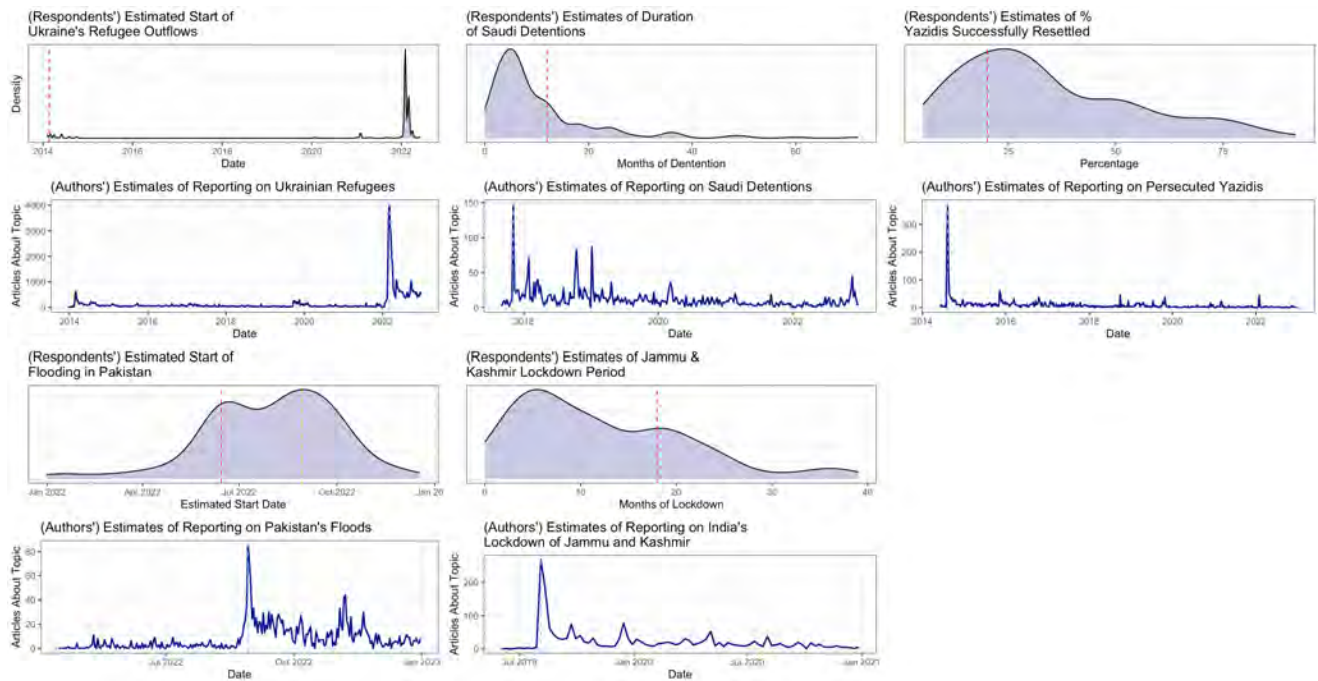


Figure 6: This figure shows across a variety of cases that international affairs professionals’ perceptions of major international events tend to track with news media reporting patterns on those issues—and not the underlying empirical realities. The one exception in the cases displayed is that of Iraqi’s Yazidi crisis. Distributions of respondents’ answers displayed as densities. News media reporting patterns are depicted with weekly time series.

## 6.4 Empirical Estimate of Functional Form: Reporting Intensity and Knowledge

The association between respondent knowledge and news media reporting intensity is significant and positive as expected. At the event-respondent level, returns to respondent knowledge linearly increase with reporting, with diminishing returns at only very high levels of outlet reporting. The results are robust across various specifications. (See Figure 7.) At the discrete-event level, the estimated functional relationship displays significant increasing returns to reporting at low levels of reporting. Thus, at this macro level of analysis, we estimate particularly significant effects on public knowledge as the numbers of articles dedicated to a subject by the major international news outlets increases from very low numbers.

This result is encouraging inasmuch as it suggests that there may be significant returns to public knowledge on major uncovered global issues were the news media to prioritize running larger (though not necessarily substantially larger) numbers of stories on those topics. To give just one example, we estimate that the recent earthquake in Morocco has received nearly double the coverage than the recent flooding in Libya.<sup>59</sup> Yet, with both disasters covered with

<sup>59</sup>The previous version of Media Cloud upon which all other data/statistics in this paper is based is now offline, and this recent estimate is conducted using a new trial version of Media Cloud to which updates are still being made, as we understand. Thus, we caveat this statement



hundreds of articles, we would expect a significant percentages of the population (if/as proxied by the survey taking population) would be familiar with both disasters.

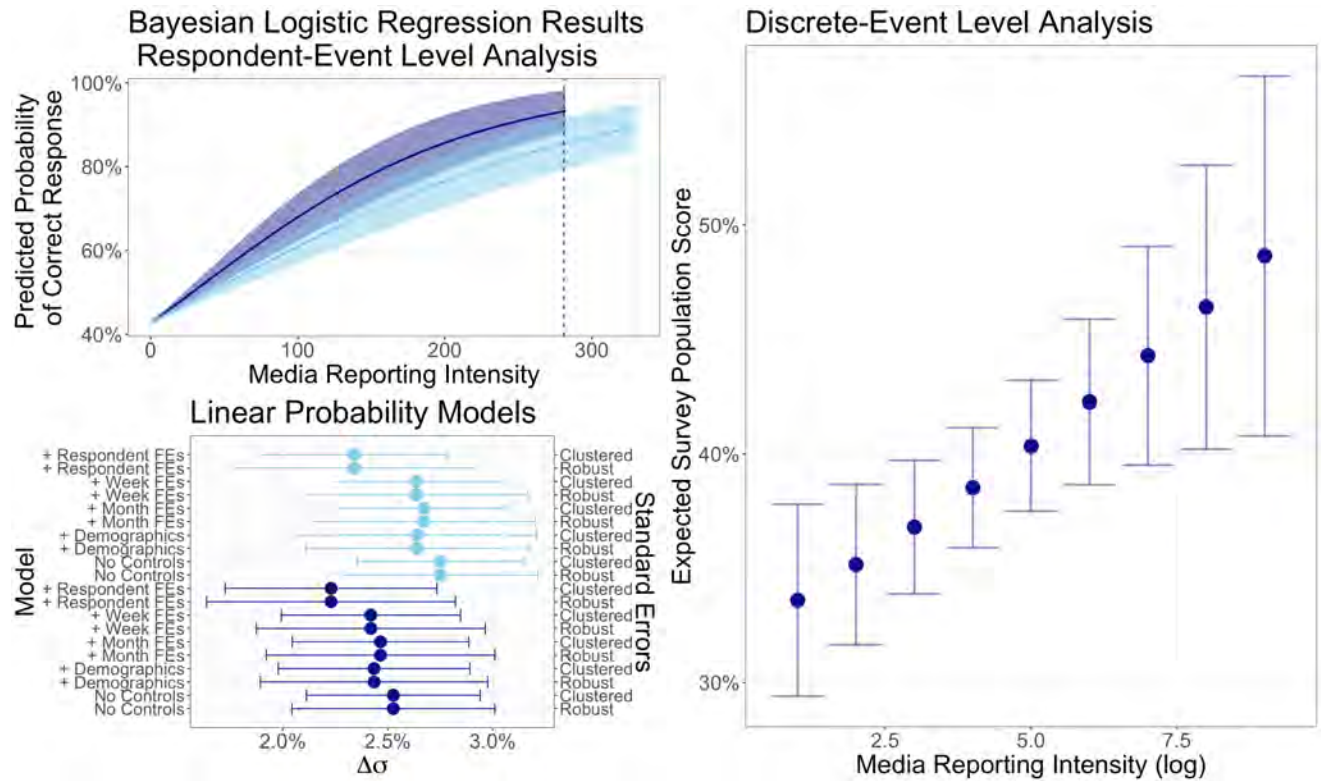


Figure 7: This figure displays results linking media reporting intensity on discrete international events to respondent knowledge. The figure on the right displays the expected survey population score as a function of news media reporting intensity.

## 7 Discussion & Conclusion

The results of our analysis reveal significant differences in the types of international affairs reported by the major international news media, broadly conceived. We show that estimated human costs of the issues we focus on account for only a small fraction of variability in reporting. In Appendix J, we explore whether our interreality findings hold when we subset only to reporting by specialized foreign affairs outlets (e.g. *Foreign Affairs*, *War on the Rocks*) and the major sources of news consulted by foreign affairs professionals. (They do.) Having shown that human cost bears little on reporting intensity, we explore the set of factors that seem to account for meaningful differences in reporting levels across international affairs topics (Appendix K).

accordingly.

Much recent academic work has focused on disinformation dynamics (Benkler et al., 2018; Allcott and Gentzkow, 2017; Martin et al., 2019). Our research raises questions about the nature of news media reporting on international affairs independent of efforts—covert or otherwise—to corrupt consumers’ news feeds. Our research indicates that, in aggregate, news outlets devote very limited attention to many global issues that account for significant human suffering. On its Policies and Standards page, the Washington Post Staff (2016) writes that “[n]o story is fair if it omits facts of major importance or significance. Fairness includes completeness.” Yet, the empirical evidence is clear: mainstream news media outlets, upon which both the U.S. public and its international affairs professionals depend systematically omit details related to deaths and suffering of large segments of the global population. Major changes in the numbers of individuals forcibly displaced from their countries, killed in natural disasters or by communicable diseases, or sentenced to death by their governments, are associated with incredibly modest changes in the numbers of articles written about these topics.

Naturally there can exist well founded reasons for limiting coverage of a topic. For instance, particular topics, when covered extensively, may cause harm—e.g. Jetter (2019)’s research suggests that coverage of al-Qaeda tends to encourage additional attacks and may facilitate further radicalization. More generally, as Slovic (2010) describes, “a form of *psychophysical numbing* may result from our inability to appreciate losses of life as they become larger...” Increased reporting beyond some threshold may not translate into appreciable changes in levels of knowledge (or the willingness to consider policy changes reflecting updated knowledge).

Yet our research suggests that reporting is well below any such threshold. Consider the hundreds of thousands of Eritrean refugees and asylum seekers who fled persecution over our study period. From the *New York Times*—which we focus on given its role as the “top” news site according to relevant professionals surveyed about their media consumption (Erdos & Morgan, 2015)—we were unable to identify a single article during that period whose title explicitly referred to “Eritrean refugees” or “Eritrean asylum seekers”.<sup>60</sup>

Our results further indicate that U.S. residents and foreign affairs elite’s dependence on news media reporting reliance bears predictably and significantly on their knowledge and perceptions of international affairs. Beyond these underappreciated effects, international affairs professionals communicated additional effects of news media reporting on international affairs in our surveys and interviews. In our survey of the professionals, many reported significant effects of news media reporting on “the work [they]/[their] organization [do] (i.e. by influencing which issues are prioritized, affecting funding streams, and so on).” (See Figure 8.)

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<sup>60</sup>This is not to say that the outlet did not report at all on Eritrean refugees or asylum seekers—indeed, it did (e.g. Cumming-Bruce (2015))—but to highlight how minimal such reporting has been. Or consider, more generally, that Media Cloud’s database tracks a total of 20 articles written by the *NYT* that explicitly mention “Eritrea” in their titles over our eleven-year study period compared to  $\approx 2,200$  that include “Israel” or  $\approx 3,450$  including “Iran” over this same period.

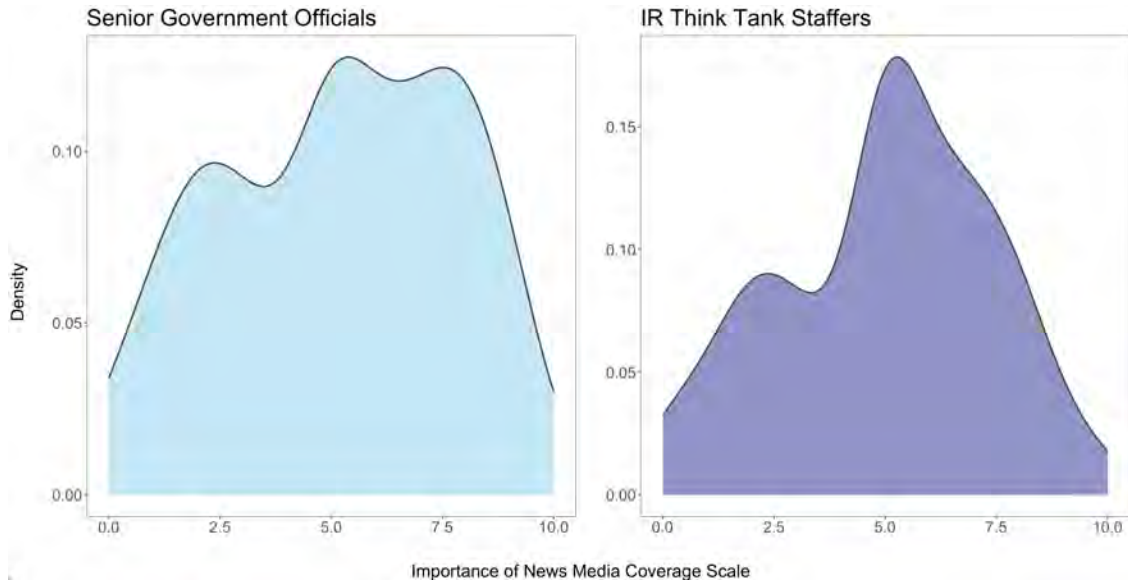


Figure 8: This figure displays current/former senior government officials and think tank staffers’ perceptions of the causal effects of media reporting on foreign affairs. Specifically, these professionals were asked to what extent, if any, “patterns of major international news media reporting on international affairs influence the work you/your organization did [does] (i.e. by influencing which issues are prioritized, affecting funding streams, and so on)?” Responses of 0 and 10 indicate the least and greatest effects, respectively.

Our interviews with current and former professionals from across the United Nations system, many of the world’s largest international non-governmental organizations, major philanthropic organizations, and think tanks/research institutes confirm the central role media play in influencing the flow of resources to relief and development efforts around the world—often in ways that do not align with the assessment of needs by these organizations, as the World Health Organization interviewee quote shared earlier in this paper made clear.

The interviews highlight tensions between assessments of need and resource allocations:

*“We are on the ground and assessing needs and want to respond to a certain thing but we can’t get it funded, and that becomes very challenging... but the media, donors... their attention is focused on what is [perceived as] an emergency. And so the funding that comes is very short-term. It’s like three months; six months—to solve what they think is a problem but doesn’t really deal with what is the root of things. So, is media attention good? Yes, to some extent. Is it worth it? Is it not? I don’t know. I think it just distorts things and it does make the work a lot more challenging.”*

Finally, they highlight how substantial and pervasive such problems are:

*“Some sectors are dramatically over and underfunded, and it’s a huge problem across the sector when either a particular topic or geography is used as the underpinning of financial appeal, which is different than working to get political will around an issue.”*

We encourage readers to browse Appendix B, where we provide a large and diverse set of quotes from inter-

viewees relating to such media effects.

Patterns reported in this project provide a starting point for identifying opportunities to redirect funding to reflect human need and prioritize longer term development and relief efforts. For media professionals seeking to highlight humanitarian issues with greater fidelity to their costs, our results open that door and, like our interviews, advocate for greater coverage of country cases like the Democratic Republic of the Congo.

We conclude by making the argument that the major international news media’s role as an actor in international affairs is underappreciated. To provide one final empirical result in support of this argument, in a final survey of international relations faculty across the United States (to which 1,713 individuals responded), we find that, although a majority of respondents indicate relying on news media materials in their teaching and research, only a minority indicate treating the major international news media as an actor in international affairs in their teaching. (See Figure 9 and Appendix A.3 for additional details.)

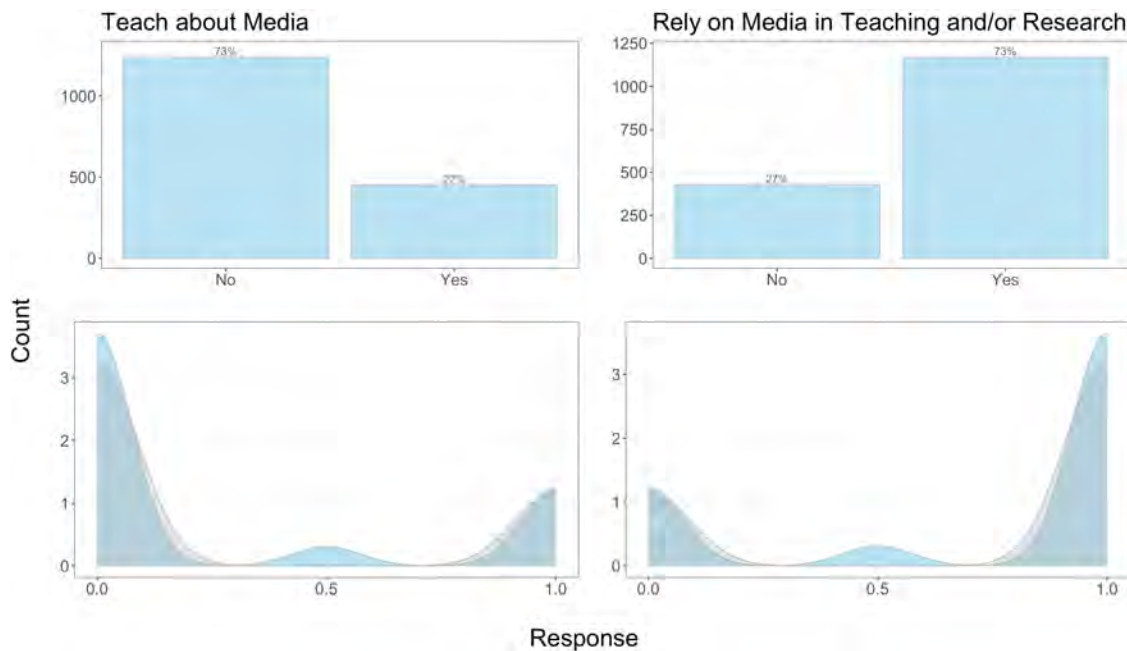


Figure 9: This figure displays the survey responses of international relations faculty across U.S. colleges and universities who were asked whether they: 1) focus on major international/American news media as an actor in international affairs in their teaching and 2) regularly include major international/American news media articles as course readings or as sources in your research. Results depict little emphasis on the news media as an actor in international affairs even as many IR faculty rely on news media articles for their work.

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# Appendix

## A Surveys

### A.1 U.S. Residents Survey: Summary Statistics

Table 5: U.S. Respondents Demographics

Gender	5366		Education	5371	
... Female	2950	54.98%	... Less Than High School	77	1.43%
... Male	2044	38.09%	... High School	648	12.06%
... Non-binary	28	0.52%	... Some College (No Degree)	828	15.42%
... Other	3	0.06%	... Associate	505	9.4%
...	341	6.35%	... Bachelor's	1509	28.1%
Age	5383		... Master's	1010	18.8%
... [18,25)	326	6.06%	... Professional	174	3.24%
... [25,35)	1426	26.49%	... Doctoral	278	5.18%
... [35,45)	1342	24.93%	...	342	6.37%
... [45,55)	733	13.62%	Ethnicity	5350	
... [55,65)	814	15.12%	... White	3972	74.24%
... ≥ 65	742	13.78%	... Black or African American	551	10.3%
Partisanship	5175		... Asian	209	3.91%
... Democrat	2438	47.11%	... American Indian or Alaska Native	120	2.24%
... Republican	1223	23.63%	... Native Hawaiian or Pacific Islander	10	0.19%
... Independent	1063	20.54%	... Other	149	2.79%
... Other	97	1.87%	...	339	6.34%
...	354	6.84%	Hispanic or Latino	5359	
Income	5259		... Yes	748	13.96%
... Less than \$20K	536	10.19%	... No	4274	79.75%
... \$20K to \$40K	791	15.04%	...	337	6.29%
... \$40K to \$60K	640	12.17%	Ancestry Overseas	5326	
... \$60K to \$80K	543	10.33%	... Yes	715	13.42%
... \$80K to \$100K	482	9.17%	... No	4270	80.17%
... \$100K to \$150K	724	13.77%	...	341	6.4%
... \$150K or more	1200	22.82%	Foreign Profession	5281	
...	343	6.52%	... Yes	643	12.18%
Employment	5294		... No	3199	60.58%
... Government	180	3.4%	... I am neither employed nor a student	1112	21.06%
... Private Sector	2860	54.02%	...	327	6.19%
... Self-employed	359	6.78%	Foreign Live	5321	
... Student	104	1.96%	... Yes	937	17.61%
... Retired	698	13.18%	... No	4052	76.15%
... Not working	747	14.11%	...	332	6.24%
...	346	6.54%	Foreign Visit	5309	
Veteran	5336		... Yes	2668	50.25%
... Yes	502	9.41%	... No	2311	43.53%
... No	4483	84.01%	...	330	6.22%
...	351	6.58%			

## A.2 IR Professionals' Survey: Summary Statistics

Table 6: IR Professionals' Survey Demographics

Expertise Variable	University faculty		Government official		Think tank specialist	
	Count	Percentage	Count	Percentage	Count	Percentage
Gender	710		216		193	
... Female	199	28.03%	43	19.91%	47	24.35%
... Male	499	70.28%	170	78.7%	144	74.61%
... Prefer not to say	12	1.69%	3	1.39%	2	1.04%
Partisanship	713		212		193	
... Democrat	490	68.72%	93	43.87%	106	54.92%
... Republican	35	4.91%	46	21.7%	22	11.4%
... Independent	157	22.02%	68	32.08%	57	29.53%
... Other	31	4.35%	5	2.36%	8	4.15%
Age	686		211		189	
... 25-34	22	3.21%	2	0.95%	15	7.94%
... 35-44	175	25.51%	18	8.53%	27	14.29%
... 45-54	184	26.82%	43	20.38%	34	17.99%
... 55-64	175	25.51%	69	32.7%	45	23.81%
... 65-74	93	13.56%	63	29.86%	51	26.98%
... 75-84	34	4.96%	16	7.58%	16	8.47%
... 85-94	2	0.29%	0	0%	1	0.53%
... 95+	1	0.15%	0	0%	0	0%
Race/Ethnicity	805		281		261	
... White	572	71.06%	171	60.85%	149	57.09%
... Non-white	78	9.69%	18	6.41%	27	10.34%
... Mixed	20	2.48%	6	2.14%	7	2.68%
... No data	135	16.77%	86	30.6%	78	29.89%
Education	714		217		196	
... Bachelor's	1	0.14%	12	5.53%	9	4.59%
... Master's	12	1.68%	108	49.77%	55	28.06%
... Professional	0	0%	49	22.58%	13	6.63%
... Doctoral	700	98.04%	37	17.05%	115	58.67%
... Other	1	0.14%	11	5.07%	4	2.04%

Table 7: IR Faculty Specific

Variable	Count	Percentage
IR Faculty Level/Rank	802	
... Chaired Full Professor	87	10.85%
... Full Professor	265	33.04%
... Emeritus	48	5.99%
... Associate Professor	244	30.42%
... Assistant Professor	75	9.35%
... Visiting Instructor/Visiting Assistant Professor	6	0.75%
... Lecturer or Senior Lecturer	27	3.37%
... Adjunct	24	2.99%
... Other	26	3.24%

Table 8: Government Officials Specific

Variable	Count	Percentage
Position Rank	280	
... Senate confirmable policy or department/agency leader	62	22.14%
... Political appointee not-confirmable	59	21.07%
... SES-level civil servant	62	22.14%
... Professional at the GS/GG 15/Band 5 level	52	18.57%
... Professional at the GS/GG 13/Band 4 level	2	0.71%
... Military officer	14	5%
... Other	29	10.36%
Field	281	
... Security	140	49.82%
... Trade	84	29.89%
... Development	57	20.28%

Table 9: Think Tank Specific

Variable	Count	Percentage
Position Level	260	
... Junior	2	0.77%
... Associate	15	5.77%
... Mid-level	39	15%
... Senior	154	59.23%
... Board Member	7	2.69%
... Other	43	16.54%

### A.3 Survey 5 with International Relations Scholars

For this survey, we used the same list of more than 5,000 international relations scholars compiled by the TRIP research lab, although this effort was carried out independently of that lab. Scholars were included in the W&M sample if they were either a) employed at a US college or university with an affiliation with a political science department or public policy school, or b) “teach or conduct research on issues that cross international borders” (Daniel Maliniak and Tierney, 2011; TRIP) We ask respondents three questions via email and received 1,713 responses.<sup>61</sup>

The survey was sent out in email batches, allowing for edits to be made as the survey was deployed.<sup>62</sup> Most importantly, the response format of the third question was changed during fielding. Being too narrow in our question, not actually needing syllabi to understand course content, and realizing general impracticality, we changed to a third yes/no question instead of a file request. Responses to the third question before this version were not considered, resulting in a lower response count for this question.

When coding responses, the scholar’s answer was taken at face value, unless it was clear via additional textual response that the question was misinterpreted, in which case they were either excluded or recoded. When provided with a short-response answer, the research team either examined the scholar’s previous publications to determine intent, or coded answers as a “somewhat”, a 0.5, if unclear. Additionally, in rare cases, due to the unique nature of their individual professions, responses would be considered as an “alternate” way of answering “yes” to any of the questions.<sup>63</sup>

Respondent answers were removed from consideration if they responded that they were an Americanist. Similarly, if scholars replied that they are not IR scholar (e.g. Comparativists), we looked at their publications to make an assessment. If an in-sample scholar forwarded the email to a colleague in the appropriate department, who clearly is considered in-sample, we considered the forwarded response. We also included professors emeriti who provide responses.

#### A.3.1 Relevant Survey Questions

##### Version 3:<sup>64</sup>

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<sup>61</sup>A response is considered to include an answer to at least one question.

<sup>62</sup>Scholars with whom the corresponding author had an existing professional relationship prior to survey launch received a more personalized version of the survey. They were all contacted using the final version of the survey.

<sup>63</sup>Analyses are provided with and without the “somewhat” and “alternate” responses.

<sup>64</sup>Scholars employed at universities alphabetically before Belmont University received version 1, then those at universities before Brown University received version 2.

1. “[Yes/No] Do you focus in any of the classes you teach on major international/American news media (*The New York Times*, *CNN*, the *BBC*, etc.) as an actor in international affairs (i.e. as an actor that has some influence on international affairs/politics)?”<sup>65</sup>
2. “[Yes/No] Do you regularly include major international/American news media articles as course readings or as sources in your research?”<sup>66</sup>

## **B Interviewee Quotes – Effects of Major News Media Reporting Patterns on Fundraising and Operations**

To better understand the consequences of the major news media’s reporting patterns on the type of issues we focus on in this article (e.g. refugee flows, natural disasters, and communicable diseases), we carried out dozens of in-depth semi-structured interviews with foreign affairs professionals who have been engaged in either the implementation, funding, or analysis of global humanitarian and development operations.

These include (but are not limited to) current and former professionals from across the United Nations system, many of the world’s largest international non-governmental organizations, major philanthropic organizations, and think tanks/research institutes. Although many of the professionals we spoke with did so on the condition of organizational anonymity, a sample of their organizational backgrounds<sup>67</sup> include the Gates Foundation, Handicap International<sup>68</sup>, the International Displacement Monitoring Center, the International Bar Association, the International Labor Organization, the International Organization for Migration, Médecins Sans Frontières, Mercy Corps, MSI Reproductive Choices, Save the Children, Sesame Workshop, the United Nations Children’s Fund (UNICEF), the United Nations Conference on Trade and Development (UNCTAD), the United Nations Foundation Clean Cooking Alliance, the United Nations Industrial Development Organization (UNIDO), the United Nations Refugee Agency (UNHCR), the Women’s Refugee Commission, the World Bank, the World Health Organization, and the World Wildlife Fund.

Collectively, the interviews make clear how important major news media coverage is to the humanitarian and development efforts being undertaken around the world and, in particular, how coverage can—and frequently does—

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<sup>65</sup>Version 2 adds the word “in” at the beginning of question 1, while version 3 adds the word “do” to the front of the question.

<sup>66</sup>Version 3 includes a new version of Question 2, asking scholars to examine their course content rather than provide a syllabus to be analyzed for content. Previously asking, “[File] You might be willing to share a recent copy of the syllabus/syllabi you use when teaching intro IR (or similar courses) at the undergraduate or graduate level (or both)?”

<sup>67</sup>Taken from interviewees who did not request organizational anonymity

<sup>68</sup>Now, Humanity & Inclusion

divert resources away from areas in which professionals assess the needs to be greatest.<sup>69</sup> Below, we share many of the most relevant quotes from these interviews with a focus on those highlighting effects on funding and operations. Typically, these responses followed a question in which we asked what, if any, are/were the implications of the major news media's reporting patterns for the topics/issues on which they worked:

*“There a lot more people working on a crisis that is able to fundraise money to respond, at least from a policy perspective. And it's kind of self-perpetuating... all of the donor e-mails they send out are focused on the conflict [in the news headlines]... and so you really do see some crises being dropped entirely.” (Interviewee 1)*

*“[L]ike any non-governmental organization operating in this space, we are donor funded... And I think there's some push and pull between what donors want to see happen and that being informed by what NGOs say is important. But certainly we're like any NGO—we have to work on what we're able to raise funds to do. And I think the more media attention a crisis gets, the more likely it is that [it's] on donors radars and something that they want to fund.” (Interviewee 2)*

*“It's really easy to get stuck in buckets where you see the international attention... [S]o much of our research is donor driven, rather than it being influenced directly by media, it's influenced a lot by what donors see as the priority issues, which indirectly is affected by media...” (Interviewee 3)*

*“Indirectly [we are affected by major news media coverage]... [A]s different things come to the [news media] spot light, it certainly shifts where we are seeing our donors being most interested in in terms of where they want to be pushing more research and more resources, and similarly, the researchers in our network also follow those trends as well...” (Interviewee 3)*

*“[W]estern media report[ing] influences... the foreign policy machinery that ultimately sets the priorities of donors... If you look at donors—I will use Iraq as an example of this... in the conflict with ISIS, there was a lot of Western media coverage about minorities in Iraq, and the impact that the conflict had on minorities... There [was] a lot of focus on [certain] minority communities and not a lot of focus on other [minority] communities... [T]hat coverage, I think, pushed Congress, the Administration to allocate funding [accordingly]... [Iraq's Ninewa province] was saturated with funding to do programming on stabilization, livelihoods, reconstruction to the detriment of other provinces that were equally impacted by the conflict but that were just neglected by international donors... So I think that the reporting does play into that... it plays into that, either because it feeds into a priority, it magnifies a certain existing priority, or it sheds light on something that that wasn't necessarily on the radar... It does influence the agenda of how funding allocation[s] [are] made.” (Interviewee 4)*

*“I think there is a huge interest in climate change... We've been doing [work in this space] for a long time but there was never that much interest... But there is huge interest now... particularly where conflict and climate impact come together... So, this is where a lot of donor attention is. So, we were able to build more of our work on this, which we were grateful for. And there is a lot of media attention on it also.” (Interviewee 5)*

*“[I]nternational public attention [is] important because we are reliant on donations to do our work. And the public are much less likely to donate to a response in the Sahel than they are to, say, Ukraine, which is front and center to people's minds at the moment. It affects the attention that governments pay to it. And that affects the institutional donors and how much money they're willing to putting forward. And it also affects the level of effort that actually goes*

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<sup>69</sup>Another major theme of the interviews, which we do not detail here, concerns the efforts of professionals to influence news media reporting on their issue areas. In addition to the news media's role in influencing resource flows, the concerted and widespread efforts that many of our interviewees described to influence how and what the major news media report serve to further confirm the central role that news media play in these spaces and the importance of understanding patterns of reporting.

into resolving these crises and addressing them and dealing with the consequences of them.” **(Interviewee 6)**

“One of the things that we have to remember [about] creating research that makes policy impact: everyone has to pay their bills. So, naturally, there is going to be a connection between the kind of topics that are in the news, the kind of topics that donors are willing to fund, and those that can tailor their research proficiencies to address those topics are naturally going to survive longer than those that can’t.” **(Interviewee 7)**

“The salience of an issue is partly a function of how much media attention it gets. So, to the degree that political salience and the public concern over an issue drives funding agencies to fund research, then we capitalize on what is salient.” **(Interviewee 8)**

“We bend over backwards trying to get media attention, because we think that once we get media attention, then we’ll get more money... If we get a lot attention, then countries and the philanthropies that fund us will be more aware of the issue. They will pay more attention to it. The politicians will pay more attention to it. And then they will give us money for these issues. You know, so often, you have these meetings with these high level [politicians or philanthropists] who don’t really know the epidemiological research—and they just [read] in the newspaper [a story] the night before about a particular problem that kinda catches their fancy and they decide to fund it.” **(Interviewee 9)**

“Legislatures and Parliament donate money, or you know, allocate money to the crises that are in the news, or to the crises that are reflective of their colonial history, or to any number of other ways. And then [these] kind of bilateral aid programs have to follow that pipeline. Similarly, you know, multilateral organizations, like the UN or the World Bank, or others may put out appeals that are specific to a particular crisis and if you look across like humanitarian funding appeals, some of them get like 30% funding. Some of them get 90% funding. Some sectors are dramatically over and underfunded, and it’s a huge problem across the sector when either a particular topic or geography is used as the underpinning of financial appeal, which is different than working to get political will around an issue.” **(Interviewee 10)**

“The work that we’re able to do on the ground as an organization, or even as advocates in the larger community, is largely dependent on where large multilateral and bilateral donors put their money. So if the media is largely focused on one geography, and that’s where the attention of appropriators goes, and appropriators put their monies into that geography, and that money comes at the cost of other undercovered topics and geographies, then it’s very difficult to claw that back or to move in any other directions. So the differential coverage of the topics and the geographies has huge implications for where news savvy, politically minded appropriators and policymakers decide to put their attention and focus.” **(Interviewee 10)**

“Yes, a lot of our work requires some form of funding that comes from governments, and governments still have a tendency to hold funding for things that have high public concern [...] and that usually comes from the media. If it isn’t heard enough, there’s less of a willingness from that government to do something about it—especially in UNICEF, that has been the case. There have been programs that I’ve worked on that were highly impactful and that can be scaled to other parts of the world but they never got the type of attention [from the media] that is required to get the funding to move forward. And that goes even beyond my work” **(Interviewee 11)**

“At [name of major philanthropic foundation], I think the news was influential in informing, in the long-view, strategy decisions, and decisions about how and where to be working broadly.” **Interviewee 12)**

“Well, I think [that] organizations like ours and many others, whether they are UN system organizations, agencies, programs or whether they are international NGOs that are working in the prevention [of conflict], peace, development and the humanitarian space, we still have a very limited core of partners and donors that support our work. Partners in places like Germany, the UK, Sweden, the Netherlands, and the US in many cases too, these folks that are sitting on development funding or humanitarian funding often get that funding because of political decisions to support the development agency of a country and provide ‘x’ and ‘y’ to all of these agencies. The political decision either comes

from elected politicians or from parliament that agrees on the parameters of spending for overseas development assistance. These are the folks that watch the news. It's not for a lack of will on the part of the desk officers that actually manage the money [and] the contracts, but if they are not getting a clear signal [...] from the politicians, that becomes a problem. We are facing some of that as well after the Ukraine War. Some of the funding from Nordic countries is slipping a little bit because some Nordic countries are worried about how many refugees are going to make their way [...]. Again, the first thing to go [away] was the development money: [Nordic governments said] 'let's put that in the humanitarian basket, let's save some [money] for [internal purposes and] how to deal with refugees when they come.' So, I think [that] those are some of the impacts. Again, once you start prioritization, I guess there is a point where you are talking more about humanitarian money rather than development money." (Interviewee 13)

"When [conflict] gets reported in the news, people think there is a massive change in the state of [affairs]. Take the example of Congo—conflict is often localized; violent flare ups are often localized... and short-lived, sudden attention to a place is not exactly what solves [the issue]. Because these places have struggled for a long time, and you need multiple layers of coordinated and long-term action to really get to both the root causes of poverty and political action... I don't want to say that media reporting is not helpful because having the issue on people's radars is better than not having it on people's radars... but at the same time reducing these conflicts [to short-term issues like conflict minerals or sexual based violence] is very problematic... that is where the money goes to. That's [what] the donors are interested in. So then project design, the type of response that we have to do sometimes are distorted. We are on the ground and assessing needs and want to respond to a certain thing but we can't get it funded, and that becomes very challenging... but the media, donors... their attention is focused on what is [perceived as] an emergency. And so the funding that comes is very short-term. It's like three months; six months—to solve what they think is a problem but doesn't really deal with what is the root of things. So, is media attention good? Yes, to some extent. Is it worth it? Is it not? I don't know. I think it just distorts things and it does make the work a lot more challenging." (Interviewee 14)

"[W]hen an issue has momentum, often more resources are put into it. So, it wouldn't be that we completely change our course and feel pressure to focus on an issue that we haven't focused on. But, let's say like it feels like there is momentum because the media is talking about an issue, leadership is talking about an issue and talking about certain policies, we then of course would put more resources and be dedicated to those issues where we feel there is potential for change of a policy." (Interviewee 15)

"The practical implication [of major news media reporting] is that it changes the nature of funding that we get to support different work... [unlike the public donations,] institutional funding, whether it's bilateral, multilateral, or private tends to more restrictive funding... and really that changes what kind of work we could do and how the organization spends the money..." (Interviewee 16)

"For iNGOs and for the UN... the question of fundraising is very important... if this crisis is well advertised [by the media], you would get a lot of funding. If I compare my experience with UNICEF in Afghanistan with my experience with UNICEF in Chad... we had more money than we could spend... Chad was very low politically... and in terms of media attention, and so there was no hope to change the narrative about why we needed to get funding for the eradication of polio in Chad, for instance, even though it was a very important topic [the eradication of polio] at the global level." (Interviewee 17)

"...I think it's generally [the case] for the development [and] philanthropic world: The more attention the media offers to a particular crisis, the more it takes away from others... If I believe that all human lives have equal value, then the media coverage doesn't really reflect that... what we are implicitly saying is that the lives of Yemenis or Ethiopians don't have equal value of Ukrainians... So, in a way, it's a zero-sum game. If one crisis takes up... more pieces of the pie, it affects... the other crisis areas... We have limited amount of staff time, staff resources, and, most importantly, financial resources. With new crises, we have to [carry out] a new appeal... to generate funding. And we can see, with Syria [for instance], it [took] away funding from Somalia." (Interviewee 18)

"Media coverage has implications because it impacts how resources are allocated and directed. That's the number



*one thing. It also changes the member state governments' priorities... that can all be affected by media coverage and also [indirectly through] the pressure put on by their Western partners... that provide development funding to them."* **(Interviewee 19)**

*"It definitely affects fundraising, and donor attrition, and also donor fatigue."* **(Interviewee 20)**

*"You have to realize that if you're not getting that kind of pickup and traction in various news media—written, TV, or electronic—we are very dependent on donors working with us in order for us to be able to actually do the work and the capacity building and technical assistance. [In] many UN organizations, like UNCTAD, we have a core staff that we can do a number of things [with], but every time—and that's very predominant for my organization—that we have to do a project in-country, we have to have some what we call extra-budgetary donor funding. That basically means that it comes on top of the regular budget [that] we have, so we have to find a donor, we have to agree with that donor on a program, and we have then to be able to implement it. "* **(Interviewee 21)**

*"Now, if you're not out there [in the media] with positive traction, this donor funding gets more and more difficult to come by because donors always want positive stories. They want their name out there, they want [to see] impact and they want positive outcome stories. So, of course, that is why we are [out] there [in the media] and talk about this: it has a direct impact on what we are doing and what we can do as a next step."* **(Interviewee 21)**

*"Using sport for development and peacebuilding in a UN context is definitely not a widely promoted tool: it is not something that is typical within the development world. Now, it was only by providing some case stories and good practices on what impact this could have—for instance, in conflict situations [...]—and by communicating these stories, we actually got quite a lot of traction and interest from donors, mainly developed countries. [They would say] 'oh, this could be interesting in other peacebuilding or peace resolution settings, could we work with you on that?' So, that is probably a very concrete story. "* **(Interviewee 22)**

*"We were successful in getting the International Automobile Union involved and by using some of their personalities—in particular a few [Formula 1] drivers—in communicating about speeding and road fatalities. [Because of that] we were successful in getting this issue out in the press and also getting countries interested in it. Through that, we were able then to develop a program that was replicated in different countries on wearing seat belts [and] respecting the speed limits [for instance]. National authorities then took this template and could run with that and actually implement programs that have proved to be successful."* **(Interviewee 23)**

*"[t]he UNHCR's budget is 96% paid by voluntary contributions... and what drives those contributions are emergencies. And so, Ukraine is a major revenue source for an international humanitarian organization, be it UNHCR, be it ICRC [International Committee of the Red Cross], MSF [Médecins Sans Frontières], WFP [UN World Food Programme], it's all the same... there is very much less interest in the complexity of resolving situations..."* **(Interviewee 24)**

*"Yes, there is a kind of impact. For instance, because of the war [in Ukraine], we have made a taxonomy of which are of countries that would be particularly affected by the food, financial, and energy crisis—countries that we say that are facing that 'perfect storm' because of how the three crises build on top of each other. This taxonomy that the UN created has attracted quite a lot of interest from the press and then countries' policymakers got to the information because they looked on the websites of various UN department, because they heard it from the secretary-general of the UN, or because they read it in the press. But in a way, there was a positive circle that they went back to the UN saying 'you are doing very good work, we now understand better the implications of the war.' In a way, having the press picking up the findings of our research work [and] our data collection is positive because it amplifies the impact [of what we do]. Many more people who read those newspapers have then visited the website of the United Nations. "* **(Interviewee 25)**

*"It matters hugely. It has such a role in destigmatizing or adding stigma [...]. It opens up our reputation or declines our trust. [...] When a negative story hits, it can have huge repercussions for us and our ability to offer aid. There is*

sometimes [this notion of] ‘no publicity is bad publicity,’ but I think there are a lot of myths and assumptions around care and negative stories around how ‘abortions make you infertile’ [and the like].” (Interviewee 26)

“I think it does. We [have] a unique non-profit funding model: we have a handful of big donors [not several smaller operations]. We have governments [...] that invest tens of millions of dollars towards TB research. So they are a handful of single actors and they are making tough decisions about how they are going to be spending their development money. I think the media environment certainly plays a big role in how development spending is perceived as worthwhile or not. I think if there is a public sense of ‘TB is not a problem; it’s not something we should be worried about [or] spending tax dollars on’ that I think is something where the media environment—or the non-existent media environment for TB—does us no favors. I think if there were more comprehensive and robust continuous reporting on TB as a problem, that would probably [make] our fundraising efforts a bit easier in terms of convincing those small groups of people that this is a worthwhile investment that has real public health [return on investment]” (Interviewee 27)

Responding to a question about the implications of major news media reporting on their issue area(s), the interviewee described significant effects of news media coverage on the operations of organizations like the International Organization for Migration, Médecins Sans Frontières, and the United Nations Children’s Fund through its influence on funding. In particular, they describe the effects of such funding distortions on the deployment of humanitarian professionals themselves. Explaining that “[a]lthough this differs somewhat between [humanitarian] entities”, “[a]t higher levels of experience, there is more space for choosing where you want to go.” “Normally the most experienced staff want to be in the crises that are most funded... [And] these more experienced people don’t want to spend time in crises that are not popular... because there is simply not enough money there to do what you think needs to be done... So, you’ll have gaps in your teams... you’ll find it much more difficult to succeed... [And] you have many junior staff leading operations in the least well funded crises.” (Interviewee 28)

“[A foreign government with which we were working] wanted the media to make a big fuss about [the] arrival of migrants, and the numbers, etc. because they could use that to ask for funds, to mobilize resources from mostly European donors.” (Interviewee 29)

## C Identification of “Top” Online News Media Outlets

We first identify “top” online news media outlets using lists of top outlets available for the years 2015 and 2017 from Media Cloud (2011a). Given that many top outlets (e.g. *Fox News*, *Washington Post*) remained within the set of top outlets each year and because 2015 and 2017 fall squarely within our study period, this combined list should cover most top outlets across the study period. Media Cloud’s U.S Top Online News 2015 list is based on data from comScore and Pew (Media Cloud, 2015).<sup>70</sup> MIT Media Cloud’s U.S. Top Online News 2017 list is based on data from August 2017 acquired by Comscore, Activate and Alexa (Media Cloud, 2017).<sup>71</sup>

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<sup>70</sup>As Pew’s State of the News Media Report 2015 describes, this list is established from the “total digital population, or unduplicated combination of desktop (web browsing and video) and mobile (websites and apps) traffic figures, to each news site in a month” (Olmstead and Shearer, 2015). Pew’s list of top 50 online news outlets is based on the “total number of unique visitors and average minutes per visit in January 2015” Olmstead and Shearer (2015).

<sup>71</sup>For the U.S., Alexa lists the most popular sites based on average traffic rank per month among U.S. users, determined from “global sample, or certified metrics” (Alexa, 2021). The 2017 data from Comscore is organized in the same manner as its 2015 report: with “unduplicated audience

We then complemented this list of outlets by adding some of the outlets that our survey respondents indicated as their preferred news sources, important specialized outlets on foreign affairs we deemed important, and outlets mentioned by IR professionals as their main source of news. The final list of outlets can be seen below.

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size, demographic composition and engagement” listed for each site (Comscore, 2015).

### Top Outlets

ABC	drudgereport	Newsweek
Akron Beacon Journal	Economist	nj.com
Al Jazeera	elitedaily.com	NPR
al.com	Engadget	PBS
Albuquerque Journal	finance.yahoo.com	Politico
Arizona Daily Star	Forbes	Realclearpolitics
Associated Press	Foreign Affairs	Reuters
Atlantic	Foreign Policy	Salon
Axios	Fox News	San Diego Union Tribune
BBC	freep.com	SF Gate
Blaze	Gawker	Slate
Bleacher Report	Guardian US	TechCrunch
Bloomberg	houstonchronicle	The Boston Globe
Breitbart	Huffington Post	The Telegraph (UK)
Business Insider	Independent	themirror
BuzzFeed News	Lawfare	Time
CBS News	Los Angeles Times	Upworthy
Chicago Tribune	Mashable!	US News & World Report
CNBC	Mic	USA TODAY
CNET	mlive.com	Vice
CNN	MSNBC	Vox
Daily Beast	NBC News	Wall Street Journal
Daily Caller	New York Post	War on the Rocks
Daily Mail	New York Times	Washington Post
Daily News	New Yorker	Washington Times
Dallas Morning News	Newsmax	Yahoo News

Table 10: The 78 outlets that comprise the “Top Outlets” source, as described in Appendix C.

## D List of Media Outlets

## E Search Criteria and Data Sources

In this section, we describe in greater detail how we identify media references to each topic described in the paper; how we establish plausible upper and lower bounds; and the sources of underlying datasets. To carry out this analysis, we interface with Media Cloud’s open-source application programming interface (API). Media Cloud has extracted and stored the RSS feeds of tens of millions of news outlets. Through its API, Media Cloud allows users to search its entire corpus of saved news media article texts for those containing particular words, phrases, or combinations thereof (Media Cloud, 2011b). Media Cloud allows users to develop tailored search queries by supporting a variety of search functions (including, but not limited to Boolean connectors, which can be used to focus searches in a wide variety of ways including, for instance, articles that contain any or all elements from a set of words or terms).<sup>72</sup>

Using a combination of R and python code to engage with the Media Cloud API, we carry out, and process the results of, thousands of searches for responsive articles—i.e. the set of articles that satisfy a given search query, ultimately storing the counts of the responsive articles (per outlet or collection of outlets per year). For each topic, we carry out two searches. The first search is intentionally broad and maximizes recall (the likelihood of recovering all relevant articles covering a given issue). Specifically, we conduct searches over the entire text of articles for keywords and expressions. For instance, consider the case of identifying articles that refer to landslides in Afghanistan. This first search involves identifying articles that contain references to “Afghanistan” and, separately, any of a set of various terms associated with landslides (e.g. “landslide”, “landslides”, “mudslide”, “mudslides”, “avalanche”, “avalanches”). This approach, however, is also likely to generate false positives (e.g. an article about landslides in another country, which mentions Afghanistan in a separate context), decreasing the precision of the set of articles we identify. Thus, this search serves as our plausible upper bound.

The second search is intentionally limited and maximizes precision (the likelihood of true positives among all responsive articles for a given search). Specifically, we conduct searches over only the titles of articles for keywords and expressions, reasoning that the inclusion of keywords and expressions are highly unlikely to be included in the titles of articles if those articles are not about them. This approach, however, is also likely to miss articles in which topics of interest are discussed—particularly when they are not the sole or primary focus of otherwise qualifying articles (e.g. an article that references flooding in Afghanistan in the broader context of ongoing conflict in that country). Thus, this search serves as our plausible lower bound.

How we define a given topic and construct the associated set of search queries varies. We, therefore, describe

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<sup>72</sup>See: <https://mediacloud.org/support/query-guide>

each in turn throughout the remainder of this section of the appendix. Generally, our search choices are informed by manual reviews of news article texts as necessary.

**Refugees and Asylum Seekers:** Identifying articles referring to refugees and asylum seekers is particularly challenging given the many ways that news outlets might describe forced displacement across international boundaries. We employ several strategies intended to balance between capturing relevant reporting and not generating an unreasonably high volume of false positives. For our partisan analysis, where we are concerned with relative differences, our process is relatively straight forward, and we describe it first. For the interreality analysis, where identifying the actual level of reporting is important, we engage in a more complicated search process, which we describe after.

For the partisan analysis, we begin by subsetting our country list to only those that had substantial refugee stocks or flows in a given year (defined when stocks and flows for a given country-year  $\geq 1000$ ). We then match each country name (and their alternatives) to a comprehensive set of adjectives and demonyms.<sup>73</sup> We also identify cases where refugees are likely to be described with adjectives relating, for instance, to ethnicity (e.g. “Rohingya”), religion (“Yazidi”), or region (e.g. “Darfur”).

Next, we identify all articles in which the words “refugee”, “refugees”, “asylum seeker” or “asylum seekers” are modified by country name (including all alternatives) (e.g. “Iraq refugees”), country adjectives (including all relevant secondary, tertiary, and quaternary adjectives (e.g. “Kyrgyzstani refugees”, “Kyrgyz refugees”, “Kirgiz refugees”, “Kirghiz refugees”)), and alternative adjectives (e.g. “Rohingya refugees”).

For the interreality analysis, we augment the article search, making use of Media Cloud’s proximity search function to identify all articles in which designated sets of words are within some specified (word) distance from one another. Specifically, using the same search terms, we identify all articles in which any of those terms are within a short distance of any of the country names, adjectives, or alternative adjectives described above. For example, this procedure identifies references like the following by Kim (2015): “...who came to Germany from Iraq as a political refugee ...”. The procedure, however, is also prone to generating false positives. For instance, references to refugees *in* a given country would be detected (erroneously identifying refugees by host rather than origin). To overcome this dilemma, we included a separate step identifying references to any of these four terms followed by “from [COUNTRY]” (e.g. “asylum seeker from Venezuela”). We called those more specific/targeted search terms “closed.” For the partisan analysis, we, again, conduct these search over articles and titles separately to generate plausible upper and lower bounds. As described previously, we err on the side of over inclusion in an effort to ensure that we do not undercount media references to a given refugee or asylum seeker population. Nevertheless, such approach may still

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<sup>73</sup>See: [en.wikipedia.org/wiki/List\\_of\\_adjectival\\_and\\_demonymic\\_forms\\_for\\_countries\\_and\\_nations](https://en.wikipedia.org/wiki/List_of_adjectival_and_demonymic_forms_for_countries_and_nations)

miss some content if, for instance, certain article describes individuals fleeing from their country without using the words refugee(s) or asylum seeker(s) at all or in proximity to the country and other identifiers we use.

For the analysis of the refugee cases with high and low media coverage, we employed upper- and lower- bound strategy by using the formula of the query terms below:

- **Refugee (Open):** (“[COUNTRY\*]” AND refugee OR refugees OR “asylum seeker” OR “asylum seekers” OR asylee OR asylees))
- **Refugee (Close E.g.):** (“refugee from Myanmar” OR “refugees from Myanmar” OR “asylee from Myanmar” OR “asylees from Myanmar” OR “asylum seeker from Myanmar” OR “asylum seekers from Myanmar” OR “refugee from Burma” OR “refugees from Burma” OR “asylee from Burma” OR “asylees from Burma” OR “asylum seeker from Burma” OR “asylum seekers from Burma” OR “Burma refugee” OR “Myanmar’s refugee” OR “Burma’s refugee” OR “Burmese refugee” OR “Myanmars refugee” OR “Burma refugees” OR “Myanmar’s refugees” OR “Burma’s refugees” OR “Burmese refugees” OR “Myanmars refugees” OR “Burma asylee” OR “Myanmar’s asylee” OR “Burma’s asylee” OR “Burmese asylee” OR “Myanmars asylee” OR “Burma asylees” OR “Myanmar’s asylees” OR “Burma’s asylees” OR “Burmese asylees” OR “Myanmars asylees” OR “Burma asylum seeker” OR “Myanmar’s asylum seeker” OR “Burma’s asylum seeker” OR “Burmese asylum seeker” OR “Myanmars asylum seeker” OR “Burma asylum seekers” OR “Myanmar’s asylum seekers” OR “Burma’s asylum seekers” OR “Burmese asylum seekers” OR “Myanmars asylum seekers”)

## E.1 Human Rights

**Death Sentences:** For this variable, we attempt to identify all possible mentions to instances in which the death sentenced was being carried. More specifically, we search for, alongside country names, the terms: “sentenced to death”, “death row”, “death penalty”, “death sentence”, “capital punishment”, “electric chair”, and “lethal injection”. We recognize this query may also capture the media reporting on the debate around the death sentence as a policy. Nevertheless, due to the use of this variable in the Interreality Analysis, we prioritized the recall of true positives as to not undercount the references to the death penalty across the world by the media.

## E.2 Global Health

**Communicable Diseases:** We develop our set of diseases based on the availability of usable data, and we found six diseases that were the most feasible to include. For each country-year, we identify the set of articles containing a

country name (or any of its alternative names) and the disease (e.g. “[COUNTRY]” AND “[DISEASE]”) anywhere in the article. The six diseases and their respective search terms are:

- **Diphtheria:** (“[COUNTRY]” AND “Diphtheria”)
- **Ebola:** (“[COUNTRY]” AND “Ebola”)
- **HIV:** (“[COUNTRY]” AND (“HIV” OR “HIV/AIDS” OR “AIDS/HIV”))
- **Malaria:** (“[COUNTRY]” AND “Malaria”)
- **Measles:** (“[COUNTRY]” AND “Measles”)
- **Tuberculosis:** (“[COUNTRY]” AND “Tuberculosis”)

### E.3 Natural Disasters

**Natural Disasters:** To develop a set of article counts referencing particular natural disasters, we use the CRED (2020) dataset to identify specific disaster types: cold waves, heat waves, droughts, earthquakes, floods, landslides, tsunamis, volcanic activity, hurricane and wildfires. We abstain from searching for disaster types with generalized terminology like “natural”, “meteorological”, and “explosion”, which would likely generate false positives. However, we included different sets of terms that relate to each event. The string for each Natural Disaster variable is as follows and are each included along individual country names in search queries:

- **Cold Wave:** (“cold wave\*”, “cold snap”, “cold spell”)
- **Drought:** (“drought\*”)
- **Earthquake** (“earthquake\*”, “seismic activit\*”, “tremor\*”, “quake\*”)
- **Flood:**(“flood\*”, “flooding”, “river overflow\*”, “river overflowed”, “inundation\*”)
- **Hurricane:**(“hurricane\*”, “tornado\*”, “cyclone\*”, “typhoon\*”)
- **Heat Wave:**(“heat wave\*”, “heatwave”)
- **Landslide:**(“landslide\*”, “landslip”, “avalanche\*”, “mudslide\*”, “mudflow”)
- **Tsunami:**(“tsunami”)
- **Volcanic Activity:**(“volcanic activity”, “volcanic eruption”, “active volcano\*”)
- **Wildfire:**(“wildfire\*”, “bushfire\*”, “wildland fire\*”)



## E.4 Skewed Media Cases

As the nature of each skewed media case is substantially different from one another, we created different query terms for each, except for the maritime piracy cases.

- **Iran Protests:** (Iran\* AND (protest\* OR unrest OR upheaval OR revolt\* OR riot\* OR uprising))
- **India's Lockdown on Jammu and KAshmir:** (India\* AND (Jammu OR Kashmir) AND (lockdown\* OR “lock down” OR “locked down” OR “internet restriction” 10 OR “internet restricted” 10 OR “internet censorship” 10 OR “internet censored” 10 OR “internet disruption” 10 OR “internet disrupted” 10 OR “internet shut” 10 OR “internet shutdown” 10 OR “internet blackout” 10 OR “internet suspend” 10 OR “internet suspended” 10 OR curfew\*))
- **Pakistan Flood:** (pakistan\* AND flood\*)
- **Saudi Arabia Corruption Detentions:** Full set of survey questions are as follows:
  - Beginning in August 2019, Indian forces imposed a lockdown of the Jammu and Kashmir region that involved restricting internet access, imposing curfews, and making a series of arrests. Approximately how many month(s) after it started did the Indian lockdown end? Please give your best estimate.
  - Beginning in August 2019, Indian forces imposed a lockdown of the Jammu and Kashmir region that included major restrictions on internet access. Approximately how many month(s) after it started did the Indian lockdown end (based on major internet services being largely restored)? Please give your best estimate.
  - Beginning in August 2019, Indian forces imposed a lockdown of the Jammu and Kashmir region that involved restricting internet access, imposing curfews, and making a series of arrests. Approximately how many month(s) after it started did the Indian lockdown end (based on major internet services being largely restored)? Please give your best estimate.
  - **Query Terms for Saudi Case:** (“saudi arabia” OR saudi OR mohammed) AND (detention OR detain\* OR prison\* OR arrest\* OR jail\* OR corrupt\*) AND (“ritz carlton” OR “ritz-carlton” OR Carlton OR hotel) AND (elite\* OR prince\* OR government OR officials OR politician\*)
- **Ukraine Migration:** (Ukrain\* AND (flee\* OR fled OR escape\* OR refuge\* OR migrant\* OR immigrat\* OR emigrat\* OR asyl\*))

- **Venezuela Migration:** (venezuela\* AND (flee\* OR fled OR escape\* OR refuge\* OR migrant\* OR immigrat\* OR emigrat\* OR asyl\*))
- **Yazidi Genocide:** ((ISIS OR “Islamic State”) AND (yazidi\*) AND (attack\* OR assault\* OR target\* OR surviv\* OR genocide OR violen\* OR massacre\* OR displac\*) AND (move OR moving OR moved OR refuge\* OR migrant\* OR immigrat\* OR emigrat\* OR asyl\* OR settle\* OR resettle\* OR return\* OR “come back” OR “came back” OR “go back” OR “went back” OR “back home” OR integrat\* OR reintegrat\* OR welcom\*))
- **Maritime Piracy Cases:** (“[COUNTRY\*]” AND (sea OR Marine OR maritime OR ship\* OR boat OR water\* OR ocean\*) AND (attack\* OR robber\* OR piracy OR pirate\* OR crime\* OR criminal\*))

## F Interreality Analysis Topics and Data Sources

### F.1 Refugees and Asylum Seeker Outflows

To determine the number of individuals driven from their countries each year, we use yearly dyadic data on refugee and asylum seeker outflows<sup>7475</sup> supplied by the United Nations Refugee Agency (Shaver et al., Conditionally Accepted; Fearon and Shaver, 2020).<sup>76</sup> An alternative measure of the human cost of displacement counts the total population of individuals displaced from a country in a given year (that is, the stock rather than new displacements). Given that individuals forced from their countries often faced prolonged displacement before returning or being permanently resettled in another country (e.g. the plight of millions of Afghan refugees who remain displaced after decades of fighting in their country), as a robustness check, we also compare media reporting on refugee populations against the size of those populations (UNHCR, 2020).

### F.2 Communicable Disease Deaths

Details related to country-level fatality measures for each communicable disease appear in Appendix Table 3 alongside sources and other citations to how the data were collected/generated.

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<sup>74</sup>That is, new yearly displacements. These are distinct from country-year stock figures, which refer to the total number of refugees from a given country (or hosted by a given country) in a given year.

<sup>75</sup>Refugees and asylum seekers are not clearly distinguished from one another in the UNHCR’s data. In some cases, individuals fleeing conflict are classified as refugees. In others, they are listed as asylum-seekers. Thus, we use the aggregate of the two.

<sup>76</sup>Existing research on refugee flows has typically used estimated flows from publicly available stock datasets. As Fearon and Shaver (2020, p. 7) describe, “[t]he global stock of refugees from a country can change year to year not only because of new outflows but also as a result of returns, births, deaths, and changes of citizenship. Changes in stocks are thus an inherently noisy measure of refugee outflows in a year, which is the relevant dependent variable if we want to understand determinants of refugee crises.”

Disease	Years Covered	Countries	Estimated Deaths	Source
Diphtheria	2010-2017	193	27,645	(Global Burden of Disease Collaborative Network, 2018; Vanderslott and Dadonaite, 2019)
HIV/AIDS	2010, '15, '19	121	2,159,660	(World Health Organization, 2021, 2019)
Malaria	2010-2018	83	990,544	(World Health Organization, 2021; World Health Organization; Alonso, 2020)
Measles	2010-2017	193	1,131,348	(Global Burden of Disease Collaborative Network, 2018; Vanderslott and Dadonaite, 2019)
Tuberculosis	2010-2019	189	13,073,911	(World Health Organization, 2021)

Table 11: This table summarizes the five diseases we focus on in this study alongside 1) the years of data included; 2) the number of countries identified as having suffered fatalities from these diseases over each period; 3) estimated recorded deaths during those periods; and 4) the data's sources.

### F.3 Natural Disasters

For data on the numbers of individuals killed or affected by natural disasters by type, we use data compiled by CRED (2020). These data are compiled from various sources including the U.N., governmental and non-governmental agencies, insurance companies, research institutes, and press agencies.<sup>77</sup> This complete dataset includes natural disasters (including geophysical, meteorological, hydrological, climatological, biological and extra-terrestrial) that have occurred in more than 180 countries between 2010 and 2020. We subset these data to include only cold waves, droughts, earthquakes, floods, heat waves, landslides, tsunamis, volcanic activity, and wildfires. These data are summarized in Appendix Table 4.

Natural Disaster	Years Covered	Countries Covered	Estimated Deaths	Estimated Affected
Cold Wave	2010-2020	51	4,384	8,726,601
Drought	2010-2019	81	20,120	671,309,293
Earthquake	2010-2020	54	267,738	35,598,659
Flood	2010-2020	156	55,554	725,099,668
Heat Wave	2010-2019	24	69,531	308,098
Landslide	2010-2020	47	10,760	3,449,666
Tsunami	2010-2018	5	25,310	3,946,238
= Volcanic Activity	2010-2020	18	1,363	4,044,716
Wildfire	2010-2020	32	875	1,094,429

Table 12: This table summarizes the nine natural disasters included in our analysis, alongside 1) the years of data in our study; 2) the number of countries identified as having been affected by these disasters over each period; and 3) the estimated numbers of individuals killed and, separately, affected by each disaster over each period. Data Source: CRED (2020)

<sup>77</sup>Press reports are cited as one source of data on natural disasters, which could theoretically produce some endogeneity between the amount of reporting and number of casualties calculated. However, we note further that CRED (2020) prioritizes non-media-based data sources in its collection efforts, including "UN agencies, governments, and the International Federation of Red Cross and Red Crescent Societies" (see: [emdat.be/frequently-asked-questions](https://emdat.be/frequently-asked-questions)). Thus, we expect that the influence of media reports is limited. Furthermore, the relationship between reporting level on natural disasters and affected individuals is miniscule. Thus, even if some positive bias is introduced, it appears to have no meaningful influence on our results.

## F.4 Death Sentences

Data on death sentences issued by governments around the world come from Amnesty International (2010-2019). The organization collects its data from sources including “official figures; judgments; information from individuals sentenced to death and their families and representatives; reporting by other civil society organizations; and media reports” (Amnesty International, 2010-2019).<sup>78</sup>

## G Interreality Regression Controls

Unless otherwise noted, all variables vary by year. The former consist of each country’s population (Barbieri, 2002); gross domestic product (Mayer and Zignago, 2011); the percentage of the population residing in urban areas (The World Bank, 2019); the number of internet users (as a percentage of the population) (International Telecommunication Union (ITU), 2019a); the number of people with mobile cellular subscriptions (per 100 individuals) (International Telecommunication Union (ITU), 2019b); variables intended to capture security conditions in the country (specifically, coups (Peyton et al., 2021)—in the form of three indicator variables representing one of three outcomes: attempted; conspired; and successful—and conflict incidents (Sundberg and Melander, 2013).<sup>79</sup> regime type (Marshall, 2018); participation in international sporting events (e.g. finalists in the World Cup (Becklas, 2018) and, separately, hosting the winter, special summer, or summer Olympics); international engagement (e.g. the number of forces deployed on and personnel killed during peacekeeping missions (United Nations Peacekeeping, 2020); rotating-membership on the U.N. Security Council (Dreher et al., 2009)); journalist safety (journalists killed and, separately, journalists jailed (Vásquez and McMahon, 2020; Committee to Protect Journalists, 2020)); civil society repression and activity in a country (Vásquez and McMahon, 2020; Pemstein and von Römer, 2020); and homicides (United Nations (UN) Office on Drugs and Crime, 2018). The dyadic variables include: The distance between capital cities (i.e. from Washington D.C. to all other countries’ capitals) (Mayer and Zignago, 2011); whether the country-pair has share a common official language (Mayer and Zignago, 2011); U.S. military deployments to country  $i$  (Salazar and Sofia, 2020); trade flows (World Trade Organization, 2009); regional trade agreement (World Trade Organization, 2009); the number of non-U.S. resident visitor arrivals to the U.S. (International Trade Administration, 2020); and the number of

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<sup>78</sup>Media reports are one of the organization’s sources of information. Given that we are comparing the organization’s information against media reports, this could result in a mechanical correlation between reporting on death sentences and the estimated number of death sentences. We are unconcerned about this possibility for two reasons. First, media reports are being used in conjunction with a variety of alternative sources. Second, should such a correlation exist, it would bias our results away from a finding that the media reporting tends not to reflect underlying occurrence rates. We do not find this to be the case.

<sup>79</sup>Incidents of conflict reported in the GED dataset are typically derived from news reports. We caution against causal interpretations of this variable, given the clear endogeneity.

U.S. residents traveling outbound to overseas countries (National Travel and Tourism Office, 2019).

## H Interreality Regression Results

<i>Dependent variable:</i>										
Responsive Articles On:										
	(I)		(II)		(IIIa)		(IIIb)		(IV)	
	Refugee Outflows		Diseases		Disasters		Disasters		Death Sentences	
<b>Affected/Displaced</b>	0.001 (0.00004)						0.00001 (0.00000)			
<b>Affected/Displaced (ln)</b>	32.959 (3.508)						31.544 (6.408)			
<b>Deaths/Sentences</b>			0.0003 (0.00002)		0.016 (0.003)				0.675 (0.080)	
<b>Deaths/Sentences (ln)</b>					2.130 (0.146)		114.306 (12.153)		44.661 (4.932)	
Observations	1,018	1,018	5,905	5,905	1,048	1,048	1,245	1,245	530	530
R <sup>2</sup>	0.364	0.099	0.223	0.219	0.127	0.173	0.103	0.113	0.152	0.167
Adjusted R <sup>2</sup>	0.358	0.090	0.221	0.217	0.111	0.157	0.089	0.100	0.136	0.151
Year Fixed Effects	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Disease Fixed Effects	–	–	Y	Y	–	–	–	–	–	–
Disaster Fixed Effects	–	–	–	–	Y	Y	Y	Y	–	–

Table 13: This table presents the set of regression results, associating total responsive articles on various issue areas across top U.S. news outlets with the estimated human costs of each. For refugee and asylum seeker outflows and death sentences, the unit of analysis is the country-year. For communicable diseases and natural disasters, the unit is the country-year-disease and country-year-disaster, respectively. All models include year fixed effects. Disease and disaster models include disease and disaster fixed effects as well. Data on responsive article counts come from the authors' calculations using Media Cloud; data on forcible displacement come from the Fearon and Shaver (2020). Data on diseases come from World Health Organization (2021) and Global Burden of Disease Collaborative Network (2018). Data on natural disasters comes from CRED (2020). Finally, data on death sentences comes from Amnesty International (2020)

<i>Dependent variable:</i>										
Responsive Articles On:										
	<b>(I)</b>		<b>(II)</b>		<b>(III)</b>		<b>(IV)</b>		<b>(V)</b>	
	<b>Diphtheria</b>		<b>HIV/AIDS</b>		<b>Malaria</b>		<b>Measles</b>		<b>Tuberculosis</b>	
<b>Fatalities</b>	0.003		0.001		0.0004		0.001		0.0002	
	(0.001)		(0.0002)		(0.001)		(0.0001)		(0.00001)	
<b>Fatalities (ln)</b>		0.306		8.470		3.141		0.984		2.750
		(0.049)		(1.890)		(0.763)		(0.170)		(0.159)
Observations	1,536	1,536	357	357	626	626	1,536	1,536	1,850	1,850
R <sup>2</sup>	0.073	0.080	0.160	0.112	0.074	0.098	0.082	0.075	0.192	0.164
Adjusted R <sup>2</sup>	0.068	0.075	0.153	0.105	0.061	0.085	0.078	0.070	0.188	0.160

Table 14: This table presents the regression results for specific diseases, again associating total responsive articles for each disease across top U.S. news outlets with the estimated fatalities. All models include year fixed effects. Data on responsive article counts come from the authors' calculations using Media Cloud. Data on Diphtheria, HIV/AIDS, Malaria, Measles, and Tuberculosis come from World Health Organization (2021), Global Burden of Disease Collaborative Network (2018), World Health Organization, World Health Organization (2019) and Vanderslott and Dadonaite (2019), respectively.

	Dependent variable:									
	Responsive Articles On:									
	(I) Refugee Outflows		(II) Diseases		(IIIa) Disasters		(IIIb) Disasters		(IV) Death Sentences	
Affected/Displaced	0.0004 (0.00005)						0.00000 (0.00000)			
Affected/Displaced (ln)	6.493 (3.187)						17.154 (9.285)			
Deaths/Sentences			0.0001 (0.00002)		0.017 (0.004)				0.082 (0.069)	
Deaths/Sentences (ln)			2.588 (0.175)		164.128 (20.291)				1.463 (4.489)	
Distance between Capitals	0.016 (0.011)	0.005 (0.013)	-0.017 (0.023)	-0.009 (0.022)	1.938 (2.524)	0.374 (2.430)	0.588 (1.387)	0.344 (1.390)	0.302 (0.153)	0.309 (0.155)
Shared Language	-50.740 (20.670)	-33.258 (24.120)	73.688 (102.015)	29.199 (99.830)	-7,876.077 (11,961.190)	-1,063.162 (11,519.260)	-2,326.706 (6,281.804)	-1,234.577 (6,294.555)	-1,457.618 (754.655)	-1,482.068 (762.698)
Population (rescaled)	-108.247 (253.429)	6.176 (291.572)	517.665 (103.449)	537.743 (101.191)	-16,060.410 (3,766.172)	-15,048.140 (3,626.210)	-15,900.000 (4,023.062)	-15,223.700 (4,006.970)	817.605 (517.150)	859.374 (517.238)
GDP (rescaled)	-0.005 (0.035)	-0.027 (0.040)	-0.020 (0.008)	-0.020 (0.008)	2.455 (0.293)	2.363 (0.282)	2.782 (0.270)	2.728 (0.271)	-0.094 (0.039)	-0.095 (0.039)
Bi-Lateral Trade Flows (rescaled)	0.404 (0.403)	0.438 (0.464)	0.565 (0.211)	0.557 (0.206)	10.646 (9.075)	9.739 (8.740)	1.874 (7.728)	2.669 (7.721)	12.496 (2.257)	12.394 (2.267)
Regional Trade Agreement	0.008 (18.208)	4.004 (21.071)	1.800 (6.749)	1.143 (6.601)	118.671 (352.960)	306.403 (340.676)	-29.252 (315.744)	-14.013 (315.060)	-5.985 (56.502)	-3.908 (56.743)
Urban (pct)	0.399 (1.561)	-1.091 (1.836)	-0.446 (0.641)	-0.279 (0.627)	51.103 (49.021)	24.876 (46.902)	-1.408 (39.890)	-4.983 (39.836)	9.851 (5.271)	10.195 (5.288)
Internet (pct)	0.079 (0.213)	-0.061 (0.245)	-0.052 (0.096)	-0.043 (0.094)	4.123 (7.149)	6.412 (6.867)	8.535 (5.946)	8.291 (5.931)	0.725 (0.698)	0.694 (0.702)
Cell Subscriptions	0.098 (0.094)	0.215 (0.107)	-0.006 (0.041)	-0.0003 (0.040)	-5.815 (2.866)	-4.677 (2.760)	-4.536 (2.438)	-4.647 (2.432)	-0.987 (0.286)	-0.957 (0.286)
Attempted Coup	10.509 (8.823)	20.158 (10.139)	0.196 (4.838)	0.350 (4.732)	-79.363 (736.593)	-102.214 (709.043)	-35.348 (474.733)	-60.074 (473.684)	-3.379 (31.548)	-1.743 (31.678)
Coup (Conspiracy)	-10.342 (10.041)	-15.836 (11.599)	-3.832 (5.427)	-3.578 (5.308)	99.214 (317.138)	87.205 (305.355)	112.628 (273.530)	107.939 (272.851)	-1.448 (38.805)	4.458 (38.563)
Coup (Successful)	-18.010 (8.594)	-5.967 (9.874)	-1.523 (4.649)	-1.354 (4.547)	-46.431 (383.077)	139.236 (369.704)	-11.328 (302.973)	-15.081 (302.195)	44.446 (26.813)	43.232 (26.868)
Peacekeepers Killed	-0.064 (0.589)	-0.139 (0.679)	-0.348 (0.278)	-0.367 (0.272)	-13.565 (16.719)	0.940 (15.184)	17.493 (14.783)	17.333 (14.746)	0.100 (2.221)	0.075 (2.228)
Peacekeeping Forces	-0.002 (0.002)	-0.003 (0.003)	-0.00003 (0.001)	0.00003 (0.001)	0.006 (0.073)	-0.055 (0.070)	-0.044 (0.059)	-0.050 (0.059)	-0.037 (0.008)	-0.039 (0.008)
Journalists Killed	1.559 (1.042)	2.407 (1.197)	-0.716 (0.592)	-0.661 (0.579)	22.355 (28.764)	11.897 (27.724)	6.704 (26.471)	5.625 (26.410)	12.654 (4.360)	11.722 (4.306)
Journalists Jailed	0.177 (0.233)	0.161 (0.269)	-0.138 (0.163)	-0.149 (0.159)	2.946 (9.439)	6.435 (9.097)	3.035 (7.910)	3.387 (7.891)	1.451 (1.716)	2.056 (1.637)
Homicides	0.288 (0.295)	0.238 (0.340)	0.046 (0.174)	0.023 (0.170)	12.059 (14.164)	12.144 (13.638)	6.038 (11.715)	6.053 (11.686)	4.257 (4.549)	3.755 (4.564)
Civil Society	-0.869 (1.527)	-2.030 (1.758)	-0.119 (0.754)	-0.113 (0.737)	28.695 (50.110)	13.318 (48.276)	13.223 (41.296)	10.204 (41.217)	0.766 (5.168)	1.128 (5.173)
UNSC Membership	-1.483 (4.071)	-3.368 (4.688)	-0.340 (1.960)	-0.185 (1.917)	-279.366 (112.220)	-303.324 (107.992)	-225.324 (99.214)	-222.823 (98.967)	30.947 (14.829)	29.277 (14.796)
U.S. Military Deployment	-3.924 (5.474)	-1.735 (6.329)	7.035 (2.827)	6.957 (2.765)	-52.547 (196.588)	-110.442 (189.464)	-45.247 (170.178)	-57.311 (169.880)	22.447 (19.669)	22.093 (19.720)
Conflict Incidents	-0.038 (0.019)	-0.013 (0.022)	0.016 (0.011)	0.016 (0.011)	-0.017 (0.543)	0.049 (0.523)	0.317 (0.507)	0.338 (0.506)	-0.199 (0.071)	-0.174 (0.068)
World Cup Participant	5.321 (16.728)	7.499 (19.260)	-2.560 (4.252)	-2.787 (4.159)	35.205 (263.309)	-20.154 (252.682)	-272.443 (272.083)	-256.366 (271.417)		
Olympics Host	-14.038 (25.521)	-11.621 (29.384)	23.853 (7.212)	23.588 (7.054)	820.692 (765.070)	726.106 (736.909)	1,008.296 (708.753)	1,002.072 (706.941)	62.266 (56.943)	61.600 (57.092)
Democracy-Autocracy	3.553 (0.786)	4.516 (0.903)	-0.442 (0.443)	-0.451 (0.433)	-1.639 (30.767)	4.874 (29.645)	6.403 (26.224)	5.166 (26.167)	0.527 (2.672)	0.599 (2.695)
US Arrivals	79.751 (37.373)	98.811 (45.351)	-74.793 (91.118)	-50.337 (89.140)	6,205.995 (10,786.710)	-160.637 (10,395.260)	2,163.391 (5,650.732)	1,149.237 (5,663.660)	-1,759.504 (750.339)	-1,782.125 (757.079)
U.S. Tourists	-0.768 (7.029)	-1.490 (8.096)	2.057 (3.462)	2.052 (3.386)	164.393 (250.300)	52.044 (240.723)	61.240 (190.259)	59.347 (189.771)	-64.905 (36.342)	-70.021 (36.163)
Observations	534	534	3,908	3,908	679	679	804	804	334	334
R <sup>2</sup>	0.726	0.636	0.281	0.312	0.354	0.401	0.350	0.354	0.905	0.904
Adjusted R <sup>2</sup>	0.651	0.537	0.248	0.281	0.171	0.231	0.199	0.203	0.870	0.869

Table 15: This table presents the original set of regression results (reported in Appendix Table 5), with a series of controls added. Estimated rates of reporting across human costs are largely unchanged. In general, very large changes to the numbers of individuals harmed or killed by the issues we considered are associated with very small changes in the number of articles written by the media referencing those subjects.



## I Interreality Plots

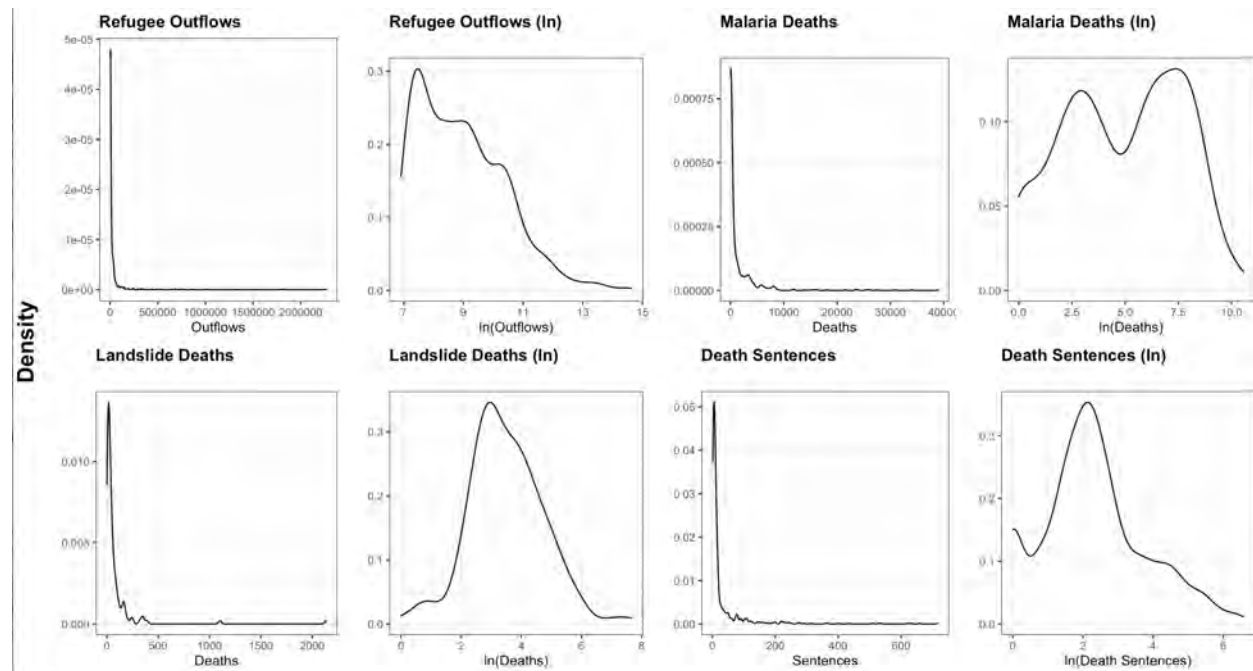


Figure 10: This figure shows the distribution of individuals forcibly displaced, killed (by malaria and, separately, landslides), or sentenced to death in levels and in (natural) logs. These plots show that, in levels, these variables are highly skewed, with small numbers of cases resulting in significantly greater human cost. The distributions are largely normalized when expressed in logs. Data are at the country-year and roughly cover the period from 2010 through 2019. Data from Fearon and Shaver (2020) (refugee and asylum seeker outflows; World Health Organization (malaria fatalities); CREED (2020) (landslide fatalities); and Amnesty International (2020) (death sentences).

## J Reporting By Specialized and Most Consulted Foreign Affairs Outlets

We have shown that actual levels of human harm explain very little of the reporting on those topics related to the harm itself. Does this finding persist if we specifically consider reporting by specialized foreign affairs outlets (e.g. *Foreign Affairs*, *War on the Rocks*) and the major sources of news consulted by foreign affairs professionals? In other words, do the result vary if we restrict our sample to the set of outlets foreign affairs professionals are most likely to consult? As an extension to this project, we replicate results using the following outlets: *Economist*, *Foreign Affairs*, *Foreign Policy*, *Lawfare*, *New York Times*, *USA Today*, *Wall Street Journal*, *War on the Rocks*, and *Washington Post*.<sup>80</sup>

<sup>80</sup> *Foreign Affairs* and *Foreign Policy* are chosen because of their specific international affairs focus and prominence. *War on the Rocks* and *Lawfare* appear on the list given Avey et al. (2020)'s finding that roughly a quarter of surveyed (current or former) policymakers visited these sites. *The Economist*, *New York Times*, *USA Today*, *Wall Street Journal* and *Washington Post* were listed as the top four most influential (non-television) news outlets among either professionals working on defense and national security issues or, separately, on trade/global economic issues (Erdos & Morgan, 2015).

The results of this exercise, which can be found in Appendix Figure 18, indicate that they do not. Revised results using reports from the restricted set of outlets reflect the patterns we report above.

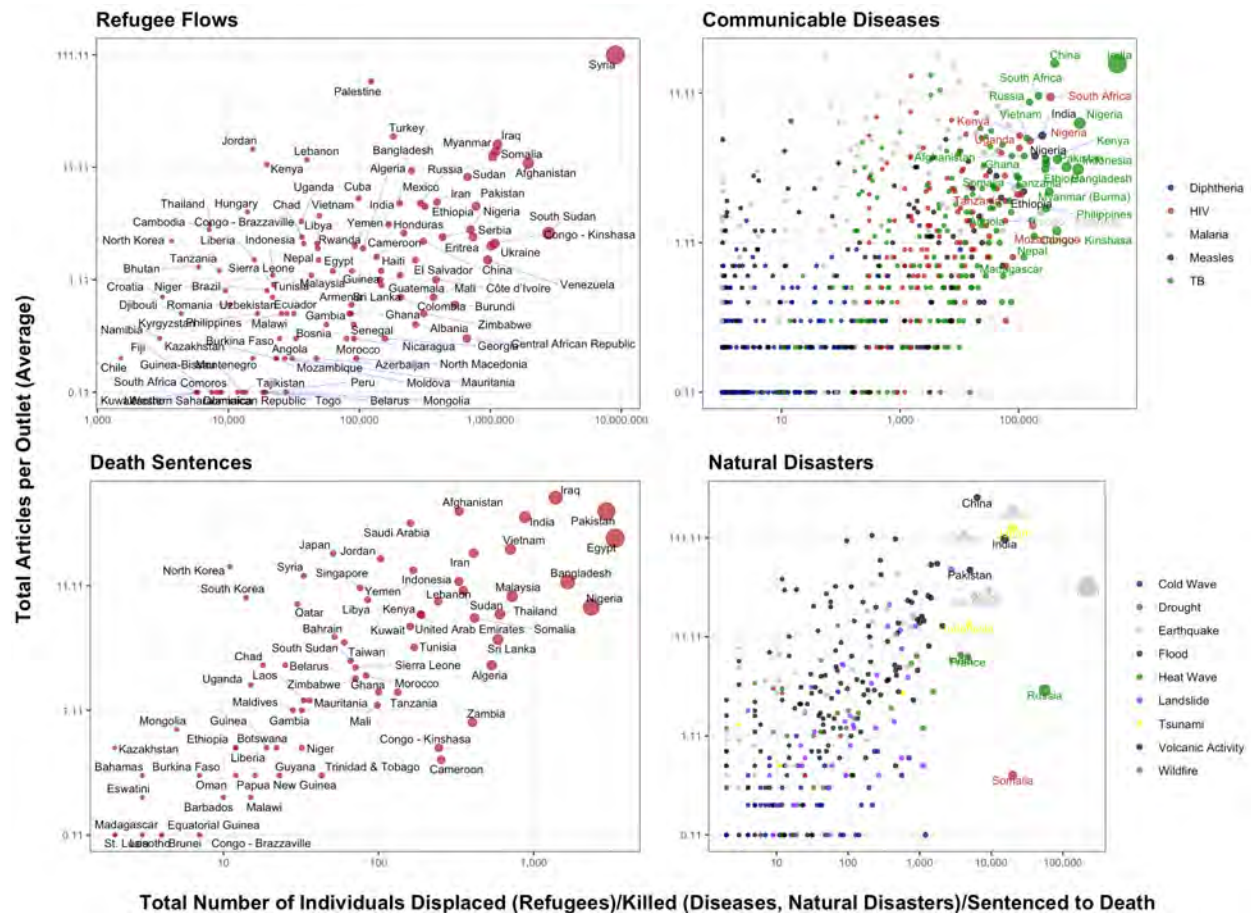


Figure 11: This figure replicates Figure 7, restricting the set of new outlets to the *Economist*, *Foreign Affairs*, *Foreign Policy*, *Lawfare*, *New York Times*, *USA Today*, *Wall Street Journal*, *War on the Rocks*, and *Washington Post*. *Foreign Affairs* and *Foreign Policy* are chosen because of their specific international affairs focus and prominence. *War on the Rocks* and *Lawfare* appear on the list given Avey et al. (2020)’s finding that roughly a quarter of surveyed (current or former) policymakers visited these sites. *The Economist*, *New York Times*, *USA Today*, *Wall Street Journal* and *Washington Post* were listed as the top four most influential (non-television) news outlets among either professionals working on defense and national security issues or, separately, on trade/global economic issues (Erdos & Morgan, 2015). The results of this exercise closely reflect the patterns we report in Figure 7.

## K Correlates of International Affairs Reporting

Our interreality analysis raises basic questions about the set of factors that account for meaningful differences in reporting levels across international affairs topics. Most directly, why do some countries feature more prominently in news reporting than others? Answering this question rigorously is beyond the scope of this project. However, to motivate future research, we carry out one final analysis, generating a set of “correlates of reporting”—that is, showing which variables do (and do not) closely correlate with how frequently a country is referenced by the news media. For this analysis, following Zuckerman (2003)’s early related work, we explore how a wide variety of variables correlate with country-level reporting. Specifically, we regress both yearly article and title-only references to individual countries against the set of country *i*-specific and dyadic variables described above. Given that references are in counts, we carry out this analysis using both OLS and quasi-poisson regression.

Some correlates accord with expectation; others do not. We briefly present several key findings here while cautioning against causal interpretations. Authoritarian governments are much more likely to receive news media attention than other types. Unsurprisingly, political violence (or the threat thereof) also appears to attract coverage: countries in which the U.S. military is engaged in combat operations; experiencing forcible political transitions (measured by the occurrence of a successful coup);<sup>81</sup> and with more recorded incidents of wartime violence receive considerably greater attention.<sup>82</sup>

Somewhat surprisingly, variables that might relate to restrictions on journalists’ operational abilities are not consistently related to decreased reporting. For instance, factors that might allow for greater flows information about newsworthy events or simply minimize operating costs (e.g. internet and cellular telephone availability) do not correlate positively with reporting levels. Similarly, reporting on countries actually increases with measures of direct threats to journalist: the numbers of journalists killed and, separately, jailed.<sup>83</sup> (Though, countries with overall greater homicide rates—potentially a measure safety/ease of operation—do receive less attention than others.) Countries that are further away from the United States and which do not share English as an official language (both of which presumably increase operational costs to American media) are also not less likely to receive coverage. We do note that countries with larger urban populations are much more likely to be covered, which may relate to ease of journalist operations

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<sup>81</sup>Though, country-years with attempted but failed coups receive less reporting.

<sup>82</sup>Though, as noted previously, data on conflict incidents are typically derived from press reports. So, whether the news media reports more on countries experiencing conflict or whether countries that they report on (for some other reason) are more likely to have conflict events reported is an open question.

<sup>83</sup>Though, of course, selection issues might drive such a result. Such result might also reflect a strategic choice by news outlets to intensify reporting on regimes, opposition groups, etc. that threaten their operations.

but also possibly to some other country characteristic related to editorial interest.

In other cases, we either observe no relationship or results are ambiguous. For instance, we observe no relationship between international sporting events (e.g. a country participating as a finalist in the World Cup) and reporting levels. Nor do variables related to countries' global engagement—measured in terms of their serving as rotating members of the United Nations Security Council or sending larger numbers of peacekeeping forces abroad—appear to correlate with how frequently they appear in the news.

Table 16:

	<i>Dependent variable:</i>			
	Article References	Title References	Article References	Title References
	<i>OLS</i> (1)	<i>OLS</i> (2)	<i>Quasipoisson</i> (3)	<i>Quasipoisson</i> (4)
<b>Distance between Capitals</b>	0.150 (0.058)	0.176 (0.075)	0.00003 (0.00001)	0.00004 (0.00001)
<b>Shared Language</b>	-390.324 (308.860)	303.267 (220.878)	-0.195 (0.093)	-0.019 (0.086)
<b>Population</b>	-0.005 (0.002)	-0.003 (0.002)	-0.00000 (0.00000)	-0.00000 (0.00000)
<b>GDP</b>	0.00001 (0.00000)	0.00001 (0.00000)	0.000 (0.000)	0.000 (0.000)
<b>Bi-Lateral Trade Flows</b>	0.0004 (0.0001)	0.0003 (0.0001)	0.00000 (0.000)	0.00000 (0.000)
<b>Regional Trade Agreement</b>	2,322.443 (356.152)	1,610.971 (405.294)	0.273 (0.090)	0.164 (0.082)
<b>Urban (pct)</b>	51.005 (9.162)	43.034 (7.122)	0.013 (0.003)	0.013 (0.002)
<b>Internet (pct)</b>	-14.223 (8.193)	-7.044 (7.165)	-0.002 (0.002)	-0.001 (0.002)
<b>Cell Subscriptions</b>	-16.161 (4.414)	-15.401 (3.935)	-0.003 (0.001)	-0.003 (0.001)
<b>Attempted Coup</b>	-1,247.651 (634.279)	-508.918 (361.102)	-0.834 (0.401)	-0.784 (0.338)
<b>Coup (Conspiracy)</b>	32.989 (1,511.457)	-435.667 (1,203.215)	0.054 (0.397)	-0.200 (0.391)
<b>Coup (Successful)</b>	4,816.517 (2,218.227)	4,129.147 (1,693.262)	0.841 (0.237)	0.893 (0.209)
<b>Peacekeepers Killed</b>	-134.412 (90.149)	-162.167 (74.889)	0.003 (0.020)	-0.008 (0.019)
<b>Peacekeeping Forces</b>	-0.077 (0.115)	-0.112 (0.092)	0.00002 (0.00003)	0.00002 (0.00002)
<b>Journalists Killed</b>	783.165 (318.697)	531.799 (264.252)	0.076 (0.019)	0.063 (0.017)
<b>Journalists Jailed</b>	245.793 (30.053)	202.393 (20.301)	0.020 (0.003)	0.018 (0.003)
<b>Homicides</b>	-46.295 (8.373)	-40.742 (7.117)	-0.019 (0.004)	-0.017 (0.004)
<b>Civil Society</b>	509.222 (129.858)	345.589 (114.649)	0.094 (0.025)	0.071 (0.022)
<b>UNSC Membership</b>	-1.895 (775.034)	-189.656 (599.209)	0.058 (0.093)	0.048 (0.082)
<b>U.S. Military Deployment</b>	2,356.897 (870.665)	2,348.077 (691.479)	0.293 (0.122)	0.339 (0.110)
<b>Conflict Incidents</b>	14.944 (4.984)	13.079 (4.745)	0.002 (0.0003)	0.002 (0.0003)
<b>World Cup Participant</b>	-1,668.472 (1,770.816)	-1,922.200 (1,606.993)	0.105 (0.193)	0.097 (0.170)
<b>Olympics Host</b>	12.259 (3,876.360)	-842.606 (4,322.759)	0.379 (0.241)	0.402 (0.271)
<b>Democracy-Autocracy</b>	-183.416 (43.732)	-129.444 (40.806)	-0.044 (0.010)	-0.038 (0.009)
<b>US Arrivals</b>	-1,002.133 (487.996)	-80.844 (327.816)	0.030 (0.107)	0.099 (0.100)
<b>U.S. Tourists</b>	2,517.923 (504.853)	1,903.417 (490.636)	0.773 (0.099)	0.785 (0.090)
Observations	1,193	1,124	1,193	1,124
R <sup>2</sup>	0.641	0.658		
Adjusted R <sup>2</sup>	0.631	0.647		

## L Historical Path Dependency: The Case of Foreign Bureaus

Patterns of contemporary news reporting may also be affected by historical path dependencies—particularly through historical foreign bureau placement. In this section, we explore whether (and to what extent) the presence of foreign news bureaus predicts additional country-level reporting. Specifically, we identify of foreign bureaus operated by *Agence France-Presse (AFP)*, *Associated Press (AP)*, the *British Broadcasting Corporation (BBC)*, the *New York Times (NYT)*, *Reuters*, and the *Washington Post*. We then generate expected counts of country-level articles as the collective number of foreign bureaus increases, controlling for a variety of factors that we expect to drive foreign affairs reporting. We provide quantitative evidence linking the attention a country receives to the presence of major news media bureaus in that country.

We focus on the effects of these outlets bureau placements not on these outlets' own country-level reporting reporting levels but on reporting levels by the major international news media more broadly. This is because the outlets we have identified are amongst the world's largest news outlets with substantial numbers of journalists deployed overseas. We expect these outlets' respective reporting patterns to influence the broader news media ecosystem for two primary reasons:

First, much of what the major wire services (*AFP*, *AP*, and *Reuters*, in particular) produce is used (either directly or indirectly) by other major news outlets in their own news reports of international affairs. The wire services are the source of much international affairs news, and if their reporting choices are influenced by bureau placement, then we expect that influence to have much broader systemic effects. Second, research finds that the international news reporting choices of major outlets like the *NYT* drive the coverage choices of other outlets (Guo and Vargo, 2017; Golan, 2006).

### L.1 Foreign Bureau Identification

To determine the number of foreign bureaus operated by the *AP*, *AFP*, *BBC*, *NYT*, *Reuters*, and *The Washington Post* in each country, we began with each organization's listing of bureau locations.<sup>84</sup> *BBC* bureau data was obtained directly through a Freedom of Information (FOI) request to which the organization responded (Information Rights, 2022). *The Washington Post* does not produce readily accessible similar data, so we used their foreign correspondent section to search by country (The Washington Post, 2023).

Although we detected the presence of bureaus globally through these approaches, in some cases they provided

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<sup>84</sup>Some organizations list these as office locations, but we considered only buildings directly related to the production of news material for the purposes of this analysis.(Associated Press, 2022; Agence France-Presse, 2022; Reuters; New York Times, 2023b,a)

only a snapshot of bureau placements for a given year. Thus, to construct a panel dataset capturing country-by-country variation across time, the research team engaged in various methods to either confirm the sustained presence of each bureau or identify years of bureau opening or closing (if either occurred during our study period).

The first method involved using a Google tools feature to restrict the dates of publication to a single calendar year. Many bylines include the city name of bureau location, making it straightforward to identify the presence of a bureau in most cases. We first used this process to determine whether a bureau was operational on both the first and last years of our study period (2010 and 2021). If this was the case, assumed continuous operation during the full period. If this was not the case, we carried out additional investigative work to determine the dates of operations during the study period.<sup>85</sup> Alternative identification options included verifying the employment of staff or the announcement of a new editor-in-chief of a bureau, often using the Wayback Machine, a project of the Internet Archive.<sup>86</sup> In cases where journalist access has been historically more limited, more extensive searches determine the number of years bureaus were open.<sup>87</sup>

In the case of foreign correspondents, we found that one journalist could be assigned to cover multiple countries. As such, the presence of such reporting does not indicate a bureau by our definition. Also, AFP historically categorized some bureaus as “secondary bureaus” (Agence France-Presse, 2010). We label this as half a bureau when coding. Additionally, locations that only provide photo and video content are recorded in this manner.

## L.2 Analysis

In the analysis, the number of articles referencing a given country in a specific year serves as our dependent variable. We regress this measure against the number of foreign bureaus in that country in the same year. As contemporary news reporting patterns are influenced by many factors, we include a large vector of control variables likely to impact country-level attention and, therefore, potentially the placement of a foreign bureau, which we list below.

We then generate expected counts of country-level articles as the collective number of foreign bureaus increases using quasi-poisson regression and generating uncertainty estimates with Quasi-Bayesian Monte Carlo simulation.

- **Economy, population and trade.** We believe that in general, a country’s economic development and size of population would have an effect on how much media attention that a country would have received from the U.S.

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<sup>85</sup>The complete set of articles used to determine the existence of operational bureaus in specific years is available upon request.

<sup>86</sup>This project allows the public to view recorded snapshots of previous iterations of websites, allowing the research team to see previous lists of bureau locations or bureau chiefs.

<sup>87</sup>Bureaus that closed sometime during the year were treated as open until the end of the calendar year.

media outlets. Therefore, we include GDP, population and international trade flow data for each country from 2010 to 2019 from Conte et al. (2021).

- **Disasters and emergencies.** We use International Disaster dataset (EM-DAT) (CRED, 2020), which reports disasters that require national or international assistance in a particular country. In a given year, we control for the total number of people affected by disasters within a country since it reflects, to some extent, the intensity of the disaster(s), which is supposed to affect media coverage.
- **Political structure.** We use POLITY II (Gurr, 2006) to capture the political structure and regime change, as we believe that regime type may impact media freedom and therefore, have an effect on media reporting patterns in the country.
- **Elections and leaders.** We use Rulers, Elections and Irregular Governance database (REIGN) for elections and leaders related variables (Bell et al., 2021): 1) if there is an election for the *de facto* leadership position taking place in the country that year; 2) whether *de facto* leader had previously been elected to their respective office; 3) number of month the current leader has been in power during their current tenure period; 4) whether the current leader's primary career and/or source of authority comes from their career in the military, police force or defense ministry.
- **Civil rights and freedom of expression.** We use Human Freedom Index dataset, which provides measures of civil society, as well as freedom of expression, which is most relevant to media reporting patterns. We use *press killed* which captures the journalists murdered in retribution or killed on fatal assignments, as well as *press jailed*, counting the number of journalists imprisoned by the Committee to Protect Journalists (Vásques and Porčnik, 2019). Both indicators measure how dangerous and costly it is for journalists to report freely on a specific country, which leads to different attention level each country receives.
- **Civil war insurgency and coups.** We believe that the civil war insurgency can serve as focal event of a country in a period of time, so use UCDP Georeferenced Event Dataset (GED) for this purpose (Sundberg and Melander, 2013). The GED records the civil war insurgency starting from 1946 till today, with the country where the conflict located, two combatant groups, conflict start and end year (or ongoing if the conflict has not ended by the time of record). We add an indicator variable to denote whether there is an insurgency occurred in the country in a specific year. We use the Coup D'état Events dataset compiled by Center for Systemic Peace for data from 2010 to 2019 (Monty and Donna, 1946-2018), which lists all coups d'état occurring in countries with a population of over 500,000.
- **U.S. military engagement.** We also include the instances where the notable use of U.S. armed forces were involved in a country (Salazar and Sofia, 2020), usually for situations of (potential) "military conflict to protect U.S. citizens or promote U.S. interests" overseas. We expect this instance would have attracted more media attention to this country than it receives in regular years.
- **Presidential visits to other countries.** We believe when U.S. President visit to another country, it would become news that reported a lot by the U.S. media on a specific country, so we include U.S. presidential visits from 2009 to 2021 in our analysis (Office of the Historian).
- **Global focal events.** We include World Cup participant countries (Becklas, 2018) as well as Summer, Winter and Special Olympics host countries (Wikipedia, a,b). World Cup and Olympics as focal global sporting events, are expected to make the hosting countries, as well as countries that play in the final games a hit in the U.S. major media outlets.
- **International migration.** We also include number of people migrated out of the U.S. to their destination country from 2010 to 2019, using International Migration data compiled by United Nations, Department of Economic and Social Affairs (2020). We predict that a country with large number of immigrants from the U.S. would receive more attention from the U.S. media outlets.
- **United Nations Security Council Membership.** We also add whether a country is a member of United Nations Security Council for a country in that specific year to analysis.



In a more comprehensive model, we include factors that may potentially drive bureaus' placement by increasing reporting costs, regarding transportation, personnel, communication, as well as security and safety. Therefore, they may actor as mediators between media bureau placement and reporting patterns. Thus, we do not include them in the first model. However, results are effectively unchanged whether we add these or not.

- **Homicides.** From Vásques and McMahon (2021), we add the index of homicides, which is based on the intentional homicides per 100,000 population within a country per year. It's highly likely media outlets are less likely to set foreign bureaus in countries where they find less secure; meanwhile, the homicide rates can transfer to media attention.
- **Common language.** We also include an indicator variable denoting if the country shares a common language with the U.S. collected in Mayer and Zignago (2011), as it can reduce the communication costs both from the supply side for journalists and demand side of the readers. We expect the a shared language can another factor that influences whether a U.S. media determines to set a foreign bureau in a target country.
- **Distance between capital cities.** We use the geodesic distance between capital cities of the U.S. and another country to measure the distance between two countries calculated by Conte et al. (2021), which may be a factor that captures the feasibility to construct a media bureau in that country.
- **Urban and rural.** From The World Bank, we add share of population residing in urban areas for each country by a year, as the process of urbanization, which can be used by media outlets to determine whether to set a bureau or not in a country.

### L.3 Results

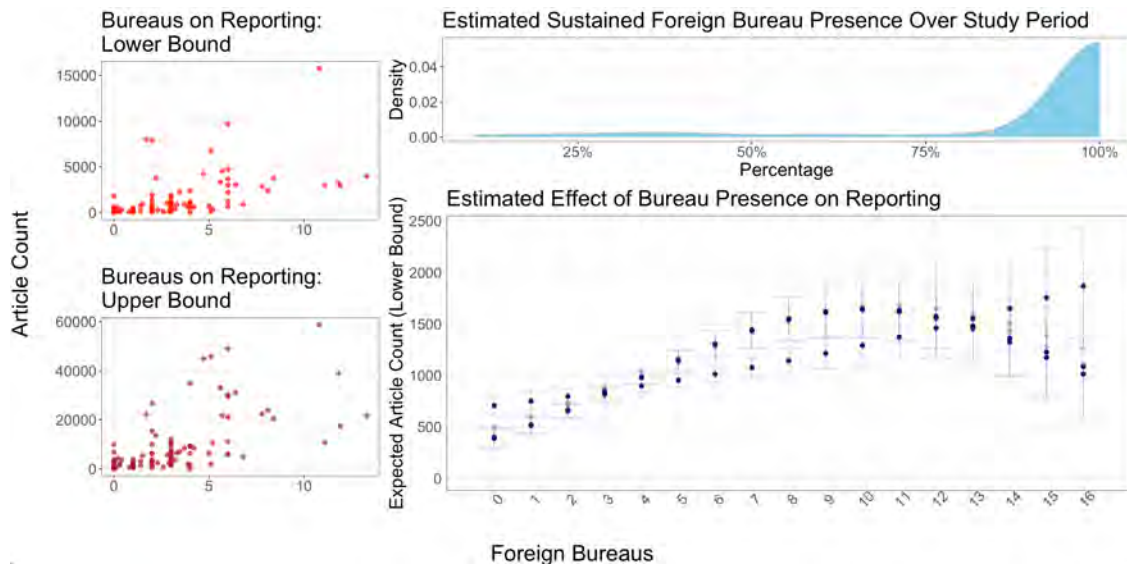


Figure 12: The figure on the upper right displays the distribution of news outlet-country percentage of years during which the outlet's bureau(s) were estimated to have been operational in the country. (See Appendix L for additional details.) In short, consistent with interviewee evidence, we find that foreign bureaus are sticky, opening/closing infrequently. The figures on the left directly associate the number of foreign bureaus belonging to many of the world's largest news agencies with lower and upper bound estimates of country-year reporting. Finally, the figure on the bottom right displays expected annual article counts for a given country as the number of foreign bureaus in that country increases controlling for a variety of potential confounding variables.

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