





How do you solve a problem like Maria? The politics of disaster response in Puerto Rico, Florida and Texas

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Abstract

COVID-19 is not the first, nor the last, public health challenge the US political system has faced. Understanding drivers of governmental responses to public health emergencies is important for policy decision-making, planning, health and social outcomes, and advocacy. We use federal political disaster-aid debates to examine political factors related to variations in outcomes for Puerto Rico, Texas, and Florida after the 2017 hurricane season. Despite the comparable need and unprecedented mortality, Puerto Rico received delayed and substantially less aid. We find bipartisan participation in floor debates over aid to Texas and Florida, but primarily Democrat participation for Puerto Rican aid. Yet, deliberation and participation in the debates were strongly influenced by whether a state or district was at risk of natural disasters. Nearly one-third of all states did not participate in any aid debate. States' local disaster risk levels and political parties' attachments to different racial and ethnic groups may help explain Congressional public health disaster response failures. These lessons are of increasing importance in the face of growing collective action problems around the climate crisis and subsequent emergent threats from natural disasters.

KEYWORDS

disaster response, health policy, health politics, race

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Key points

- Our results suggest that the deaths of thousands of Americans may not be enough to mobilize congressional participation in disaster aid deliberations, and that legislators may be more incentivized to participate in debates if they perceive disaster risk to their districts.
- Where some states have more advocacy for federal disaster aid than others, disparities in disaster aid relief and subsequent outcomes may be exacerbated.
- Institutional barriers may further exacerbate participatory inequality in disaster aid deliberations, such as no voting membership for U.S. territories. Institutional constraints and the strong relationship between disaster risk and legislative participation in aid debates compared to mortality may reduce accountability for federal disaster response failures.

INTRODUCTION

How the United States federal government responds to public health disasters became increasingly salient and important in 2020. While the COVID-19 pandemic is by magnitudes the most devastating and challenging public health crisis since the 1918 influenza pandemic, the United States is not new to responding and managing other types of public health emergencies. Learning from past events may help us understand why the federal government responds effectively or ineffectively to public health emergencies and offer opportunities to improve policymaking to mitigate future failures.

From August to September of 2017, the United States experienced three concurrent, highly destructive hurricanes. Hurricane Harvey made landfall in Texas, Hurricane Irma hit Florida, and Hurricane Maria struck Puerto Rico. In Texas, 69 lives were lost, 88 in Florida (Blake & Zelinsky, 2017; Cangialosi et al., 2018). In Puerto Rico, 2995 people were killed as a result of Hurricane Maria (Audi et al., 2018).

Puerto Rico, despite comparable damage estimates (Blake & Zelinsky, 2017; Pasch et al., 2018; United States Government Accountability Office, 2018) and incomparably worse mortality, received considerably less federal aid in measures of staffing and federal dollars within the first 6 months after landfall compared to Hurricanes Irma in Florida and Harvey in Texas (Willison et al., 2019). The disproportionate federal aid to Puerto Rico is even more troubling given Puerto Rico's fragile infrastructure before the hurricane compared to mainland states, which constrained Puerto Rico's ability to withstand and recover from such a disaster. Puerto Rico's response was further curtailed by the debt crisis the island faced in the years before Hurricane Maria. The government of Puerto Rico, constrained by \$70 billion in debt obligations and the island's status as a territory, not a state, which would not allow it to declare bankruptcy, contributed to reductions in public spending and infrastructure (Peón, 2020). A stronger federal response to Hurricane Maria would have reduced deaths and prevented downstream harm to the Puerto Rican economy, population health, and social outcomes. The absence of a strong federal response increased existing inequities and contributed to substantial new outmigration (Cruz-Cano & Mead, 2019; Michaud & Kates, 2017; Orengo-Aguayo et al., 2019; Smith & Sow, 2019; Willison et al., 2019).

This paper analyzes federal, congressional aid deliberations as measured in congressional floor debates over funding and disaster aid relief for the 2017 hurricanes for 6 months after landfall. Congressional floor debate speeches are a unique method to begin to identify



factors that may have influenced why aid (speed, staffing, and federal dollars) was prioritized for Texas and Florida compared to Puerto Rico. In our paper we examine and identify: (1) how congressional representatives prioritized aid (as measured by frequency and content of speeches over aid, and Congressional members' own *participation* in aid debates) and (2) salient factors illuminated in congressional floor speeches related to aid prioritization. We analyze congressional legislative floor debate speeches as a part of federal disaster response deliberations, to identify political factors associated with the differences between the federal responses to Hurricane Maria in Puerto Rico compared to the hurricanes that struck mainland Texas and Florida.

Political determinants of disaster responses in the United States

There are several reasons why the federal government may have delivered less aid, and at a slower pace, to Puerto Rico compared to Texas and Florida. Paramount to those factors is geography. Puerto Rico is an island, which makes it harder to move aid and personnel. Yet, geography alone does not account for the *3-month* time lag before the numbers of federal responders in Puerto Rico were comparable to the numbers there were in Florida on Day 1 after Hurricane Irma (Willison et al., 2019). Similarly, in 2010, the US federal government moved more personnel to Haiti to respond to the earthquake than went to Puerto Rico in 2017, at a far faster rate, despite a more difficult operational environment in Haiti (Cecchine et al., 2013, XV).

This suggests that politics, not geography, is a likely explanatory factor. Politics have driven and shaped federal responses to disasters (Greer & Singer, 2017; Nachlis, 2018; Oliver & Reeves, 2015; Singer et al., 2020; Sledge & Thomas, 2019). US political decision-making also has a long history of leveraging social services policy as mechanisms to reinforce disparities between groups rather than improve equity (Einstein et al., 2019; Horowitz, 2020; Trounstine, 2019; Weaver, 2007). The effects of differential treatment for racial outgroup members (outgroup identity defined as negatively socially constructed or construed as “different” from the perceived or traditional “majority” or ingroup) (Pettigrew, 1998) is also particularly salient in state-level policy outcomes across a variety of social and health policy spaces (Michener, 2018; Soss et al., 2011).

We primarily think of the Federal Emergency Management Agency (FEMA) when thinking about federal disaster responses in the United States. Yet Congress, the focus of this study, matters a lot in federal disaster responses. Congress determines and closely tracks annual appropriations to the Disaster Relief Fund (DRF), the federal fund that allocates spending to FEMA to utilize in initial responses to major disaster events (Congressional Research Service, 2021). In addition, during active disaster events, Congress acts in an expedited manner to replenish the DRF as needed *and* to expediently deliver supplemental appropriations to affected communities. Supplemental negotiations for disaster events are different from typical congressional debates because bills do not go through complete committee processes (Congressional Research Service, 2021, p. 14). Thus, most of the debate over aid appropriations takes place on the floor of both chambers. In these ways, Congress is not only responsible for the base level of the DRF, but supplemental appropriations act as an important accountability mechanism to deliver essential aid, quickly, when initial responses are insufficient. Further, while bureaucratic agencies (here, FEMA) are intended to be insulated from politics, carrying out duties and promulgating rules according to their expertise, agencies are politically responsive and often reflective of Administrations' political priorities (Huber & Shipan, 2002; Kroll & Moynihan, 2020). This conditional discretion granted to agencies (Huber & Shipan, 2011) may make bureaucracies more cautious of pushing back against congressional appropriations and priorities. In disaster politics, this suggests that Congress may be more illustrative of broader disaster

response preferences and priorities than FEMA. For the 2017 Hurricanes, Congress allocated three supplemental appropriations bills during the first 6 months after landfall, granting 15.25 billion in aid to Harvey and Irma in September, and a 4.9 billion dollar loan to Puerto Rico in October (Willison et al., 2019).

There are two intertwined but analytically separate political explanations to the federal response to Hurricane Maria. One focuses on the explanatory power of racial resentment or racism among the US public and use of racialized rhetoric and actions by President Trump, which has been extensively studied in American political science (Abramowitz & McCoy, 2019; Craig et al., 2018; Grogan et al., 2017; Jardina, 2019; Valentino et al., 2013). A large and growing body of research demonstrates that individual-level identity and attitudinal characteristics, including biases against outgroup members, shape support for public policies targeting marginalized, minority group populations. This literature finds that the past two decades have witnessed an increase in resentment or ethnic antagonism (Bartels, 2020) among White Americans towards people of color due to the perceived “outgroup threat” associated with racial minorities becoming more economically and socially mobile (Cramer, 2016; Jardina, 2019; Valentino et al., 2013). Here, racial resentment, or possibly outgroup threat perceptions against racial or ethnic minority group members (Bartels, 2020), may have directly or indirectly influenced federal debates about hurricane aid and subsequent disaster aid allocations. It is important to note that in positing the likely role of racial resentment or racism in influencing differential federal disaster responses, we are not likely to see outwardly negative racial perceptions of Puerto Rico displayed in disaster response deliberations. Elected officials will alternatively publicly display coded messaging in congressional debates as signals to appease racially resentful White voters while attempting to not violate the norms of racial equality (López, 2013; Mendelberg, 2001). This may take the form of silence or limited acknowledgment of humanitarian needs across types of social policy for ethnic minority groups (López, 2013; Mendelberg, 2001).

Additional empirical research examining intergroup relations demonstrates around 40% of US mainland citizens are unaware that Puerto Ricans are US citizens (Gonzalez-Sobrinó, 2019; Newman et al., 2018). While this does not directly measure racialization, as notions of citizenship and race are separate although inevitably related, this supports notions that Puerto Ricans may be perceived, by mainland Americans, as outgroup members for reasons connected to hierarchies of race, culture, language, and a history of colonial relationship (Duany, 2003).

The other explanation focuses on partisanship and party strategy, with politicians providing benefits to certain voters, either swing voters or their base, in “disaster gerrymandering,” (Platt, 1999; Reeves, 2011; Salkow & Chakraborty, 2009). Disaster gerrymandering is empirically different from traditional definitions of partisan electoral gerrymandering. Instead, disaster gerrymandering argues that disaster politics is *not* driven by the need or likelihood of a jurisdiction being “overwhelmed” by a disaster event but instead by the political factors like partisanship and biased vote-seeking (Salkow & Chakraborty, 2009). Here, US politics incentivizes attention not to a collective good but rather to groups that either are very loyal (and thus key parts of party coalitions) or groups that might defect to another party (and thereby attract political attention). This incentive structure or pattern of participation in distributive politics is well documented, especially in regard to “disaster gerrymandering” by at-risk states, competing with one another with negative consequences for less-well resourced, at-risk states (Maffioli et al., 2017; Platt, 1999; Salkow & Chakraborty, 2009; Stramp, 2013; Sylves & Búzás, 2007).

Puerto Ricans are American citizens, but Puerto Rico lacks congressional representation and political clout. Puerto Rico is one of five US territories. The territories are granted Congressional Delegates—one per each territory, and only in the House—with no voting power on the floor of Congress. Previous scholarship demonstrates that delegate presence on the floor,



as opposed to voting membership, sufficiently obscures territorial interests in broader debates: they have no power and are ignored in congressional deliberations (Brown, 1950; Holtzman, 1986; Lewallen & Sparrow, 2018; Sparrow, 2006). Puerto Rico has been a US colony, without independent political status, or integrated representation and political power in the United States since 1898 (Peón, 2020). As a result of these institutional constraints and colonial status, Puerto Rico faces accessibility barriers to federal disaster aid debates. The lack of electoral incentives for engaging in Puerto Rican concerns by federal, congressional politicians (Lecours & Vézina, 2017) and restricted political protections for Puerto Rico are apparent in the ongoing bankruptcy debates which limits access to financing and governance, as well as representation in financial decisions by the territory. This has continued even as congress ignores six referendums in Puerto Rico supporting statehood for the island (Peón, 2020).

The politics of disaster responses are increasingly important as we face the ongoing COVID-19 pandemic and anthropogenic climate change that increases the likelihood of public health disasters. Previous research has measured how federal policymakers responded to the concurrent hurricanes in 2017. Here, we examine federal policymakers' public deliberations or political decision making that played a role in influencing aid distribution to Texas, Florida, and Puerto Rico after the 2017 hurricanes. Using public congressional deliberations gives insight into broader factors associated with how the federal government, or elected federal representatives, prioritize aid for different places and different disasters. The weight elected officials place on aid to different places and different disaster events matters, as it sets a public value judgment about perceived or implied deservedness for receiving emergency services during public health crises. By contrast, the absence of participatory bias (i.e., congressional members advocating equally for aid across all hurricanes) by congressional representatives in public deliberations over aid to the three hurricane-affected areas would implicate other factors, beyond political decision making, as a cause for the divergent federal responses to the 2017 storms.

METHODS

We conducted a retrospective analysis of political elites' discourse, comparing substantive content for 6 months after landfall for each hurricane. This allows us to examine discourse over time and any changes in political elites' perceptions of the populations affected by the hurricanes. Evaluating discourse during and after the disaster responses gives an indication of the influence of disaster response deliberations (perceptions of at-risk or affected groups and explanations of policymaking choices) may play in shaping or be reflective of decisions informing how the federal government responded to each hurricane.

To understand and identify factors directly or indirectly influencing disaster aid prioritization in disaster aid debates, we analyzed political elites' perceptions as shared publicly in federal congressional floor debates. Speech conducted on the floor of Congress acts as a signal of importance, either to attract attention with constituents, rally support of their colleagues in Congress, or to make electoral gains by highlighting policy successes or failures (Fenno, 1978). Floor debates are also a unique method to illuminate broader political factors that may influence aid distribution as signaled in congressional floor debate speech content and congressional members' *participation* in debates (Weiss & Zoorob, 2021). Congressional floor debates were collected from the publicly available Congressional Record for floor debates in both congressional chambers (House and Senate) (United States Congress, 2020). Search terms included terms specific to each hurricane: "hurricane, location (Texas, Florida, Puerto Rico), hurricane name (Harvey, Irma, Maria)." Although there was some overlap of documents that discuss one or more hurricanes (e.g., disaster relief bill debates), we identified discourse specific to each individual hurricane to parse deliberations over aid to the hurricanes

individually rather than hurricane aid, generally. Instances of overlap between hurricanes were primarily short references or comparisons to prior federal action in response to a disaster.

The research team analyzed over 800 congressional testimonies. In each case, we measured discourse frequency about each hurricane across partisan, geographic (e.g., state; state disaster-risk based on US National Oceanic and Atmospheric Administration [NOAA] categories), and demographic categories (% of the population identifying as Puerto Rican based on US census data (complete methodology in Appendix S1)). Frequencies measuring participation in federal congressional debates were collected from landfall to six months after landfall. The frequencies include counts of substantive content (statement made in reference to or about, regardless of length (one sentence or longer), any of the 2017 hurricanes; does not include mentions as referenced in a list or without substantive context). Bill texts are omitted, and only congressional member deliberations are counted (total *N*). Counts are absolute mentions. In addition to discourse frequency, we conducted content analyses, coding across emergent themes including notions of citizenship and race, and disaster gerrymandering, in congressional deliberations for the three hurricanes from landfall to 6 months post-landfall. NVivo software was used to code the documents and conduct content analysis to identify emergent themes related to aid prioritization in congressional debates. Four coders were used in an iterative process for consensus and reliability. Coders conducted consensus coding on a sample subset before coding the entire sample to improve reliability and reduce measurement error.

RESULTS

There are three primary results from our analysis. First, we found that federal disaster aid debates were largely conducted by politicians representing states and districts at-risk of natural disasters, or in places with constituents with a direct interest in disaster-affected areas (in this case Puerto Rican Americans).

Second, participation in congressional debates over aid for Hurricanes Harvey and Irma was bipartisan, with aid debates marked by both Democratic and Republican members participating at similar frequencies and talking about the disasters in a similar manner. Qualitatively in substance, both Democrats and Republicans made compelling, public statements about the deservedness of Texans and Floridians for receiving federal disaster aid. For representatives from states not affected by the 2017 hurricanes, Congressional members of both parties additionally used their time to advocate for federal aid to their own jurisdiction for other unrelated, past or present disaster needs.

Third, Hurricane Maria was different. Participation in debates and the substantive discourse of those debates varied notably from debates over aid to Texas and Florida, and between political parties. Overall, Republicans participated at least 30% less in debates over aid to Puerto Rico. Qualitatively, in the majority of instances, Republicans did not make public statements about deservedness or need for Puerto Rican Americans compared to their participation in debates for aid to Florida and Texas.

Disaster aid debates were not national

Debates over hurricane aid to affected areas were not nationally representative. Rather, congressional participants in aid deliberations were almost entirely from districts and states that were at-risk of natural disasters. Puerto Rican constituencies were also related to debate participation. When viewed across all three hurricanes, over one-quarter of Congress did not participate in disaster relief debates (see Appendix S1). For congressional members that did participate in debates over disaster relief, about half represented areas

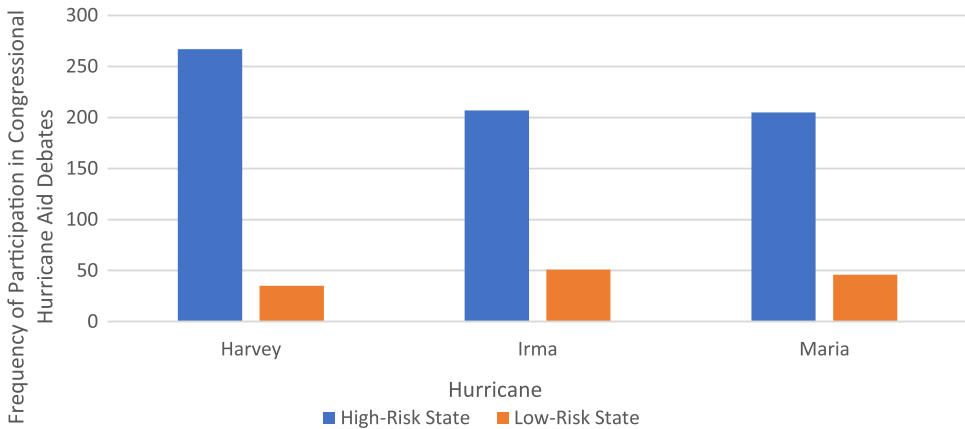


FIGURE 1 Congressional 2017 hurricane aid debate participation by state disaster risk

with high disaster risks and over one-third were states with large Puerto Rican constituencies across each hurricane (see Appendix S1 and Table S1). However, higher-risk disaster areas with higher Puerto Rican constituencies participated more in debates over aid for Maria than high-risk disaster areas with lower Puerto Rican constituencies (see Appendix S1 and Figure 1). When broken down by partisanship, this trend did not hold for Republican states: Republican states with higher-disaster risk and larger Puerto Rican constituencies participated less in debates over aid to Puerto Rico than high-risk disaster areas with lower Puerto Rican constituencies (see Appendix S1 and Figure 2).

Figure 1 shows the participation in congressional aid debates between states deemed at high risk of natural disasters and those with lower risk, according to the US NOAA (NOAA, National Centers for Environmental Information, 2020). NOAA measures risk by spending on disasters as well as disaster frequency. We utilized NOAA data from 1980 to 2019 to identify states with high/low disaster risk. We identified the cutoff for states at low risk of disasters as states with less than or equal to 35 disaster events between 1980 and 2019 that caused at least 1 billion dollars of damage to control for states experiencing increases in major disasters in recent years (California and New Jersey). State disaster risk can be viewed in the NOAA data (NOAA, National Centers for Environmental Information, 2020) and in Appendix S1. The majority of states participating in aid deliberations are located in high-risk disaster areas, with comparably limited representation from low-risk states. This trend holds across deliberations for all three 2017 hurricanes.

Figure 2 shows these divisions by political party. The trend of participation by disaster risk holds across partisan lines, with at least 60% of debates conducted by members in at-risk states. Democrats from lower-risk states participated more frequently than Republicans from low-risk states, though this may be partly due to Democrats from low-risk states with an interest in Puerto Rican affairs due to the presence of sizeable Puerto Rican communities (e.g., Illinois).

Our results demonstrate that the majority of congressional members deliberating over aid to the 2017 hurricanes had incentives related to disaster-risk or constituent interests in their own jurisdiction.

Participation in aid debates were partisan—over Puerto Rico

For our second main result, we find that congressional participation in the debate over the hurricane response was partisan, but only for Hurricane Maria. As shown in Figure 3,

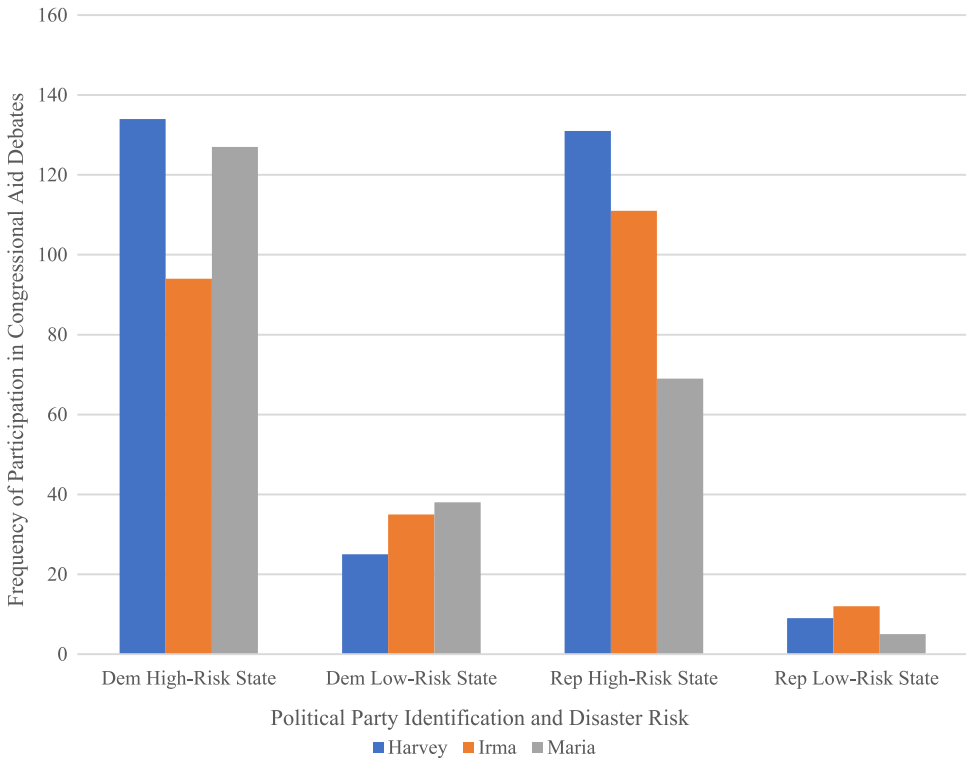


FIGURE 2 Congressional 2017 hurricane aid debate participation by state disaster risk and party ID

Hurricane	Total Mentions	Total Mentions by Republicans	Total Mentions by Democrats
Maria	252	76	166
Irma	259	122	131
Harvey	305	142	160
Total	816	340	457

FIGURE 3 Partisan federal congressional discourse of 2017 hurricanes

findings demonstrate that Democrats and Republicans participated at comparable rates in debates over federal aid to Texas and Florida. Participation by Democrats was slightly higher but comparable to Republican participation despite the fact that Texas and Florida are majority conservative states. More Democratic participation could also be explained by municipal ideologies. Urban areas trend less conservative; both Houston and Tampa, which



were hard-hit by hurricanes in 2017 are both represented by Democrats. The content of statements made in response to Hurricanes Harvey and Irma were also comparable between Democrats and Republicans.

There is a strong partisan disparity in participating in aid deliberations when it came to Puerto Rico and Hurricane Maria. Democrats participated in Puerto Rican aid deliberations at more than twice the rate of Republicans. Democrats and Republicans also spoke about aid to Puerto Rico in very different ways.

Bipartisan assumptions about federal disaster aid distribution in Texas and Florida

Similar to the dynamics in the frequency of participation, the content of aid deliberations diverged between the three hurricanes. Hurricanes Harvey and Irma shared two similarities in the content of speech. First, we find a shared bipartisan logic of federal responsibility for disaster aid relief. This logic was framed in the need for federal action, responsibility, and funding, as well as emphasizing the deservedness of citizens in Texas and Florida affected by the hurricanes to receive federal aid. “Nearly 2 months after the hurricane—the most extreme rain event in US history—many Texans are still waiting for normalcy to return to their debris-littered lawns and their torn-up living rooms, to their daily routines, their workplaces, their children’s schools. The waters may have receded, but their troubles have not... These are just a few of the reasons the situation demands ongoing attention, as well as the full extent of government resources,” Senator Cornyn (R-Texas).

Figure 4 shows the emphasis of discussions about federal responsibility over other levels of government in discourse across all three hurricane aid debates. Figure 4 shows what actor or jurisdiction was identified as responsible (e.g., the federal government), mood (were debates—positive or negative), and expressions of a need to do more.

Second, the majority of participants who were *not* from states affected by the 2017 hurricanes, regardless of party identification and across deliberations for all three hurricanes, were from states at high risk of natural disasters. These members used their platform to simultaneously advocate for present or past disaster aid for their own communities. For example, many members from California and Oregon took the opportunity to advocate for funding for aid to address wildfire damage. “Weeks after Maria made landfall, millions of American citizens in Puerto Rico are still in desperate need of help. Our neighbors to the south suffer with the aftermath of a massive earthquake. Tornadoes are a threat across much of the country. In our part of the world, these wildfires are our natural disasters... I hope my colleagues will support the Wildfire Disaster Funding Act,” Senator Ron Wyden (D—Oregon). The logic of bipartisan congressional action from nonaffected states in deliberations for aid to Hurricanes Harvey and Irma was to advocate for federal disaster aid but conditioned upon their own constituents’ needs.

Divergence did take place, however, across partisan lines in the deliberations over aid to Puerto Rico. Republicans and Democrats both made substantive contributions based on assumptions of federal responsibility to Texas and Florida, while also advocating for their own interests. This was not the case in debates over aid to Puerto Rico.

Partisan differences in advocating for federal aid to Puerto Rico

Democrats in Puerto Rico aid deliberations continued to make strong appeals to the need for federal aid, while also invoking criticism of the Trump administration for their

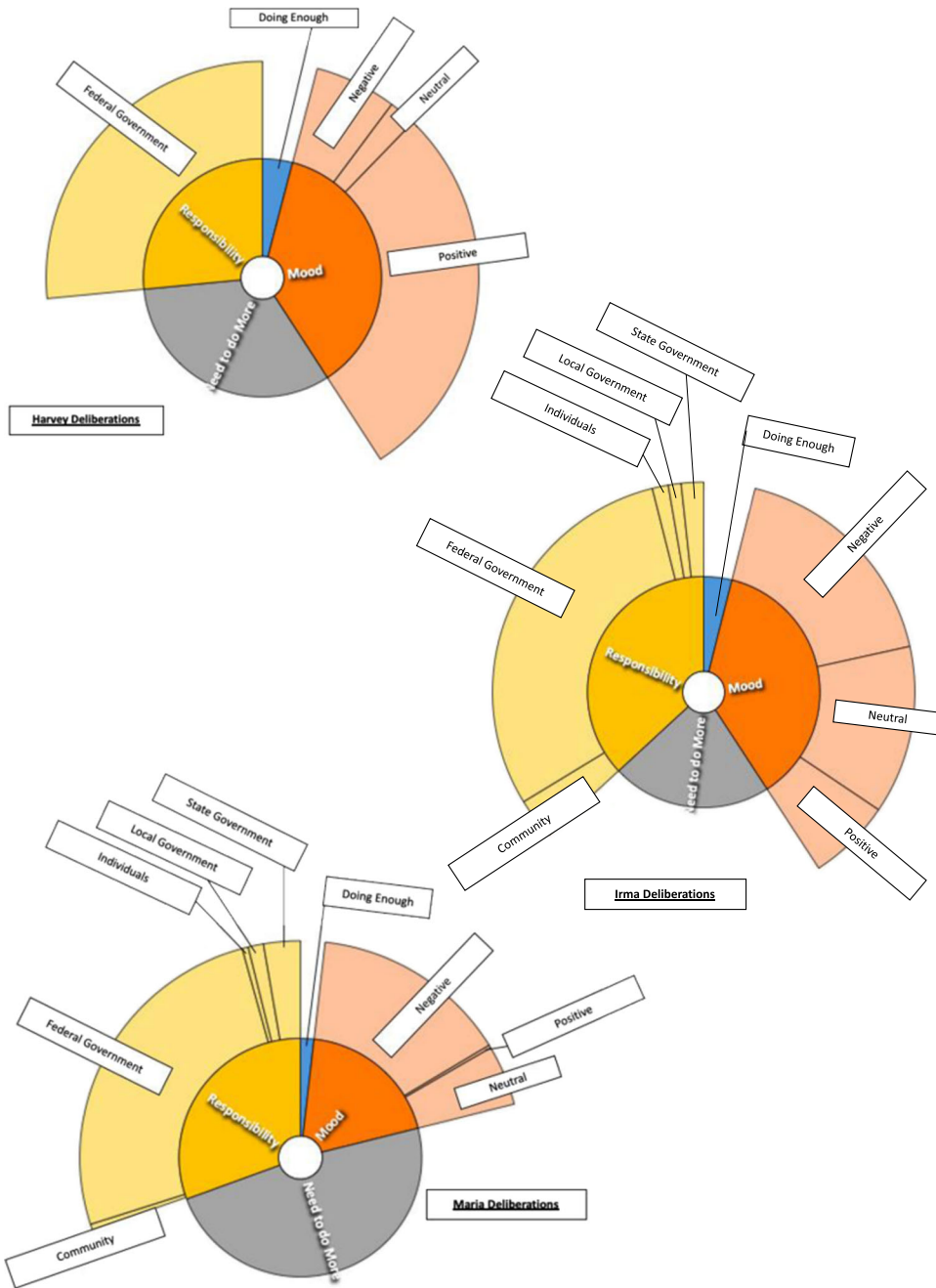


FIGURE 4 Hurricane aid deliberations: Perceptions of responsibility, need for aid, and mood towards response. The figure includes Parent and Child Qualitative Codes. The inner circle is Parent codes or the top-level codes. The outer circles are the Child Codes paired with the corresponding Parent Code. For example, for the code “Responsibility,” “Responsibility” is the Parent Code and levels of government (Federal, State, Local) are child or subcodes. The figure displays the prevalence of these overlapping or co-occurring codes for each hurricane. For example, how often does the code for “Federal government” within “Responsibility” occur in a “Mood” that is coded as “Positive”? Perceptions of responsibility include debate discourse over what structures should be responsible for carrying out hurricane responses; Need for aid includes debate discourse over the sufficiency of the response to date in the debates and whether or not there is a need for more aid; Mood towards the response includes whether or not actors in the debates discuss the hurricane response to date as positive, negative, or neutral



response (see Figure 4). Senator Cory Booker (D-NJ) remarked on this discrepancy in response when he said that “Puerto Rico needs US military, disaster, and humanitarian assistance to maintain order and provide security, water, food, and fuel. Puerto Rico needs additional first responders, and they need generators, emergency vehicles, and fuel. Also, Puerto Rico needs to see that its government—the US Government—will respond the way we have for other disasters. There cannot be a double standard when it comes to Americans... Yet I have read so many heartbreaking stories. This shows the lack of urgency, the lack of being present, the lack of being there when we are needed.”

When it came to Hurricane Maria, Republicans participated over 50% less than *Democrats*, and over 30% less than their own party in debates over Harvey and Irma. When Republicans did participate, they did so briefly, with limited substantive content. An example is Representative Joe Wilson (R-SC)'s: “In conclusion, God bless our troops, and we will never forget September the 11th in the global war on terrorism. Our prayers are with those in Mexico City, Puerto Rico, and all in the path of Hurricane Maria.” Republican speech in response to Hurricane Maria overall echoed familiar “thoughts and prayers” content but lacked substantial narratives for aid. Compared to Texas and Florida, Republicans expressed limited direct statements about the need for federal aid and the deservedness of Puerto Rican Americans. Overall, the qualitative disparities in rhetoric by Congressional Republicans in Hurricane Maria debates compared to Harvey and Irma demonstrate highly partisan support for Puerto Rico disaster aid relief.

DISCUSSION AND CONCLUSIONS

Main findings of this study

We find three main outcomes about how aid debates were prioritized in the 2017 hurricane season. First, congressional debates about hurricane aid to affected areas were not national. Congressional participants in aid deliberations for *all* hurricanes were almost entirely from states that were either at-risk of natural disasters and/or states with large Puerto Rican constituencies (see Appendix S1). Second, congressional participation in the hurricane debates for the mainland states of Texas and Florida was bipartisan, both qualitatively in substance and in the frequency of participation.

The content of Democrats' and Republicans' deliberations over aid to Harvey and Irma are similar. Both congressional Democrats and Republicans shared an assumption of *federal* responsibility for disaster relief and aid. Regardless of party affiliation, we find that congressional members that were unaffected by any of the 2017 hurricanes used debate to advocate for present or past federal disaster aid for their own communities. In addition, in debates over aid to Texas and Florida, both Democrats and Republicans made compelling, public arguments about Texans' and Floridians' need and deservedness of federal disaster aid.

Yet, lastly, debates over aid to Puerto Rico were not bipartisan in either frequency of participation or in qualitative discourse content. Republicans participated over 30% less in disaster aid deliberations for Puerto Rico compared to debates over aid to Texas and Florida. Qualitatively, while Democratic representatives made lengthy statements about the deservedness and need of Puerto Ricans, and rights as American citizens, Republican representatives the majority of the time made comparably short statements that did not address or acknowledge need, deservedness, or citizenship status. This stands in stark comparison to lengthy statements made by Republicans regarding the deservedness and need of Americans in both Texas and Florida.

Main findings of our research in the context of what is already known

The participatory frequencies and the qualitative results together indicate the phenomenon of “disaster gerrymandering” (Maffioli et al., 2017; Platt, 1999; Salkowe & Chakraborty, 2009). Congressional members' participation, and *how* they participate or what they discuss, in disaster aid debates, is related to whether or not the aid deliberations align with electoral interests: their constituent base (who currently or historically experienced natural disasters and require aid) or potential swing voters (e.g., new voters who moved from Puerto Rico to the mainland). The diaspora of Puerto Rico should be considered when analyzing racial resentment and deliberation over aid. Puerto Rican islanders who move to the mainland historically tend to move to more liberal states and urban areas with a greater proportion of Democratic congressional representation, despite the fact that Puerto Ricans living off the mainland trend ideologically conservative (Lecours & Vézina, 2017). Politicians of both parties in states now experiencing high rates of Puerto Rican migration, notably Florida, compete for Puerto Rican votes once they are on the mainland (Gonzalez-Sobrino, 2019; Sutter & Hernandez, 2018).

What this study adds

Our results demonstrate that federal disaster aid debates may be relegated to states at-risk of natural disasters and/or with constituents with direct interest in disaster-affected areas (in this case Puerto Rican Americans) as opposed to a national forum. This localism is paired with partisanship. Compared to the hurricanes on the mainland, Congressional Republicans avoided the topic of Hurricane Maria and overwhelmingly did not make substantive appeals to the needs of constituents in their comments, despite the seemingly apparent mortality and need (Audi et al., 2018; Pasch et al., 2018). Republican constraint in Maria debates is starker when considering they held majorities in the House and Senate in 2017 and a Republican president. While Congressional Republicans' failure to advocate on behalf of Puerto Rican Americans in the frequency of participation and qualitative rhetoric compared to mainland Texas and Florida highlights a deep disparity in partisan logic of disaster aid-appropriations, there is another relevant finding. While failing to broadly participate in aid debates for Puerto Rico, Congressional Republicans by contrast did not publicly utilize racialized rhetoric or publicly display outwardly negative perceptions of Puerto Rican Americans. Here, Congressional Republicans may have been attempting to remain aligned with President Trump while not engaging in outward ethnic antagonism, regardless of potential internally held, not publicly shared perceptions of Puerto Rican Americans. This is consistent with previous research demonstrating that Congressional Republicans face increasing contradictory pressures of not wanting to violate norms of racial equality, while facing electoral incentives to mobilize racially resentful White voters (Mendelberg, 2001), and resolve it with “dog-whistle politics” that purport to be nonracist while actually containing coded racist messages (López, 2013). It might be good news that overt Trumpian racial appeals were seemingly not popular, but the evidence for dog-whistle politics and simple omission of people of color (as policy recipients or intended beneficiaries) from policy debates, Puerto Ricans in this case, is strong.

Limitations of this study

A limitation of our research is that we are constrained in our ability to measure the social construction of racial outgroup members or racial animus in congressional testimonies by



virtue of what is likely to be presented publicly by political elites. However, our findings of the disparity in both debate scope and content related specifically to Puerto Rico when partisan divides did not hold across both Texas and Florida calls such factors into question. Specifically, the notable difference in Republican debate participation for aid to Puerto Rico compared to Texas and Florida, and the comparably limited rhetoric on the deservedness and need of Puerto Rican Americans compared to such arguments for citizens in Texas and Florida illustrates how Republicans, by comparison, did not prioritize aid to Puerto Rico or *neglected* attention to the immense public health crisis and loss of life. Whether driven by partisanship, ethnic antagonism, or the intersection of partisanship and ethnic antagonism (Bartels, 2020; Jardina, 2020), Puerto Rico was treated as an outgroup compared to Texas and Florida in the way Republicans prioritized aid both quantitatively and qualitatively in Congressional aid deliberations. It is notable that mortality rates across the hurricanes are *negatively* related to Republican participation in aid debates—in debate substance and participation frequency. Or put another way, that mortality rates appear irrelevant to Congressional Republican mobilization for public health disasters as reflected in the 2017 hurricanes. Emerging literature on the response to the COVID-19 pandemic demonstrates the persistence of this trend by Republican elected officials to discount loss of life in the public reception of and response to public health emergencies (Singer et al., 2021). New literature on the opioid crisis—a public health emergency that has purported to be bipartisan—also demonstrates limited Republican participation in congressional deliberations over responses to the opioid epidemic, with an emphasis on punitive solutions when they did participate as opposed to evidence-based health policies (Weiss & Zoorob, 2021).

If the federal government cannot mobilize to prevent the deaths of *thousands* of Americans, as in the case of Hurricane Maria in Puerto Rico, and legislators may only be incentivized to participate in debates if they perceive disaster risk to their districts, we should not be surprised if politicians are not held accountable for federal disaster response failures, as we saw in the case of Hurricane Maria. While Puerto Rico faces unique substantive institutional barriers to participation in congressional deliberations, prior research demonstrates that communities of color are less likely to receive sufficient disaster aid (Howell & Elliott, 2019). Thus, the findings of this study may likely extend to low-income states or territories and those with larger populations of racial/ethnic minorities if congressional members perceive risk not to broader constituencies but to “outgroup members” and are, therefore, less likely to advocate for aid, which may be further compounded by partisan divides over aid to such areas (Adolph et al., 2020; Shukla et al., 2019). The logic of localism based on disaster gerrymandering, at least, managed to lead to bipartisan concern for vote-rich states such as Texas and Florida, while partisanship cued silence in frequency and substance by Republicans in legislative discussions of Puerto Rico. Leveraging social movements advocating against entrenched oppression of Black Americans to align with public health aid may further work to mitigate disparities; promote participatory equity in aid deliberations; and hold politicians accountable for failures to protect the health and prevent *widespread deaths* of Americans in public health emergencies (Horowitz, 2020; Nong et al., 2021; Singer et al., 2021).

The effects of resource constraints on disaster aid deliberations, paired with narrow participation by states overall, may be further inhibited by institutional arrangements. Here, Puerto Rico faces the greatest institutional constraints: no congressional voting power. This institutional constraint paired with narrow debate participation and a marginalized population may have exacerbated participatory challenges for Puerto Rico in the Congressional aid deliberations and thus influenced federal aid decision-making. We cannot rewrite the history of an island that is one of the world's longest-standing colonies, but if disaster gerrymandering is as powerful as we find, then according to Puerto Rico greater voting power would likely reduce future barriers to accessibility of requests for disaster aid (Greer et al., 2019; Peón, 2020).

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CONFLICT OF INTERESTS

The authors declare that there are no conflict of interests.

ETHICS STATEMENT

Ethical approval was not required for this study because there were no human participants in the research design.

DATA AVAILABILITY STATEMENT

The data underlying this article are publicly available in the Congressional Record at <https://www.congress.gov/congressional-record>

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SUPPORTING INFORMATION

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