Representation in State Legislative Hearings: A Case Study of Oral Testimony in the Maryland State Legislature[1]

Shanna Pearson-Merkowitz, PhD.
spearson@umd.edu
Kasey Vangelov, Doctoral Candidate,
Sydney Frost, Doctoral Candidate
School of Public Policy, University of Maryland at College Park

Abstract: Open hearings in state legislatures were designed to enhance the public's ability to participate in the legislative process. The goal is to ensure that citizens can do more than just cast votes for candidates for office, with hearings and other open meetings, the public could directly speak to those legislators tasked with reviewing and considering a bill and let them know how it would affect they and why they support or oppose legislation. However, research on political participation and the hearing process has raised questions about the extent to which these hearings deliver on the democratic promise for which they were designed. In this paper, we analyze the body of participants in environmental policy hearings in the 2021 state legislative session for the Maryland General Assembly. The data includes all 194 bills and the public testimony of all public participants in the legislative session environmental policy hearings. We analyzed the testimony for a host of information including the race, gender, and age of the person testifying and if they testified on behalf of an organization such as a business, nonprofit or government agency. We also analyze position taking (e.g. opposition or support for bills) and formal changes offered to bills (e.g. offering a suggested amendment). We find that the population of those who testified was 83 percent white, less than 11 percent Black, and 60 percent male. This is significantly misrepresentative of the general public which is only 57% white and 48.5% male. Moreover 89% of those who testified did so on behalf of an organized interest. The findings raise important questions about the role of hearings in improving the information legislators receive.

[1] This paper was prepared for the 2024 Southern Political Science Association Annual Meeting, New Orleans, LA, January 9-12, 2024. We thank the conference discussants and panelists for their feedback. This research was made possible by the generous support of the School of Public Policy through the Saul L. Stern Civic Engagement Professorship and the Stern Civic Engagement Lab. We thank all the students who helped code the data including: Miranda Baxter, Liora Petter-Lipstein, Diana Goldsmith, Justin Goodwin, Elli Nikolopoulos, Mira Morgan, Isabelle Faith Antonetti, Sam Shei, Nikita Kale, and Ryan Sipple.

Introduction:

"Sunshine laws" were intended to ensure the public could view and participate in the lawmaking process. First adopted in the late 1800s, every state in the country passed their own version by the end of the 1970s. Open meetings were supposed to bring about transparency that would change the behavior of everyone from legislators and journalists to the public themselves. Sunshine laws were also intended to have a broad "influence on the critical functions of American legislatures, including their capacity to make policy and represent citizen interests" (Kirkland and Harden, 2022 pg. 6). For example, the Attorney General of Maryland notes that Maryland's open meetings law's goals are to "increase the public's faith in government, ensure the accountability of government to the public, and enhance the public's ability to participate effectively in our democracy" (Maryland Attorney General, n.d.). But normative questions remain regarding the efficacy of these laws.

Kirkland and Harden (2022) argue that, at least in state legislatures, there is little evidence that open meetings have increased representation or democratic governance. Instead, transparency seems to increase the ability of unrepresentative interest groups to apply pressure on lawmakers while also creating "a public that is somewhat more satisfied with [their government], but less knowledgeable about them" (p. 7). These findings reinforce older literature that found that public hearings benefit regulated industries the most and that individual citizens, particularly those in minority groups, are underrepresented (Checkoway, 1981).

There are important questions about who participates in public hearings that political scientists must address to evaluate the role of open meetings laws in democratic governance. Are those who participate representative of the population? Or does the public hearing choir sing with the upper-class accent that has for so long been associated with formal interest groups (e.g. Schattschneider, 1960)? Even if most of those testifying are doing so on behalf of a formal group, if they generally represent the population as a whole, then interest groups may simply be serving a normative good: overcoming the collective action problem. However, if those who participate in legislative hearings are un or misrepresentative of the public, then open meetings have the power to further bias policy outputs (Schlozman, 2010; Browne, 1990; Halpin and Binderkrantz, 2011).

In this paper, we contribute to the literature by moving beyond survey data and personal reports of high-cost/high-value political participation, and analyses of who is registered as a

lobbyist, to analyzing the makeup of those who actually participate in open hearings. We utilize a case study of the Maryland General Assembly's (MGA) 2021 hearings regarding environmental policy.

We chose environmental policy as our case study because of the history of environmental racism and environmental injustice. Since the United States is racially and economically quite segregated, environmental policies tend to have differing effects on communities. The long history of environmental injustice has been at least in part a product of the loud and powerful voice of suburban white communities and the unpowerful voice of marginalized communities.

Maryland itself also represents an interesting case to study. It has a large, highly educated, middle class Black population[2] that is fairly well represented in the lawmaking process compared to other states and the nation (Nichols & Schak, 2017). A third of the Maryland state assembly identifies as Black, almost identical (although slightly higher) to the population of the state, and 40 percent identify as female, making it the legislature with the largest proportion of Black legislators in the nation and among the most gender balanced legislatures as well (Shwe, 2020; National Conference of State Legislatures [NCSL], 2020). Maryland also has a fairly strong public hearing law and a legislature with a norm of transparency and openness. For example, all bills introduced in a legislative session are guaranteed a hearing, and all hearings are public: anyone can sign up and testify, and all hearings and work sessions are recorded on video and posted publicly (Maryland Attorney General, n.d.; MGA, n.d.). For our analysis, we collected original data utilizing videos of public testimony in the MGA in 2021 on the topic of environmental policy. The Covid-19 pandemic presented an opportunity to researchers to understand and conduct analysis of public participation in legislative forums because during the pandemic, many states conducted their legislative hearings over Zoom. This was both an opportunity for the public and for researchers to access hearings: for the public, online hearings decreased the geographic and time challenges associated with participation; for researchers, since hearings in several states were posted on YouTube, researchers now have a database of public testimony that is perfectly suited for researching public participation.

[2] 30 percent of the Black population of Maryland has a college degree, about 8 percentage points more than the national average. The Black median income for Maryland is $79,868 compared to $48,297 nationally (U.S. Census Bureau, 2020)..

Our data includes an analysis of MGA bills from the 2021 regular session on the topic of environmental policy which includes 194 bills and public testimony by 508 unique participants. We analyzed the testimony for a host of information including the race, gender, and age of the person testifying and if they testified on behalf of an organization such as a business, nonprofit or government agency. We also analyze position taking (e.g. opposition or support for bills) and formal changes offered to bills (e.g. offering a suggested amendment).

Our analysis was pre-registered at the Open Science Foundation. We find that those who testify are very misrepresentative of the general public: 89 percent of those who testified did so on behalf of an organized interest and a quarter were registered lobbyists. Only 10 percent of those who testified did not mention being there on behalf of an organized interest and were also not registered lobbyists. While this could suggest that organized interests are facilitating the general public in overcoming collective action hurdles and accessing policy makers by organizing people to testify or sending their staff to testify on the public's behalf, the make-up of those who participate through organized interests exacerbate racial and gender inequalities. The population of those who testified was 83 percent white, less than 11 percent Black, and 60 percent male. This is significantly misrepresentative of the general public which is only 57% white and 48.5% male.

We also found differences that are important to consider in terms of the content of the testimony. Opposition testimony has been found to be far more powerful in terms of its effectiveness than supporting testimony (McKay, 2012). However, we found that lobbyists were far more likely to oppose legislation than non-lobbyists and white individuals were significantly more likely to oppose legislation compared to black or minority individuals. In fact, in this case study, we found that white testifiers were almost twice as likely to testify in opposition to legislation than nonwhite testifiers. However, this is due to an interaction between race and the type of organization witnesses represented.

Our findings lead to the conclusion that, at least within this case study, public meetings laws fail to meet their normative goals. Since lobbyists and organized interests do not require the public hearing to deliver information to legislators, public hearings appear to exacerbate inequalities in political voice. Instead, the effort put into public hearings in Maryland serves only to lift the voice of the already advantaged and does nothing to increase the public's participation in the lawmaking process.

Environmental Policy and Environmental Justice

Environmental policy is a broad term that covers many topic areas but is important for many facets of everyday life from the costs of necessary utilities to customers, access to open space and its effect on home prices, investments in energy independence and climate change mitigation strategies, and where polluting industries are housed and how they are regulated. However, just like other aspects of society, minoritized communities tend to be disproportionately impacted by environmental policies negatively, which has lasting implications for the health of residents (Bullard & Johnson, 2000; Newell, 2005; Taylor, 2015).

Guha and Martinez-Alier (1998) argue that Western environmentalism has been driven by the urban middle-class, and as a result, environmental policies benefit white males. However, there has been an ongoing grassroots movement to change the way environmental policy and justice is viewed, from government hiring practices to the administration and regulation of policies (Arora-Jonsson & Ågren, 2019; Bullard & Johnson, 2000). Ultimately, grassroots movements have advocated for environmental organizations to adopt equitable and inclusive practices (Arora-Jonsson & Ågren, 2019; Bullard & Johnson, 2000; Taylor, 2015). However, as of 2015, Taylor found that while there had been great changes in the gender makeup of environmental organizations to the point that women outnumbered men in environmental organizations, they were still substantially underrepresented in the top leadership and nonwhite staff were found to be "underrepresented in all ranks of the staff and leadership of environmental organizations (Arora-Jonsson & Ågren, 2019, p. 876)"

Moreover, Fischel argues that suburban and rural environmentalism was actually a convenient way for homeowners to make their neighborhoods more exclusive, drive up housing prices, and ensure racial and class segregation while sounding progressive: "Environmental justification for policies that just happen to increase existing home values is a shield against outside criticism of exclusion and a source of unification among homeowners with otherwise unequal interests in the policies" (Fischel , 2017, p. 21)

Finally, while environmental policy fights that have geographic components (such as the citing of a plant, or regulations that increase the ability to build at the expense of open space) pit neighborhoods against one another, which have consequences for class and racial inequalities, other environmental policies pit individuals and communities against businesses. Businesses,

particularly large utilities remain dominated by white males in the senior leadership. For example, one study found that women make up only about 24% of managerial roles and hold only 16% of board seats in utility companies (Ernst & Hlinka, 2021). The same year the National Association of State Energy Officials (NASEO) reported that white workers were much more likely to hold managerial positions than Black and Hispanic energy workers and that the inequality persisted even after accounting for differences in educational attainment (NASEO, 2021).

In sum, investigating who legislators hear from in the area of environmental policy is particularly important given both the known trends in leadership in both the left and right of the environmental policy space and the history and current "wicked problem" of environmental justice.

Who Participates and Why does it matter?

The question of why some people choose to engage in politics and others do not has long been of interest to researchers. Data availability has meant that the most extensive research has always focused on the most accessible form of political participation: voting (Berelson et al., 1954; Campbell et al., 1954; Lazarsfeld et al., 1944). While voting is well studied, and there are significant challenges to accessing the polls, it is still the political activity that is the easiest form of political participation and most likely to be even across demographic groups (Verba et al., 1995). Other forms, such as volunteering for a candidate, donating money to campaigns and causes, participating in rallies and protests, writing letters to public officials, and testifying in public hearings are much more challenging and require more resources to perform. As a result, "American democracy is marred by deeply ingrained and persistent class-based political inequality" (Schlozman, Verba, and Brady 2013).

According to a 2018 Pew Research Center study, 67% of Americans report engaging in at least one type of political activity within the past five years, 46% of whom have done so in the past year (Pew Research Center, 2018). However, the ways in which citizens choose to engage in the political process can have varying levels of impact on politics: voting is typically a "low-impact" and "low-resource" form of political participation: low resource because voting requires minimal-effort compared to other forms of participation, but the impact is also systemic and not specific. It may contribute to a single member being elected in a large legislature, or contribute to

the change in party holding power, but why people voted for each member or party and how they would like them to behave on specific policy areas is not possible to ascertain from a vote for a candidate. On the other hand, public hearings are considered "high-resource" due to the larger investment efforts by participants, as hearings are not always held at times and places that are convenient and accessible and they require citizens to know about specific bills before the legislative body (Checkoway, 1981; Sinclair, 1977; Verba et al., 1995) but they are "high impact" because the message delivered to policy makers is specific to the bills they are actually currently considering and communicate exactly how constituents feel about the bill and how they believe it will affect them. .

Public hearings and other forms of public comment are a direct way to communicate to elected officials not just broad feelings about policy areas (e.g. pro-choice or anti-choice) but public concerns and support for specific policy proposals that are actually being considered for enactment (e.g. a # week ban on abortion, or a change in how abortion providers are regulated). These hearings allow those who will actually be affected by the policy to weigh in, publicly, with their support, opposition, and their reasoning for doing so. However, there is concern over the effectiveness of citizen participation in public hearings. Do public hearings give the general public a platform to voice their concerns or is it just a formal process that gives the illusion of having a voice? Gephart (1993, 1997) describes the process of public hearings as ceremonial for the public rather than substantive - the general public does not actually have an impact on the outcome and for the individual citizen, their voice does not hold the same weight as those in positions of power. Additionally, Topal (2009) argues that local governments use public hearings as a way to create an illusion of legitimacy rather than true legitimacy. While the literature has found that public hearings benefit regulated industries more than any group, public hearings can be a way to gain public awareness of positions held by active actors (e.g. Chekoway, 1981).

Recent studies have found that participation in public hearings influences legislative efforts (Moreland-Russel et al., 2015). While testimony does not seem to change many votes, it can increase legislator's awareness on an issue and makes them better informed about the different sides of an issue (Moreland-Russel et al., 2015).

One reason that few legislators have their minds changed through testimony may be who testifies. For example, Butler and Nickerson (2011) find that legislators who are given information about what their constituents think about budget policy are very likely to vote in

alignment with the position of their constituents, even if it did not align with their original position. Their findings suggest that "legislators want to be more responsive to public opinion than they are in their natural state and can be if given solid information about constituent beliefs" (55). Additionally, Rosener finds that citizen testimony at public hearings does have an impact on regulatory decisions, particularly when the citizen's stance matches up with the regulatory body's staff recommendations (Rosener, 1982). However, if public testimony is obviously unrepresentative of their district's makeup, this may explain why open meetings fail to change legislator's minds. That said, some issues are easier to infer from one's knowledge of their constituents. For example, Purtle et al (2021) find that mayoral officials care more about health disparities when it is a problem in their community. However, knowing that one's community is highly affected by disease and health risks is easier than understanding what one's constituents would want when there is a tradeoff involved: such as a potential increase in jobs but decrease in environmental welfare. Moreover, McKay argues that negative lobbying – lobbying that takes the opposing stance to the proposed bill/regulation – is much more effective at influencing policy outcomes (and predicting policy outcomes) than positive lobbying (McKay, 2012).[3] Negative lobbying could result in citizen testimonies, especially underrepresented and minority groups, being more influential if they use their limited resources and efforts to show up in opposition of legislative efforts rather than in support. However, often individuals testify, not as individuals representing their personal opinions, but as representatives of organized interest groups – including businesses, trade organizations, and nonprofits. And research has found that when interest groups, particularly those representing the wealthy, have different preferences than the general public, interest groups have the most influence on policy outcomes (Gilens & Page, 2014). Moreover, research reinforces that organized interests do not represent the general population, but rather the elite – along with the racial biases that are endemic to the income distribution in the United States (Gilens & Page, 2014; Schlozman et al 2013).

While witness testimonies can be impactful, witness testimonies are not all weighted equally. When witnesses testify, they are providing legislators with information that can increase or decrease the likelihood that their testimony will have a positive impact on policy (Burstein

[3] McKay uses a large data set collected from lobbyists and her definition of negative lobbying, "the amount of lobbying against a proposal", is specifically referring to lobbyists. However, going forward negative lobbying will be used to mean "arguing in opposition to legislation", whether the person is a lobbyist or not.

and Hirsh, 2007); in particular, information regarding policy effectiveness increases the likelihood that a policy proposal will be enacted (Burstein and Hirsh, 2007). Legislators also pay attention to witness characteristics, such as their credibility or apparent knowledge on the subject, which could favor the testimonies of lobbyists over citizens (Moreland-Russel et al., 2015). However, the weight of an individual's testimony can be strengthened or weakened through unconscious, implicit biases (Harris & Lieberman, 2013). Despite efforts to create a more equitable society, white maleness is still a demographic that holds a strong air of authority and can have drastic impacts within the legislative process (Harris & Lieberman, 2013; Portillo et al., 2022).

Recent research on lobbyists suggests that lobbyists remain overwhelmingly white and male despite a preference (at least on the left) for hiring a more diverse pool of lobbyists (Egerod et al. ND; Strickland and Staffer 2021). The research to date suggests that having a more diverse set of lobbyists has real results for policy outcomes (e.g. LaPira et al 2020: Levine 2009; Lucas and Hyde 2012; Nownes and Freeman 1998) and women and nonwhite lobbyists appear to change the way substantive issues affecting minority groups are presented to legislators and how they are received (e.g. LaPira et al. 2020; Strickland and Stauffer 2022; Strickland & Tarr, 2023). Moreover, the presence of nonwhite and female lobbyists is related to the level of diversity in the legislature. For example, Strickland and Tarr (2022, p. 268) propose that "the election of legislators from populations that are traditionally excluded from elite political networks encourages the mobilization of coethnic or coracial identity groups. We base our expectation on the assumption that interest groups develop alliances with particular legislators and subsidize or inform their work (as in Hall and Deardorff 2006). To ensure credible spokesmanship and prevent shirking, we expect that identity groups hire lobbyists who share the identities of their group members. Finally, while the election of nonwhite people to public office may mobilize coethnic or coracial identity groups, we think that it also encourages all interests in general to hire nonwhite lobbyists." Looking at the makeup of lobbyists in the American states, they find support for their theory: As the number of black legislators rose, so too did the number of affinity groups who hired lobbyists and those lobbyists tended to match the identities of their members.

While lobbyists have known advantages over the general public, the theory proposed by Strickland and Tarr seems reasonable to expand to the general public. Interested groups help overcome collective action problems by helping their members or affected communities know

about what the legislature is considering and how it will affect them. Moreover, organized interests help organize people to testify. If this is the case, in a state like Maryland, with a large female and nonwhite legislative body, we would expect the testifying population to look like the legislature and be more similar to the actual demographic makeup of the state.

However, we doubt this will be the case. Given the research to date reviewed above, we propose that even in the face of significant demographic gains in representation in elected officials, those who testify will look very different than the general population. On the one hand, it is well established that there are simply more interest groups representing the wealthy than historically marginalized or poor populations. As a result, while there may be marginally more affinity groups hiring lobbyists and organizing people to testify, they will be dwarfed by those organized and paid for by elite organizations. As a result, testifiers are likely to be far whiter and more male even with a diverse legislature.

Moreover, we question the efficacy of those who testify. Following (cite on opposition and support), we investigate the extent to which different groups of citizens show up to offer different information: particularly the probability that they deliver opposition or supporting testimony or offer amendments. Given opposition testimony is far more impactful than support, our research question raises questions about the normative good of large mobilization campaigns among nonwhite constituents in support of legislation.

Given our theory, we test four hypotheses:

H1 (Demographic Inequity hypothesis): On environmental legislation, we expect there to be a larger proportion of male, white, and older testifiers.

H2 (Demographic representation hypothesis): In comparison to the general population of Maryland, we expect non-whites and females to be underrepresented.

H3 (Elite theory driven hypothesis): We expect lobbyists to be overrepresented in the witness pool.

H4: We expect those who represent a group (nonprofit representatives, business representatives, government representatives, and representatives of trade associations and unions) to be more likely to testify than non-associated individual citizens.

We offer two exploratory research questions pertaining to the actions of those who testify:

H4 (Implementation-focused hypothesis): Are there differences between who offers amendments? Are those who represent the government or another formal organization more likely than individual citizens or nonprofits to offer amendments?

H5: Are there differences in demographic groups in terms of the probability that they testify to support[oppose] legislation?

Data/Methods:

We gathered our data by analyzing a census of zoom recordings of the 2021 Maryland General Assembly's (MGA) committee hearings on all bills that pertained to environmental policy. Committee sessions were moved online due to the COVID-19 pandemic, and they were made available to the public via YouTube. In addition to MGA data, we employ publicly available data from the Maryland Lobbying Registrations System (MSEC, 2023), and the American Community Survey (U.S. Census Bureau, 2020).

Data Collection

We referenced the Maryland General Assembly (MGA) website to identify all environmental bills. The MGA classifies bills according to subject area; searches on the following subject areas were used to identify legislation: Environmental Matters, Environmental Health, Conservation, Pollution, Natural Resources, Environment Services, Department of Environment, Recycling, Renewable Energy, Solar Energy, Wind Energy, and Wildlife. We identified 232 pieces of environmental legislation using the search feature on the MGA website; witnesses testified at 194 hearings. The 38 bills excluded from our dataset were either withdrawn before the hearing took place or had a hearing in which no witnesses testified. The final dataset contains information on each of the 958 testimonies given by 508 unique witnesses on environmental legislation in the state of Maryland in 2021.

A team of research assistants coded each of the 232 MGA environmental bill hearings for the 2021 regular session. Data collected for each hearing included all pertinent information about the bill and demographic information and the stance of each testifier. The bill number, sponsoring legislator, bill topic, and geographic pertinence (whole state versus locality) were

also coded by the research assistants and then confirmed against information on the Maryland General Assembly Website or through additional resources like Legiscan or Billtrack50. Finally, we collected data on the characteristics of each person who testified for each bill in each hearing. Demographics collected include: age group, race, ethnicity (Hispanic/Non-Hispanic), gender, and organizational affiliation.

While most variables, such as "Bill Number" or "Bill Topic", can be (and were) cross-checked outside of the video recordings for accuracy (e.g., on the MGA website, Legiscan, or BillTrack50), it is not possible to cross-check witness demographic characteristics. In addition to this, our goal was to mimic the legislator's experience of observing witnesses during a hearing. As a result, coders were instructed to use their own judgment when coding witness demographic attributes and intercoder reliability checks were performed. Due to the Zoom format, some witnesses called in to give their testimony and did not appear on video or had their camera turned off; when a coder was not able to determine the witness's age, race, ethnicity, or gender based on the audio, coders were instructed to select "Audio Only".[4] We included the following demographic categories into our data collection:

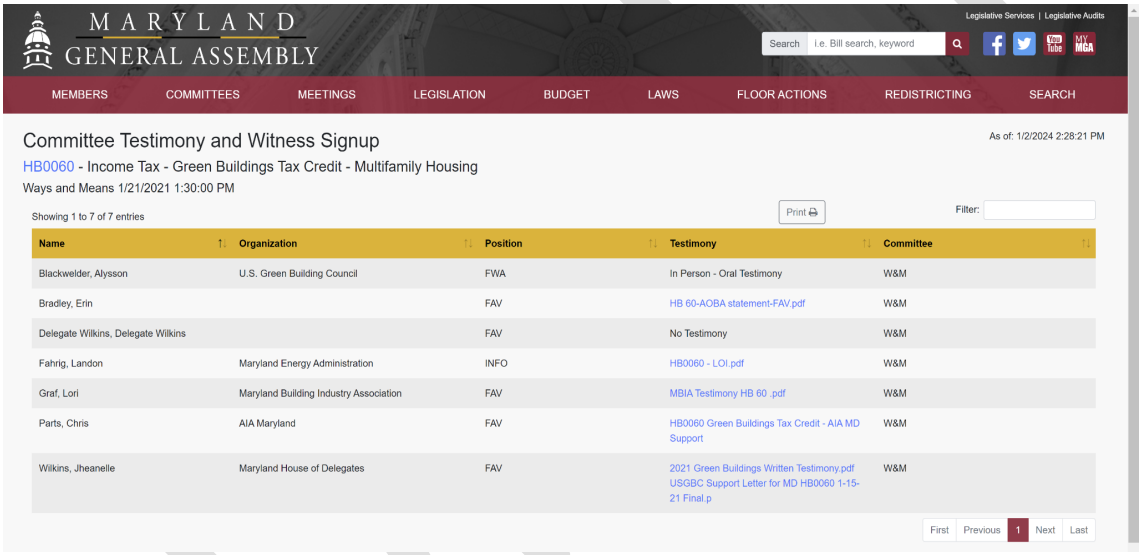
- Age: 18 or younger, 19-29, 30-39, 40-49, 50-59, 60-69, over 70, or Audio Only.
- Race: Black, White, American Indian or Alaska Native, Asian (Far East, Southeast Asia, or the Indian subcontinent including, for example, Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand, and Vietnam), Native Hawaiian or Pacific Islander, Middle Eastern/North African, or Audio Only.
- Ethnicity: Hispanic or Latino, Not Hispanic or Latino, or Audio Only.
- Gender: male, female, non-binary, or other.
- Organizational Affiliation: Yes/No, is the witness representing an organization through testimony?
- Name of Organization: If Yes, witness is representing an organization, fill in the name of the organization.

[4] "Audio Only" was selected for 19 witnesses in the Race category, 5 witnesses in the Gender category, and 55 witnesses in the Ethnicity category. We are currently going back to the audio only videos to increase the reliability of these entries.

- Position on bill: Supports legislation, Opposes legislation, Supports legislation with amendments, Neutral stance on bill (no position/position unclear).
- Offered Amendments: Offered one amendment, offered multiple amendments, offered no amendments.

Based on *Organizational Affiliation* and *Name of Organization*, each witness was assigned to an *Organization Category* after the initial data collection process. Each hearing has a corresponding *witness signup list* on the MGA website. Organization names were captured from witness signup lists. Witnesses who were *not* representing an organization did not have an organization title next to their name on the witness list. An example witness list from the MGA website is captured below:

Figure 1. Maryland General Assembly Website Witness List



After the coding of the testimony was complete, organization names were searched on Google to determine the organization category. Categories are as follows:

- Government Organization Representative: witness testified on behalf of/as a representative of a government organization (national, state, or local). Examples of government organizations include: the Montgomery County Department of Environmental Protection, the Maryland National Parks Commission, and the Office of the Attorney General.

- Nonprofit Representative: witness testified on behalf of/as a representative of a nonprofit organization that is *not* a trade association or union. Examples of nonprofit organizations include: the Sierra Club, Chesapeake Bay Foundation, U.S. Greenbuilding Council, Million Acre Challenge, and Safe Healthy Playing Fields.
- Trade Association/Union Representative: witness testified on behalf of/as a representative of a trade association or a union through their testimony. Examples of trade associations/unions include: the Maryland-Delaware Solid Waste Association, the Professional Animal Workers of Maryland, and the UFCW Local 400.
- Business Representative: Witness testified on behalf of/as a representative of a private business. Examples of private businesses include: Summit Ridge Energy, Bainbridge Development Corporation, and Mom's Organic Markets.
- Non-affiliated Witness: Witness did not mention testifying on behalf of an organized group or business.

We then appended data from the Maryland Lobbying Registration system to our dataset; this system contains the names of all registered lobbyists, the names of all organizations who hire lobbyists, and all lobbyist-related expenditures. This additional data allows us to discern whether a witness was a registered lobbyist. Lobbyist status is assigned and evaluated separately from the organization categories discussed above – a witness can be coded as both a registered lobbyist and a nonprofit representative, for example, because someone may testify in their role at a nonprofit but may not lobby as a part of their job (and therefore be required to register as a lobbyist) or someone can be there on behalf of a nonprofit and be a registered lobbyist.

While the pandemic presented an opportunity for researchers to easily collect data, we cannot verify if the witness pool was different due to the Zoom environment or if legislators or witnesses behaved differently during pre-pandemic, in-person hearings. However, Zoom allows for increased access to testifying because it cuts out the need to drive to the state capital, potentially during the workday, and instead allows people to testify from their home computer or their phone. While acknowledging the differential access to Zoom-capable technology, we still

feel this fact is likely to bias our data away from finding evidence in favor of our hypotheses and therefore is a good test of the hypotheses.

Data reliability

Our data consists of a census of all witnesses who testified on environmental legislation in the Maryland General Assembly during the 2021 legislative session. To check the validity of our data collection procedures, 10.6% of MGA committee hearings were double coded for intercoder reliability. Table 1 presents the intercoder reliability statistics of all data collected as of June 2023, as well as the double coded entries of the data once sectioned by environmental legislation.

Table 1: Intercoder Reliability Statistics

	Full Set of Double Codes *238 double-coded witnesses*				**Environmental Legislation Only** *40 double-coded witnesses*			
	Full Match	**Additional Information Provided by One Coder**	**Fully Different**		**Full Match**	**Additional Information Provided by One Coder**	**Fully Different**	
Witness Representing Organization?	91.18%	0.00%	8.82%		90.00%	0.00%	10.00%	
Witness Organization Name	88.66%	10.50%	0.84%		87.50%	12.50%	0.00%	
Witness Personal Information	92.86%	7.14%	0.00%		90.00%	10.00%	0.00%	
Witness County	83.61%	14.71%	1.68%		90.00%	7.50%	2.50%	
Witness Gender	98.32%	1.26%	0.42%		97.50%	2.50%	0.00%	
Witness Race	95.80%	1.26%	2.94%		97.50%	2.50%	0.00%	
Witness Ethnicity	90.34%	9.24%	0.42%		92.50%	7.50%	0.00%	
	Full Match	**Partial Match**	**Fully Different**		**Full Match**	**Partial Match**	**Fully Different**	
Witness Offered Amendment	92.02%	2.10%	5.88%		90.00%	7.50%	2.50%	
Witness Stance Towards Bill	93.70%	4.62%	1.68%		90.00%	7.50%	2.50%	
	Full Match	**One Age Group Off**	**Two Age Groups Off**	**Three Age Groups Off**	**Full Match**	**One Age Group Off**	**Two Age Groups Off**	**Three Age Groups Off**
Witness Age: 10yr groups	47.48%	39.92%	11.76%	0.84%	52.50%	40.00%	7.50%	0.00%
	Match		**No Match**		**Match**		**No Match**	
Recoded Age: Younger, Mid-Age, Older	78.99%		21.01%		72.50%		27.50%	

Strong intercoder reliability is present in the majority of demographic categories, in particular, on gender, race, and ethnicity. There were instances where one coder provided additional information; for example, the coder may have selected “Hispanic” and written in additional information on the witness, such as that the witness had noted they were Salvadoran. For the purposes of our analysis, each racial and ethnic category was simplified so that each witness was assigned only one broad racial or ethnic group. There was significant coder disagreement on age. Only ~50% of witnesses were assigned the same ten-year age group by coders. However, the majority of coders were only one ten-year age group off. Simplifying “age

group" into three major categories, young, mid-age, and older, improves intercoder reliability by 20 percentage points. As a result, simplified age groups were used for our analysis.[5]

Methods of Analysis

First, we compute descriptive summary statistics on the population of witnesses who testified on environmental legislation in Maryland in 2021. Second, we compare that body of witnesses to the population of Maryland to estimate the level of representativeness in testimony on environmental policy. We employ quantitative methods to determine whether or not the body of witnesses differs significantly from the population of Maryland as a whole. This first portion of our analysis focuses on the demographics of witnesses – in particular: age, race, gender, and ethnicity (Hispanic vs. Non-Hispanic).

Following this, we explore the distribution of witness occupations and affiliations to organizations and if they are registered as a lobbyist. And differences in the nature of public testimony in the areas of offering amendments and position (support/oppose).

Findings:

Race, Gender, and Ethnicity among Hearing Participants

In 2021, 232 bills pertaining to the environment were introduced in the state of Maryland. Within that set of bills, 194 hearings took place that witnesses testified at – this set of 194 hearings makes up our dataset. A total of 958 unique witness testimonies were heard by the Maryland General Assembly during these bill hearings. Many witnesses testified at multiple hearings: our dataset consists of 508 unique witnesses.

Figures 2-5 present the demographic breakdown of all witnesses who testified on environmental legislation in 2021. The majority of witnesses presented as male, white, not Hispanic or Latino, and mid-age (ages 30-59). In addition to this, demographic characteristics are associated with each other, as seen in Tables 2-3. In all racial and ethnic groups other than *Asian*

[5] There was disagreement between coders on the category *representing an organization*, as 10% of coders disagreed in our environmental dataset (this would occur if one coder marked the witness as not representing an organization while the other marked that they were). A witness's organization could be cross-checked on the MGA website, as a witness's organization name is present on the website. In the final paper, all witness organization names will be reassigned using the MGA website rather than coder-collected data.

or Pacific Islander, the majority of witnesses are male. The white and non-Hispanic witness population skews much older as well. Witness demographics of other racial groups – in particular, *Asian or Pacific Islander* – skew much younger; however, the low sample size of nonwhite witnesses reduce the generalizability of this finding. This provides support in favor of our *Demographic Inequity hypothesis*, which predicted that male, white, and older individuals will make up a larger share of the witness pool than women, non-white, and younger populations.

Several initial takeaways are present. Men greatly outnumber women testifiers at a ratio of 1.43 male for every 1 female who testified (Figure 2). While a significant imbalance, this, interestingly, almost completely mirrors the makeup of the Maryland General Assembly's legislative body which is 43% female. Figure 3 also shows that testifiers are overwhelmingly white (82.88%) and only 10.66% of testifiers presented as Black. In this case, there are 4.8 white testifiers for every one non-white person who appeared before the legislature. Unlike gender, on race, the testifying population is far whiter than either the population or the legislature: the Maryland General Assembly is 34% Black and 62% white[6] and the population is 32% Black and 57% white.[7] Ethnicity is also striking but we have the lowest faith in this category as unless the testifier self-identified as Hispanic or Latino, it can be very hard to infer witness ethnicity.

Figure 2. Witness Gender

[6] MGA, 2023
[7] U.S. Census Bureau, n.d.

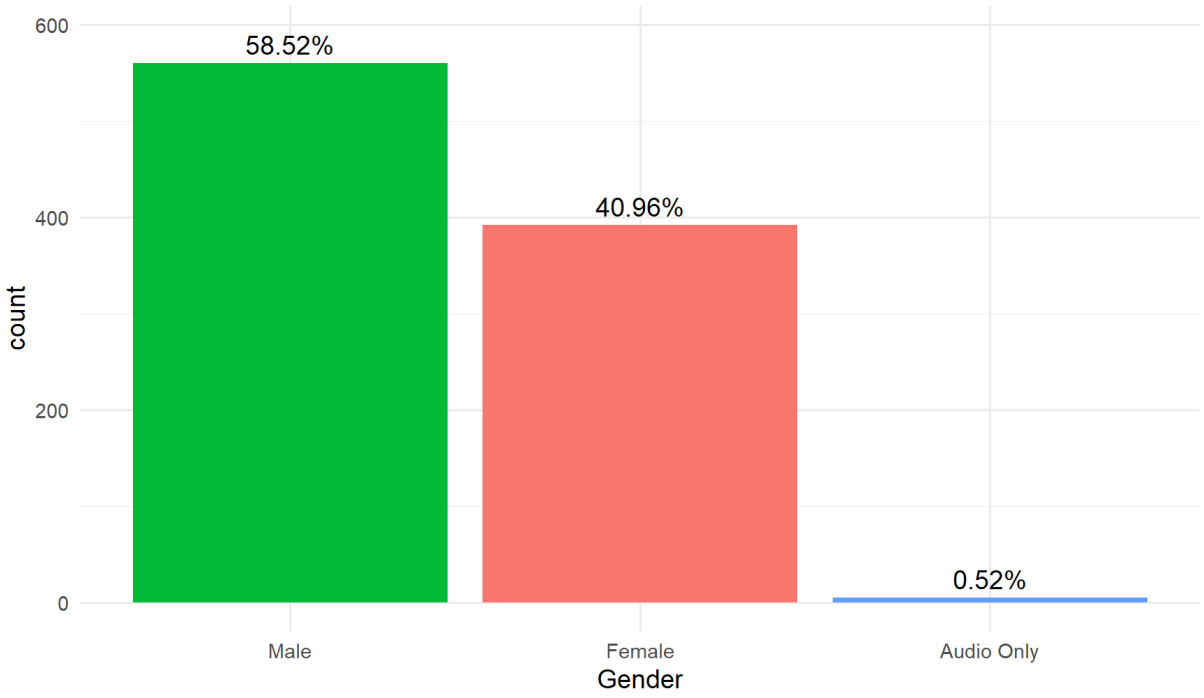


Figure 3. Witness Race

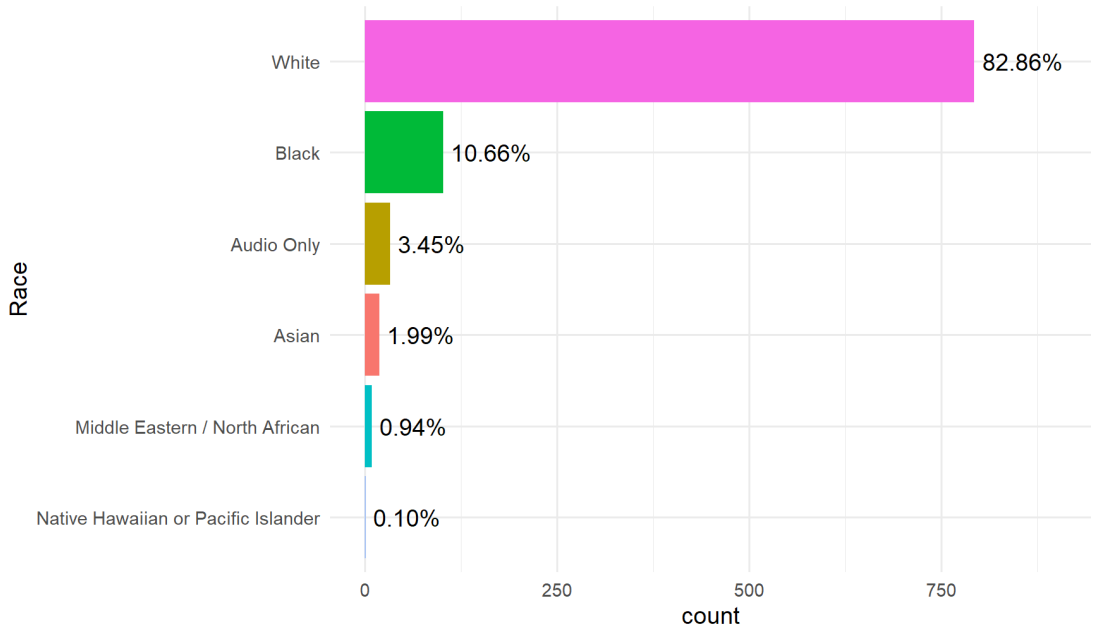


Figure 4. Witness Age Group

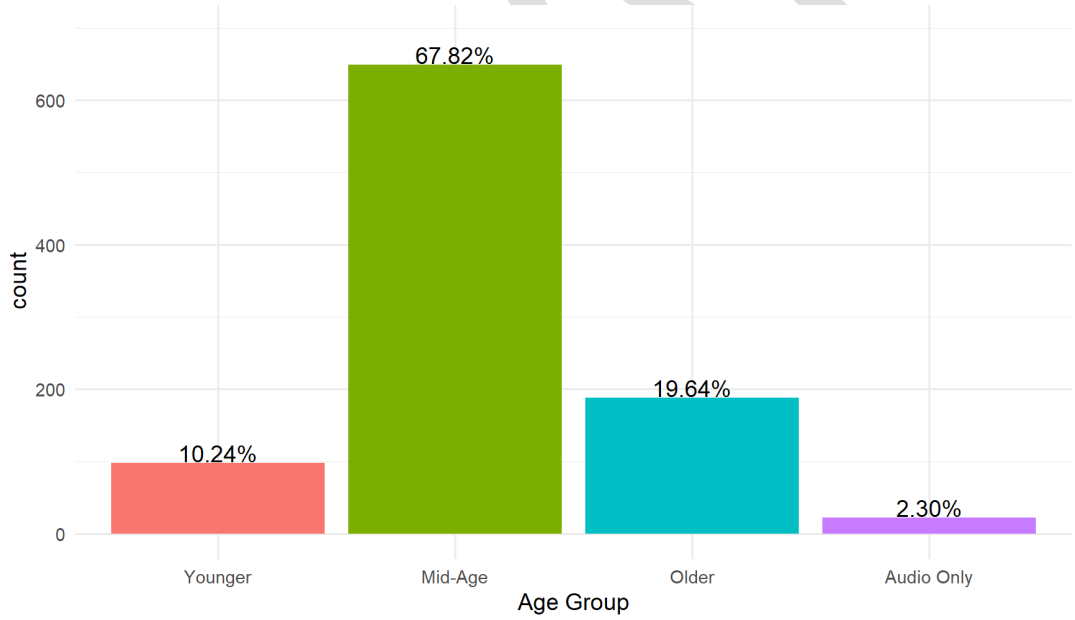
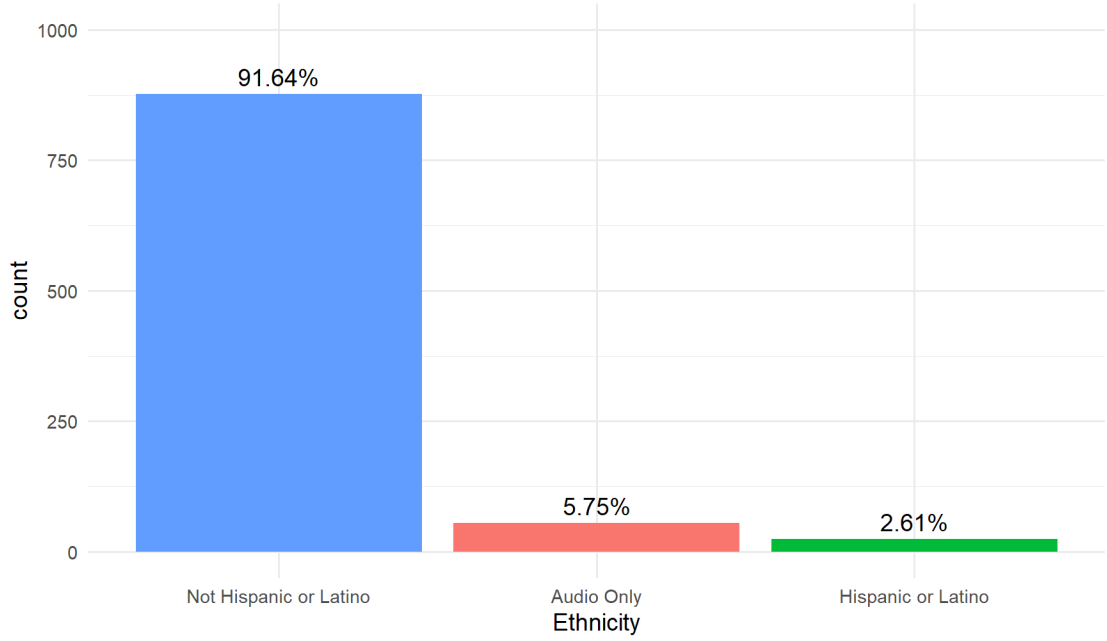


Figure 5. Witness Ethnicity



While we see suggestive evidence in the descriptive statistics that the testifying population is more white, male, and older than one would expect from the population (H1). Our findings support that there are a larger proportion of male, white, and older testifiers. We now turn to a statistical test of H2. To test this hypothesis, we compare the distribution of witness demographics to the population statistics from the Census. To determine whether the proportion of witnesses in each demographic group varied significantly from the proportion of Maryland residents in each demographic group, we used the Pearson's chi-square test of independence. For this test, we calculate our critical value at the a =.05 significance level.

The results of our Chi-squared analysis provide evidence that on gender, race, and ethnicity, the population of witnesses is significantly different than the state of Maryland as a whole. There does appear to be a relationship between one's demographics and their likelihood to testify. Table 2 contains the percentage of witnesses in each demographic group in comparison to the Maryland population. In terms of representation, women, non-white individuals, and Hispanic individuals appear to be underrepresented in the witness pool. This provides evidence for our second hypothesis, the *Demographic Representation hypothesis (H2): In comparison to*

the general population of Maryland, non-whites and females <u>are underrepresented</u> in hearings on environmental policy.

.

Table 2: Witness Demographics Versus Maryland State Demographics

	Witnesses n = 952		Maryland by Gender ACS Voting Age Population n = 4,313,168		% Difference Witnesses - Population	χ^2 df
Gender	n	%	n	%		48.95*** 1
Male	560	58.82%	2,049,376	47.51%	11.31%	
Female	392	41.18%	2,263,792	52.49%	-11.31%	
	Witnesses n = 915		**Maryland Population** Census "One Race" Values n = 5,465,255		**% Difference Witness - Population**	**χ^2 df**
Race	n	%	n	%		274.21*** 3
White	793	86.67%	3,275,048	59.92%	26.74%	
Black	102	11.15%	1,803,128	32.99%	-21.85%	
Asian	19	2.08%	384,429	7.03%	-4.96%	
Native Hawaiian / Pacific Islander	1	0.11%	2,650	0.05%	0.06%	

Significance Codes: *** p < 0.01; ** p < 0.05; * p < 0.1

Note: Maryland Population percentages are calculated using data from the Maryland 2020 Census and the 2020 American Community Survey 5-year tables. Gender data pertains to the voting-age population of Maryland. Race data pertains to the entire Maryland population.

When running Chi-sqared analyses, witnesses categorized into groups that do not align with Maryland population categories (e.g., witnesses with unknown demographics, the Middle Eastern/North African race category) were dropped from the dataset. "Percent of witnesses" was recalculated on the truncated dataset so that the percentages sum to 100%.

While the descriptive makeup of the population who testifies is critical, we are also interested in the extent to which legislative hearings serve as a mechanism to allow the public to express their voice on specific bills or if they simply serve to elevate the voices of organized interest. To investigate this, we collected information on the organizations witnesses are representing through testimony. Figure 6 contains the breakdown of witnesses by organization type – witnesses who are *not* representing an organization through testimony are sorted into the *non-affiliated witness* category. The sizable majority (89%) of witnesses say they are testifying on behalf of an organized group; a plurality of which are representing a 501c3 or c4 “nonprofit” organization; these individuals make up 41.75% of the witness pool. The second largest group are witnesses who are representing a trade association or labor union; this group makes up 24.22% of the witness pool. The remaining two organized interest groups – business

representatives and government representatives – each make up approximately 11% of the witness pool.

In addition to the type of organization witnesses represent, we collected data on whether or not a witness is a registered lobbyist; witness names were cross-checked with the Maryland Lobbying Registration System to determine whether or not a witness is also a registered lobbyist. Table 3 contains a cross-tabulation of witness organization type and registered lobbyist status. It appears a lobbyist is more likely to testify on behalf of a nonprofit, trade association, or union; few registered lobbyists testified on behalf of a government organization in 2021. These results provide partial support for our *Elite Theory hypothesis*. Non-affiliated witnesses make up the smallest percentage of witnesses at 11.06%; however, going against our predictions, government representatives are not far ahead, making up only 11.27% of the witness pool.

Given these groups may serve as means to overcome collective action problems, Table 3 includes an analysis of the racial and gender breakdown within organization types. There is a difference between the types of organizations witnesses are associated with. Approximately 45% of nonwhite witnesses testify on behalf of a nonprofit organization; this is somewhat larger than the share of white witnesses associated with nonprofit organizations (40.61% of white witnesses). In addition to this, nonwhite witnesses are much more likely to be a non-affiliated witness in comparison to white witnesses (almost 2 times as likely: 22% of those who testified with no affiliation to a group were not white, the largest percent across all categories), and nonwhite witnesses are half as likely to represent a trade association or union as white witnesses are (26.48% of white witnesses, 12.98% of nonwhite witnesses). This suggests that witnesses of different races are mobilized to testify by different organizations and/or issues.

Similar differences appear when looking at organization type by gender; female witnesses are almost *twice* as likely to represent a nonprofit organization than male witnesses are (56.89% of female witnesses represent a nonprofit, while only 31.25% of male witnesses do). Likewise, in comparison to female witnesses, male witnesses are more likely to represent a trade association or union, more than *twice* as likely to represent a government organization, and over *three times* as likely to represent a private business through testimony.

The next version of this analysis will include a recategorization of organizational types to split out public interest/mass interest groups from elite groups (e.g. Gilens and Page 2014).

Schlozman et al., in the *2001 Washington Representatives Study*, categorized organizations by the interests they represent. The most common categories of organized interests, as specified by Schlozman, Verba, and Brady in *The Unheavenly Chorus*, are: corporations, trade and other business associations, occupational associations, unions, education, health, social welfare or poor, public interest, identity groups, state and local governments, and foreign. We expect the coding scheme employed in the *Washington Representatives Study* to add additional information to our existing organization categories of private business, trade association/union, government organization, and nonprofit organization. We will assign one or more of these eleven categories to each organization based on the organization's mission statement. Additionally, we will assign one or more subcategories when applicable, using the *Washington Representatives Study* as a model.

If this analysis shows that mass interest groups are more gender/racially balanced than elite groups, it would suggest that in the area of environmental policy, community groups are serving to help overcome collective action problems and are improving their outreach to minoritized communities, however, further analysis is required to determine if it is environmental nonprofits driving nonwhite participation or if it is affinity or community groups associated with non-white communities driving this finding. However, if we find no evidence that community interest groups are more representative than traditionally elite groups, it will raise further questions about the role of hearings in exacerbating biased interest group voices. Regardless, this finding alone raises questions about how legislators process the information they receive in hearings. If legislators give equal weight to different groups (e.g. business views+nonprofit views+government views+citizen views=decision to support), then overrepresentation in one area may dilute the influence of different groups of citizens, particularly when they are unequally represented to begin with.

Figure 6. Organizational Representation of Testifiers

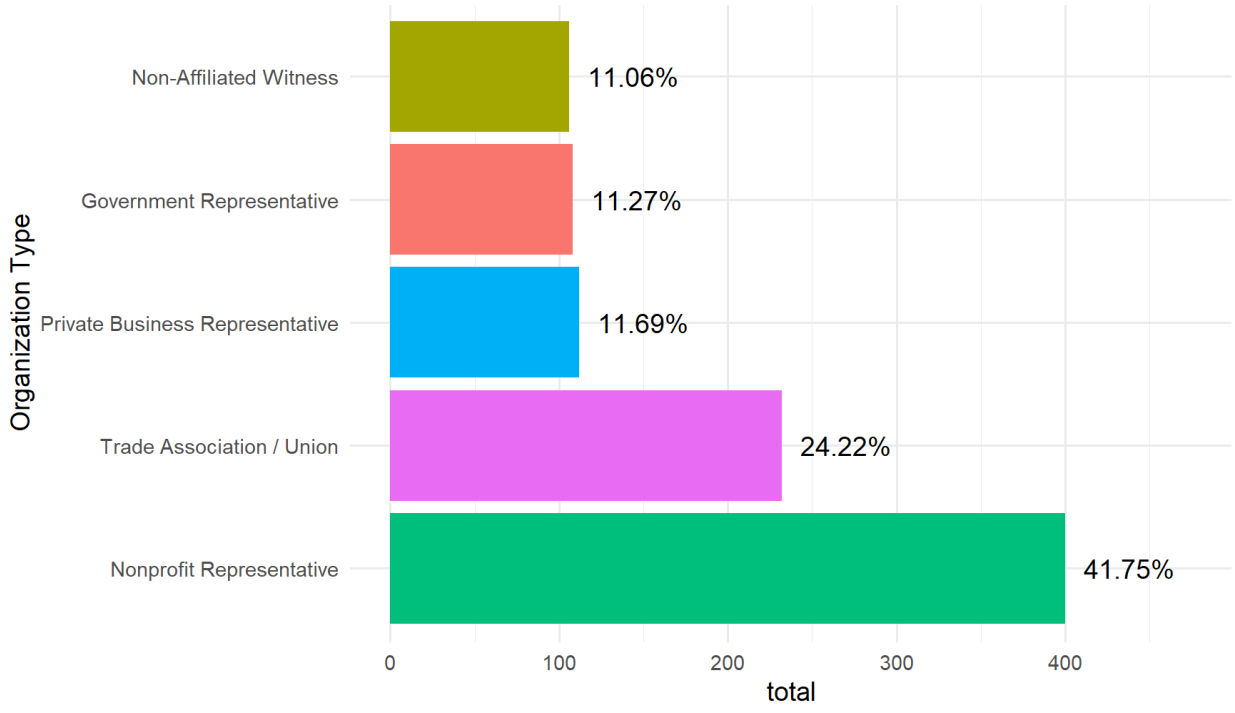

Organization Type
Non-Affiliated Witness
Government Representative
Private Business Representative
Trade Association / Union
Nonprofit Representative
11.06%
11.27%
11.69%
24.22%
41.75%
0
100
200
300
400
total

Table 3: Descriptive Statistics: Witness Organization Category by Race and Gender

Organization Category	Total n = 958		White n = 793		Nonwhite n = 131		Male n = 560		Female n = 392	
	n	% Total	n	% White Total	n	% Nonwhite Total	n	% Male Total	n	% Female Total
Nonprofit Representative	400	41.75%	322	40.61%	59	45.04%	175	31.25%	223	56.89%
	n	% Category Total	n	% Category White	n	% Category Nonwhite	n	% Category Male	n	% Category Female
Registered lobbyist	70	17.50%	61	18.94%	7	11.86%	31	17.71%	39	17.49%
Not a registered lobbyist	330	82.50%	261	81.06%	52	88.14%	144	82.29%	184	82.51%
	n	% Total	n	% White Total	n	% Nonwhite Total	n	% Male Total	n	% Female Total
Trade Association/Union Representative	232	24.22%	210	26.48%	17	12.98%	151	26.96%	79	20.15%
	n	% Category Total	n	% Category White	n	% Category Nonwhite	n	% Category Male	n	% Category Female
Registered lobbyist	80	34.48%	74	35.24%	5	29.41%	42	27.81%	38	48.10%
Not a registered lobbyist	152	65.52%	136	64.76%	12	70.59%	109	72.19%	41	51.90%
	n	% Total	n	% White Total	n	% Nonwhite Total	n	% Male Total	n	% Female Total
Private Business Representative	112	11.69%	90	11.35%	18	13.74%	90	16.07%	21	5.36%
	n	% Category Total	n	% Category White	n	% Category Nonwhite	n	% Category Male	n	% Category Female
Registered lobbyist	27	24.11%	23	25.56%	3	16.67%	22	24.44%	5	23.81%
Not a registered lobbyist	85	75.89%	67	74.44%	15	83.33%	68	75.56%	16	76.19%
	n	% Total	n	% White Total	n	% Nonwhite Total	n	% Male Total	n	% Female Total
Government Representative	108	11.27%	94	11.85%	13	9.92%	83	14.82%	25	6.38%
	n	% Category Total	n	% Category White	n	% Category Nonwhite	n	% Category Male	n	% Category Female
Registered lobbyist	2	1.85%	2	2.13%	0	0.00%	1	1.20%	1	4.00%
Not a registered lobbyist	106	98.15%	92	97.87%	13	100.00%	82	98.80%	24	96.00%
	n	% Total	n	% White Total	n	% Nonwhite Total	n	% Male Total	n	% Female Total
Non-Affiliated Witness	106	11.06%	77	9.71%	24	18.32%	61	10.89%	44	11.22%
	n	% Category Total	n	% Category White	n	% Category Nonwhite	n	% Category Male	n	% Category Female
Registered lobbyist	10	9.43%	10	12.99%	0	0.00%	5	8.20%	5	11.36%
Not a registered lobbyist	96	90.57%	67	87.01%	24	100.00%	56	91.80%	39	88.64%

Note: Witnesses who's race or gender were coded as "Audio Only" were omitted from this table.

In addition to this, witness demographics vary by registered lobbyist status. Note, a witness may still perform lobbying under their job title without being a registered lobbyist or as a citizen organized by the organization. Male witnesses make up a larger share of witnesses in both the registered lobbyist and non-registered lobbyist category; however, a larger share of female witnesses are registered lobbyists (22.45% of female witnesses in comparison to 18.04% of male witnesses). The opposite holds for white and nonwhite witnesses. The vast majority of witnesses are white, but among the nonwhite group, witnesses are less likely to be registered lobbyists than white witnesses (21.44% of white witnesses are registered lobbyists, while only 11.45% of nonwhite witnesses are registered lobbyists). These findings hold interesting implications for the

equality of demographic representation given lobbyists have great resource and network advantages (Hirsch et al., 2023; Levine, 2008).

Table 4: Descriptive Statistics: Registered Lobbyist Status by Race and Gender

Lobbyist Status	Registered Lobbyists n = 189		Non-registered lobbyists n = 769	
	n	% demographic group	n	% demographic group
Gender				
Male	101	18.04%	459	81.96%
Female	88	22.45%	304	77.55%
Race				
White	170	21.44%	623	78.56%
Nonwhite	15	11.45%	116	88.55%

Note: Witnesses who's race or gender were coded as "Audio Only" or "Unknown" were omitted from this table.

In addition to looking at *who testifies*, we also collected data on witness behavior. We are interested in how a witness's occupation or demographic characteristics influence *how* they testify. We recorded whether or not a witness offered an amendment to a piece of legislation, as well as the position they took on the bill (in support of the piece of legislation or in opposition). Table 5 contains a cross tabulation of whether a witness offered an amendment by demographic category. The data suggest that women were slightly *less* likely than men to offer an amendment. Likewise, nonwhite witnesses were slightly *less* likely to offer an amendment than white participants – however, this difference is by fewer than one percentage point. While these differences are marginal, they provide further evidence that a witness's demographic group may impact *how* they testify.

Table 5: Descriptive Statistics: Witness Offered Amendment by Demographic Category

	Offered Amendment n = 90		No Amendment Offered n = 867	
Demographic Category	n	% within each demographic category	n	% within each demographic category
Gender				
Male	61	10.89%	499	89.11%
Female	29	7.40%	363	92.60%
Race				
White	78	9.84%	715	90.16%
Nonwhite	12	9.23%	118	90.77%

Note: Witnesses who's race or gender were coded as "Audio Only" or "Unknown" were omitted from this table.

Table 6 contains a cross tabulation of the witness's position on the bill (for or against) and the witness's demographic category (race or gender). Male witnesses opposed legislation at a slightly higher rate than women. On the other hand, the race of witnesses appears to be strongly related to position. A white witness was almost twice as likely to take the opposing stance than a nonwhite witness. This provides strong evidence that witnesses of different demographic groups participate in different ways.

Table 6: Descriptive Statistics: Witness Position on Bill by Demographic Category

	Opposed Legislation n = 178		Supported Legislation n = 773	
Demographic Category	n	% Opposed	n	% Supported
Gender				
Male	104	18.77%	450	81.23%
Female	72	18.37%	320	81.63%
Race				
White	159	20.18%	629	79.82%
Nonwhite	14	10.77%	116	89.23%

Note: Witnesses who's race or gender was coded as "Audio Only" were omitted from this table. Witnesses who did not take a position on the bill (were neither for nor against) were omitted from this table.

Due to the differences across demographics and organizational representation presented above, we conduct a logistic regression treating each of these behaviors as a binary outcome variable. Predictor variables included the type of organization a witness was testifying on behalf of, as well as the witness's demographic characteristics. For the witness behavior, *Offered Amendment*, the baseline equation is as follows:

$$\textit{Offered Amendment} = a + B1(\textit{Government Representative}) + B2(\textit{Nonprofit Representative}) + B3(\textit{Trade Association/Union Representative}) + B4(\textit{Non-affiliated Witness}) + B5(\textit{Registered Lobbyist}) + e \quad (1)$$

Offered Amendment is a binary outcome variable indicating whether or not a witness offered an amendment on a bill (assigned the value of 1) or not (assigned the value of 0). *Government Representative* is a dummy variable indicating whether an individual is there on behalf of a government organization. *Nonprofit Representative* is a dummy variable indicating whether or not an individual is testifying on behalf of a nonprofit organization. *Trade Association/Union Representative* is a dummy variable indicating whether or not an individual is testifying on behalf of a trade association or union. *Non-affiliated Witness* is a dummy variable indicating whether an individual is *unassociated with* an organization through their testimony. The baseline organization category is *Private Business Representative*, for which its relationship with *Offered Amendment* is captured in the model's intercept. *Registered Lobbyist* is a dummy variable indicating whether an individual is a registered lobbyist.

Table 7: Logistic Regression Models: Witness Offered Amendment

	Model 1		Model 2		Model 3	
Variables	Coefficient	Std. Error	Coefficient	Std. Error	Coefficient	Std. Error
Organization Category						
Government Representative	0.18	(0.54)	0.06	(0.54)	-0.01	(0.54)
Nonprofit Representative	0.40	(0.43)	0.36	(0.43)	0.49	(0.44)
Trade Association/Union Rep.	0.80*	(0.44)	0.87**	(0.44)	0.87**	(0.44)
Non-Affiliated Witness	0.33	(0.52)	0.25	(0.52)	0.34	(0.54)
Registered Lobbyist						
Lobbyist			-0.67**	(0.33)	-0.69**	(0.33)
Race						
Black					0.15	(0.35)
Other Nonwhite					-1.89*	(1.02)
Gender						
Female					-0.47*	(0.25)
Ethnicity						
Hispanic/Latino					-0.33	(0.76)
Age Group						
29 or Younger					0.21	(0.39)
60 or Older					0.04	(0.28)
Intercept	-2.71***	(0.39)	-2.58***	(0.39)	-2.43***	(0.41)
N	957		957		952	
AIC	601.53		598.85		599.21	

Significance Codes: *** p < 0.01; ** p < 0.05; * p < 0.1
Reference Categories: Organization category -- business representative; Registered Lobbyist -- non-lobbyist; Race -- white; Ethnicity -- non-hispanic/latino; Age Group -- mid-age

As *business representative* is the reference organization category, regression results must be interpreted in relation to a representative of a private business. The intercept of *Model 1* shows that a *business representative* is very unlikely to offer an amendment with a probability of occurrence of 0.06. This relationship persists as additional predictor variables are added to the model. The only occupation category that significantly differs from *business representative* is *trade association / union representative*; a union representative is much more likely to offer an amendment than a *business representative*. When controlling for organizational affiliation, a *non-lobbyist* is more likely to offer an amendment than a lobbyist, as seen in *Model 2.* As demographic characteristics are added to the model in *Model 3*, we can see that there is a weak relationship between gender/race and likelihood of offering an amendment; however, as our dataset consists of the entire population of witnesses, non-significant results are meaningful. *Female* witnesses are less likely to offer amendments than male witnesses. *Black witnesses* appear to be very slightly more likely to offer an amendment than white witnesses; *other nonwhite* witnesses, however, are much more unlikely to offer an amendment. These findings are

in line with the descriptive statistics presented in Table 5. The direction and approximate magnitude of the coefficients hold when "Organization Category" and "Registered Lobbyist" are dropped from the model.

The same set of covariates were tested on the binary variable *Opposing Stance*, which indicates whether the witness took an opposing stance on the piece of legislation. The baseline equation is as follows:

Opposing Stance = a + B1(Government Representative) + B2(Nonprofit Representative) + B3(Trade Association/Union Representative) + B4(Non-affiliated Witness) + B5(Registered Lobbyist) + e (2)

Table 8: Logistic Regression Models: Witness Took Opposing Stance

	Model 4		Model 5		Model 6	
Variables	Coefficient	Std. Error	Coefficient	Std. Error	Coefficient	Std. Error
Organization Category						
Government Representative	-1.30***	(0.41)	-1.10***	(0.42)	-1.09***	(0.42)
Nonprofit Representative	-1.15***	(0.28)	-1.11***	(0.28)	-1.14***	(0.29)
Trade Association/Union Rep.	0.59**	(0.26)	0.52**	(0.26)	0.48*	(0.27)
Non-Affiliated Witness	-0.63*	(0.35)	-0.51	(0.35)	-0.6	(0.37)
Registered Lobbyist						
Lobbyist			0.78***	(0.20)	0.75***	(0.20)
Race						
Black					-0.50	(0.35)
Other Nonwhite					-0.33	(0.46)
Gender						
Female					0.23	(0.19)
Ethnicity						
Hispanic/Latino					0.23	(0.58)
Age Group						
29 or Younger					-0.32	(0.37)
60 or Older					0.24	(0.22)
Intercept	-1.10***	(0.22)	-1.31***	(0.23)	-1.35***	(0.25)
N	957		957		952	
AIC	845.81		832.69		828.92	

Significance Codes: *** p < 0.01; ** p < 0.05; * p < 0.1
Reference Categories: Organization Category -- business representative; Registered Lobbyist -- non-lobbyist; Race -- white; Ethnicity -- non-hispanic/latino; Age Group -- mid-age

Once again, the results in Table 8 must be interpreted in reference to a *business representative*. As indicated by the intercept in *Model 4*, the probability that a *business*

representative will take the opposing stance is approximately .25; this probability decreases as additional covariates are added to the model. *Trade association or union representatives* are more likely to take the opposing stance than a *business representative*. *Government representatives* are the least likely to take an opposing stance; followed by *nonprofit representatives* and *non-affiliated witnesses*. In addition to this, those who are *lobbyists* are more likely to take the opposing stance than *non-lobbyists*. While including demographic predictor variables increases the accuracy of the model, as indicated by the AIC value, once accounting for organization, there is no significant relationship between a witness's demographic characteristics and their stance on the piece of legislation. However, in the descriptive statistics, we saw that nonwhite testifiers were half as likely to take the opposing stance as White testifiers (Table 6). We ran an additional regression (not included in this draft) looking solely at the impact of demographic characteristics on opposing stance. Black witnesses are less likely to oppose legislation; however, the statistical significance of this association disappears when organization types are included in the regression. Trade Associations/Unions are much more likely to take the opposing stance on legislation, and, as seen in Table 3, few nonwhite witnesses represent trade associations/unions in comparison to white witnesses. Looking at these findings in conjunction, we can conclude that the types of organizations nonwhite witnesses belong to behave in different ways than the types of organizations white witnesses belong to. These results provide mixed evidence regarding *hypothesis 5*. When controlling for organizational affiliation, nonwhite witnesses take the opposing stance less often than white witnesses.

Discussion:

The body of witnesses that testify before the Maryland General Assembly on environmental policy are *not* representative of the population of Maryland. Witnesses belonging to minoritized groups make up a much smaller part of the witness pool – particularly when compared to the population distribution of Maryland as a whole. Women, non-whites, and Hispanics/Latinos are underrepresented.

While previous research has documented a growth in descriptive representation in lobbyists, our research finds that while that may be so, this phenomenon has not translated into a more equal political voice in state legislative hearings on environmental legislation. Instead, legislative hearings appear dominated by lobbyists for organized interests and non-lobbyists who

organized interests mobilize to appear on their behalf. And, importantly, organized interest representatives are extremely unrepresentative of the population.

Future research should further explore the behavior of witnesses in public hearings. Existing research argues that taking the opposing stance on legislation can have a much greater impact on legislative outcomes rather than testifying in support of legislation (McKay, 2012). Our data shows that nonwhite witnesses took the opposing stance on environmental policy less often in 2021, although, when controlling for organizational affiliation, the relationship between race and opposition/support goes away. We do see, however, that there are stark differences between the organizational affiliation of different hearing participants. For example, nonwhite witnesses appeared on behalf of nonprofits more than white witnesses (~40% of white witnesses were there for nonprofits, while ~45% of nonwhite witnesses were). But, importantly, about 18% of nonwhite witnesses were not affiliated with a group, while only ~9% of white witnesses were. This goes against expectations generated from nonprofit and community mobilization theories that hypothesize that community organizations in marginalized communities serve to mobilize and overcome historic inequalities among minoritized community members. As a result, we found it surprising that nonwhite participants were much more likely to participate without an affiliation. This might mean that organizations with a mission to support minoritized individuals do more to mobilize their greater community and do less to ensure that testifiers are there on the group's behalf.

Finally, we found that the majority of witnesses appear to have a stake in the game, testifying as either a nonprofit representative, private business representative, government representative, or trade association/union representative. The voices of the general public, what we refer to as *non-affiliated witnesses, are* much less likely to testify. This is not necessarily bad, as interest group participation incentivizes legislators to engage in analytical discourse rather than anecdotal, emotional appeals to constituents (Esterling, 2007) and can help overcome collective action barriers to the general population. However, there were large differences in racial and gender affiliation among different organization types.

For example, another interesting finding is that the issues that mobilized a majority of Black participants were policies they supported. This effect (black participation on support) is explained by organizational affiliation in Table 8 -- the organizations that witnesses of

demographic groups belong to impact how they participate. Given the differences in the racial composition of witnesses by organization type and the overwhelming probability that Trade Associations and Unions oppose environmental legislation, this may also explain the phenomenon.

Lit Review References

1. *About Meetings*. Maryland General Assembly (MGA). (n.d.). https://mgaleg.maryland.gov/mgawebsite/Meetings/About
2. Arora-Jonsson, S., & Ågren, M. (2019). Bringing diversity to nature: Politicizing gender, race and class in environmental organizations? *Environment and Planning E: Nature and Space*, *2*(4), 874-898. https://doi.org/10.1177/2514848619866381
3. Berelson, B. R., Lazarsfeld, P. F., & McPhee, W. N. *Voting: A study of opinion formation in a presidential campaign*. Chicago: University of Chicago Press, 1954.
4. BExcellence Team. (2023, May 27). *This is the richest Black County in America*. Black Excellence. https://www.blackexcellence.com/this-is-the-richest-black-county-in-america/
5. Browne, W. P. (1990). Organized interests and their issue niches: A search for pluralism in a policy domain. *The Journal of Politics*, *52*(2), 477–509. https://doi.org/10.2307/2131903
6. Bullard, R. D., & Johnson, G. S. (2000). Environmentalism and public policy: Environmental justice: Grassroots activism and its impact on public policy decision making. *Journal of Social Issues*, *56*(3), 555–578. https://doi.org/10.1111/0022-4537.00184
7. Burstein, P., & Hirsh, C. E. (2007). Interest Organizations, Information, and Policy Innovation in the U.S. Congress. *Sociological Forum*, *22*(2), 174–199. http://www.jstor.org/stable/20110202
8. Butler, D. M., & Nickerson, D. W. (2011). Can learning constituency opinion affect how legislators vote? results from a field experiment. *Quarterly Journal of Political Science*, *6*(1), 55–83. https://doi.org/10.1561/100.00011019

9. Campbell, A., Gurin, G., & Miller, W. E. The voter decides. Evanston, Ill.: Row, Peterson, 1954
10. Checkoway, B. (1981). The Politics of Public Hearings. The Journal of Applied Behavioral Science, 17(4), 566–582. https://doi.org/10.1177/002188638101700411
11. *Diversity in the U.S. Energy Workforce - NASEO*. National Association of State Energy Officials. (2021). https://www.naseo.org/data/sites/1/documents/publications/Workforce%20Diversity%20Data%20Findings%20MASTER%20Final42.pdf
12. Egerod, B. C. K., Hassell, H. J. G., McCrain, J., & Miller, D. R. (n.d.). *Lobbying Against Discrimination: The Effects of Race and Gender in Lobbyist Hiring Decisions*. https://www.davidryanmiller.com/files/Lobbyist_Discrimination.pdf
13. Erbe, W. (1964). Social Involvement and Political Activity: A Replication and Elaboration. *American Sociological Review*, *29*(2), 198–215. https://doi.org/10.2307/2092123
14. Ernst, R., & Hlinka, M. (2021, April 27). *Utility sector progressing on gender diversity, but experts say more work needed*. S&P Global Homepage. https://www.spglobal.com/marketintelligence/en/news-insights/blog/utility-sector-progressing-on-gender-diversity-but-experts-say-more-work-needed
15. Fischel, W. A. (2017). The Rise of the Homevoters: How the Growth Machine Was Subverted by OPEC and Earth Day. In L. A. Fennell & B. J. Keys (Eds.), *Evidence and Innovation in Housing Law and Policy* (pp. 13–37). chapter, Cambridge: Cambridge University Press.
16. Fredrick C. Harris, & Robert C. Lieberman. (2013). Beyond Discrimination : Racial Inequality in a Post-Racist Era. Russell Sage Foundation.
17. Frey, B. S. (1971). Why do High Income People Participate More in Politics? *Public Choice*, *11*, 101–105. http://www.jstor.org/stable/30022656
18. Gephart, R. (1997). Hazardous Measures: An Interpretive Textual Analysis of Quantitative Sensemaking during Crises. *Journal of Organizational Behavior*, *18*, 583–622. http://www.jstor.org/stable/3100266
19. Gephart, R. P. (1993). The Textual Approach: Risk and Blame in Disaster Sensemaking. *The Academy of Management Journal*, *36*(6), 1465–1514. https://doi.org/10.2307/256819

20. Goerres, A. (2007). Why are Older People More Likely to Vote? The Impact of Ageing on Electoral Turnout in Europe. The British Journal of Politics and International Relations, 9(1), 90–121. https://doi.org/10.1111/j.1467-856x.2006.00243.x
21. Guha, R. & Martinez-Alier, J. (1998) *Varities of Environmentalism: Essays North and South*, New Delhi, India: Oxford University Press.
22. Habermas, J. (1979). *Communication and the evolution of society*. Heinemann Educational Books.
23. Habermas, J., & McCarthy, T. (1976). *Legitimation crisis*. Heinemann Educational.
24. Halpin, Darren R. and Binderkrantz, Anne S., 2011. "Explaining breadth of policy engagement: patterns of interest group mobilization in public policy", *Journal of European Public Policy*, 18: 2, 201-219.
25. Hill, E., Tiefenthäler, A., Triebert, C., Jordan, D., Willis, H., & Stein, R. (2020, May 31). How George Floyd Was Killed in Police Custody. *NYTimes*. Retrieved December 19, 2023, from https://www.nytimes.com/2020/05/31/us/george-floyd-investigation.html.
26. Hirsch, A. V., Kang, K., Montagnes, B. P., & You, H. Y. (2023). Lobbyists as gatekeepers: Theory and evidence. *The Journal of Politics*, *85*(2), 731–748. https://doi.org/10.1086/723026
27. Huber, J., & Shipan, C. (2002). LAWS, BUREAUCRATIC AUTONOMY, AND THE COMPARATIVE STUDY OF DELEGATION. In *Deliberate Discretion?: The Institutional Foundations of Bureaucratic Autonomy* (Cambridge Studies in Comparative Politics, pp. 1-16). Cambridge: Cambridge University Press. doi:10.1017/CBO9780511804915.002
28. Jones, P. R., & Cullis, J. G. (1986). Is Democracy Regressive? A Comment on Political Participation. *Public Choice*, *51*(1), 101–107. http://www.jstor.org/stable/30024674
29. Kirkland, J. H., & Harden, J. J. (2022). *The illusion of accountability: Transparency and representation in American legislatures*. Cambridge University Press.
30. Lazarsfeld, P. F., Berelson, B., & Gaudet, H. *The people's choice: How the voter makes up his mind in a presidential campaign*. New York: Duell, Sloan, and Pearce, 1944.
31. LaPira, T. M., Marchetti, K., & Thomas, H. F. (2020). Gender politics in the lobbying profession. Politics & Gender, 16(3), 816-844.

32. Logan, J. R., Darrah, J., & Oh, S. (2012). The Impact of Race and Ethnicity, Immigration, and Political Context on Participation in American Electoral Politics. *Social forces; a scientific medium of social study and interpretation*, *90*(3), 10.1093/sf/sor024. https://doi.org/10.1093/sf/sor024
33. Lucas, J. C., & Hyde, M. S. (2012). Men and Women Lobbyists in the American States. Social Science Quarterly, 93(2), 394-414.
34. *Maryland General Assembly Membership Profile. (2023, July 12).* *https://mgaleg.maryland.gov/pubs-current/current-member-profile.pdf*
35. *Maryland Open Meetings Act*. Maryland Attorney General. (n.d.). https://www.marylandattorneygeneral.gov/Pages/OpenGov/OpenMeetings/default.aspx#:~:text=Maryland%27s%20Open%20Meetings%20Act%20is,to%20discuss%20some%20topics%20confidentially
36. McKay, A. (2012). Negative Lobbying and Policy Outcomes. American Politics Research, 40(1), 116–146. https://doi.org/10.1177/1532673X11413435
37. Moreland-Russell, S., Barbero, C., Andersen, S., Geary, N., Dodson, E. A., & Brownson, R. C. (2015). "Hearing from all sides" How legislative testimony influences state level policy-makers in the United States. *International journal of health policy and management*, *4*(2), 91–98. https://doi.org/10.15171/ijhpm.2015.13
38. "MSEC - Maryland Lobbyist Registrations." Accessed December 27, 2023. https://lobby-ethics.maryland.gov/public_access.
39. NCSL. (2020, December 1). *Resource State legislator demographics*. National Conference of State Legislatures. https://www.ncsl.org/about-state-legislatures/state-legislator-demographics#overview
40. Newell, P. (2005). Race, class and the global politics of environmental inequality. *Global Environmental Politics*, *5*(3), 70–94. https://doi.org/10.1162/1526380054794835
41. New York Times. 1990. "Earth Issues Lure a New Breed of Young Worker." July 20. p. 41.
42. Nichols, A. H., & Schak, J. O. (2017). *Degree attainment for black adults: National and State trends*. The Education Trust. https://edtrust.org/wp-content/uploads/2014/09/Black-Degree-Attainment_FINAL.pdf?trk=public_post_comment-text

43. Nownes, A. J., & Freeman, P. K. (1998). Female Lobbyists: Women in the World of" Good Ol'Boys". The Journal of Politics, 60(4), 1181-1201.
44. Olsen, M. E. Social participation and voting turnout: A multivariate analysis. American Sociological Review, 1972, 37, 317–333.
45. Pew Research Center. (2018). (rep.). *The Public, the Political System and American Democracy*. Retrieved August 6, 2023, from https://www.pewresearch.org/politics/2018/04/26/10-political-engagement-knowledge-and-the-midterms/.
46. Portillo, S.K., Humphrey, N., & Bearfield, D.A. (2022). The Myth of Bureaucratic Neutrality: An Examination of Merit and Representation (1st ed.). Routledge. https://doi-org.proxy-um.researchport.umd.edu/10.4324/9781003322795
47. Purtle, J., Joshi, R., Lê-Scherban, F., Henson, R. M., & Diez Roux, A. V. (2021). Linking data on constituent health with elected officials' opinions: Associations between urban health disparities and mayoral officials' beliefs about health disparities in their cities. *The Milbank Quarterly*, *99*(3), 794–827. https://doi.org/10.1111/1468-0009.12501
48. Rosener, J. B. (1982). Making Bureaucrats Responsive: A Study of the Impact of Citizen Participation and Staff Recommendations on Regulatory Decision Making. *Public Administration Review*, *42*(4), 339–345. https://doi.org/10.2307/975977
49. Rosenstone, S. J., & Hansen, J. M. (1993). *Mobilization, participation, and democracy in America*. Macmillan Publishing Company.
50. Schattschneider E. E. (1960). *The semisovereign people : a realist's view of democracy in america*. Holt Rinehart and Winston.
51. Schlozman, K. L., Burch, T., Jones, P. E., You, H. Y., Verba, S., & Brady, H. E. (2014). "Washington Representatives Study (Organized Interests in Washington Politics) - 1981, 1991, 2001, 2006, 2011." Inter-university Consortium for Political and Social Research [distributor]. https://doi.org/10.3886/ICPSR35309.v1.
52. Schlozman, K. L., Verba, S., & Brady, H. E. (2012). The unheavenly chorus : unequal political voice and the broken promise of american democracy. Princeton University Press.

53. Schlozman, K. L., Verba, S., & Brady, H. E. (2010). Weapon of the Strong? Participatory Inequality and the Internet. *Perspectives on Politics*, *8*(2), 487–509. http://www.jstor.org/stable/25698614
54. Schlozman, K. L. (2010). Who Sings in the Heavenly Chorus? The Shape of the Organized Interest System. In *The Oxford Handbook of American Political Parties and interest groups* (pp. 425–450). essay, University Press.
55. Shabecoff P. 1990. "Environmental Groups Told They Are Racists in Hiring." *New York Times*. February 1. p. A20.
56. Shwe, E. (2020, October 12). *State Legislatures have more women and racial diversity, compared to five years ago*. Maryland Matters. https://www.marylandmatters.org/2020/10/12/state-legislatures-have-more-women-and-racial-diversity-compared-to-five-years-ago/
57. Sinclair M. 1977. The public hearing as a participatory device: Evaluation of the IJC experience. In *Public participation in planning*, edited by Sewell W. R. D., Coppock J. T., 105-22. London: John Wiley & Sons.
58. Strickland, J. M., & Stauffer, K. E. (2022). Legislative Diversity and the Rise of Women Lobbyists. *Political Research Quarterly*, *75*(3), 531-546. https://doi.org/10.1177/10659129211009305
59. Strickland, J. M., & Tarr, N. (2023). Diversity for Access? Legislative Diversity, Identity Group Mobilization, and Lobbying. *The Journal of Race, Ethnicity, and Politics*, *8*(2), 267–288. doi:10.1017/rep.2023.12
60. Taylor, D. E. (2015). Gender and racial diversity in environmental organizations: Uneven accomplishments and cause for concern. *Environmental Justice*, *8*(5), 165–180. https://doi.org/10.1089/env.2015.0018
61. Taylor D.E. 2014. *The State of Diversity in Environmental Organizations: Mainstream NGOs, Foundations, and Government Agencies*. Ann Arbor, MI: University of Michigan, School of Conservation and Environment.
62. Topal, C. (2009). The Construction of General Public Interest: Risk, Legitimacy, and Power in a Public Hearing. Organization Studies, 30(2-3), 277-300. https://doi-org.proxy-um.researchport.umd.edu/10.1177/0170840608101481

63. U.S. Census Bureau. (2020). ACS DEMOGRAPHIC AND HOUSING ESTIMATES. American Community Survey, ACS 5-Year Estimates Data Profiles, Table DP05. Retrieved December 27, 2023, from https://data.census.gov/table/ACSDP5Y2020.DP05?q=Maryland%20sex%202020%20voting%20age
64. U.S. Census Bureau. (2020). *Median household income by state*. Explore census data. https://data.census.gov/all?q=median%2Bhousehold%2Bincome%2Bby%2Bstate
65. U.S. Census Bureau. (n.d.). U.S. Census Bureau quickfacts: Maryland. https://www.census.gov/quickfacts/fact/table/MD/PST045222
66. United Church of Christ. 1987. *Toxic Wastes and Race*. New York: Commission for Racial Justice.
67. Van Dam, A. (2022, June 29). *Is Prince George's Still the Richest Majority-Black County in America?* Retrieved August 6, 2023, from https://www.washingtonpost.com/business/2022/06/29/dept-of-data-prince-georges-richest-black-county/.
68. Verba, S., & Nie, H. N. Participation in America: Political democracy and social equality. New York: Harper & Row, 1972.
69. Verba, S., Nie, N., & Kim, J. *Participation and political equality: A seven nation comparison*. London and New York: Cambridge University Press, 1978.
70. Verba, S., Schlozman, K. L., & Brady, H. E. (1995). *Voice and Equality: Civic Voluntarism in American Politics*. Harvard University Press. https://doi.org/10.2307/j.ctv1pnc1k7