RESEARCH, TEACHING, AND SERVICE STATEMENT

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My research investigates the causes and consequences of information flows between citizens, media, and government in democracies. Obtaining and using politically-relevant information is foundational to the effective functioning of democratic systems, whether by helping voters select representatives, informing politicians and bureaucrats about the policies citizens want and holding them accountable for their provision, or mobilizing individual and community action. These functions are especially important in the Global South, where more limited political competition, less ideological politics, and captured government institutions may otherwise hinder economic development, efforts to reduce inequalities, and service delivery.

While information is integral to democratic governance, the many steps to unlocking its benefits are poorly understood. The core of my research program explores if, when, and how the informational environment makes democracy work well for its citizens. This encompasses three substantive agendas:

1. *Effects of exposure to information*. Given access to indicators about government performance, I investigate when and how voters use this information to elect their representatives and whether it in turn shapes the policies that politicians and bureaucrats deliver.
2. *When politically-relevant information is produced and obtained*. Having established information's potential for impact, I next explore what news citizens actually obtain—and the political consequences—by examining when and why citizens become informed and how the capacity, incentives, and regulation of media outlets shape the content produced.
3. *How education shapes informed political participation*. I study how formal education affects citizens' news consumption, political participation, and political preferences later in life.

Together with various collaborators, I investigate these topical and policy-relevant questions by both developing and applying theories and testing them using cutting-edge empirical methods. In contexts across Latin America and Sub-Saharan Africa, together with some comparisons to the Global North, I combine large and often novel datasets with field experiments and observational designs to estimate causal relationships on real-world behaviors and illuminate the underlying theoretical mechanisms. I also advance quantitative methods in my fields of comparative politics and political economy by identifying and solving methodological issues I encounter in my research. The same substantive and methodological interests animate my teaching and drive my commitment to advising and mentoring a wide range of students.

1 Research

1.1 Effects of exposure to information

In theory, information about government performance can help voters to select competent or policy-aligned politicians and create incentives for them to represent voters' interests to get re-elected. However, politicians like Brazilian President Dilma Rousseff often get re-elected after major scandals and many of Africa's long-serving leaders have survived despite slow and unequal economic development. Skeptics have thus argued that citizens are not sufficiently rational to process relevant information, voters are too willing to vote based on other factors like ideology or shared identity instead of performance, or even that politicians abandon their expertise to pander to their electorate's instincts. In addition to this theoretical uncertainty about the quality of democratic processes, scholars have only recently started deploying research designs able to isolate information's causal effects and thus establish whether it really matters.

My first research agenda investigates *if and how* exposure to various forms of information provided by the media, leaflets, and word of mouth shape two central functions of democratic systems: who voters vote for and the provision and uptake of government services.

[*]Journal acronyms are provided for each published article; "wp" denotes a completed working paper available on my website.

When does incumbent performance information affect voting behavior?

I first establish that voters are generally able to use indicators of government performance to evaluate incumbent politicians in sophisticated ways. Motivated by the substantial heterogeneity in whether and how information in turn shapes incumbent vote shares, my theoretical and empirical work illuminates this puzzle by demonstrating that incumbent performance indicators influence vote choices to the extent that they (i) differ from citizens' prior beliefs, (ii) are regarded as relevant and credible, (iii) reach enough voters to coordinate vote choices, and (iv) encounter citizens open to receiving novel information.

Across seven field and natural experiments in Africa, Europe, and Latin America, my coauthors and I consistently find that (at least some) voters act on indicators of government performance.[1] Exposure to nonpartisan information about the economy, crime, resources secured for constituents, corruption, and public health makes voters more (less) likely to vote for incumbent parties or politicians that perform well (poorly).[2] For example, I led a field experiment involving one of my advisees in rural parts of Senegal which found that receiving scorecards documenting parliamentarian performance made voters more likely to support incumbents who secured more resources for their district, both immediately and several weeks later at the ballot box (Bhandari, Larreguy and Marshall 2023, *AJPS*). In Mexico, I exploit natural experiments to vary performance levels *and* access to local media to show that electoral sanctioning of municipal governments that oversee more homicides is driven by greater access to local radio and TV stations (Marshall 2024*b*, R&R *JEEA*). By establishing that information enhances electoral accountability, these studies help fill an evidence gap pertaining to a foundational question in political science. But they also reveal that the effects of exposure to incumbent performance indicators vary considerably across individuals and contexts, as the cross-country "Metaketa" collaboration I participated in also found (Dunning et al. 2019, *Science Advances*).

Probing the concern that citizens are not using such information rationally, I find that voters process incumbent performance indicators in approximately Bayesian ways. This conclusion emerges from studies showing that voter responses to new information are moderated by their prior beliefs and understanding of how the information was generated. First, in Arias, Larreguy, Marshall and Querubín (2022, *JEEA*), we show that informing Mexican voters of independent audits of their municipal government's expenditures led them to appraise the incumbent party more/less favorably when illegal spending fell below/exceeded their prior expectations. The extent of belief updating increased with the difference between the audit results and the position of voters' prior beliefs and imprecision of this prior belief. Second, Bhandari, Larreguy and Marshall (2023, *AJPS*) finds that Senegalese voters used previous incumbents' performance to benchmark their appraisals of current incumbents. Third, I show that citizens perceive differences in source credibility. Alt, Lassen and Marshall (2016, *JOP*) finds that Danes updated their beliefs about the economy most from unemployment projections made by independent experts (e.g. the Danish Central Bank) and political parties with incentives to report differently (e.g. governments projecting high unemployment rates).

While citizens are up to the job of processing information, when will they act on it *en masse*? A distinctive insight from my research is that the mode of information delivery and the social networks of its recipients can be as consequential as its content. This is because disseminating incumbent performance indicators via dense networks or mass media generates common knowledge (that other citizens are receiving the same information) and discussions that *coordinate* citizens seeking to collectively vote for the best candidate. We formalize this theory in Arias, Balán, Larreguy, Marshall and Querubín (2019, *APSR*), which

[1] Alt, Jensen, Larreguy, Lassen and Marshall (2022, *JOP*) examines unemployment; Marshall (2024*b*, R&R *JEEA*) examines recent homicides; Bhandari, Larreguy and Marshall (2023, *AJPS*) examines parliamentary activity; Arias, Larreguy, Marshall and Querubín (2022, *JEEA*), Enríquez, Larreguy, Marshall and Simpser (2024*b*, *JEEA*), and Larreguy, Marshall and Snyder (2020, *EJ*) examine malfeasance; Enríquez, Larreguy, Marshall and Simpser (2024*a*, wp) examines COVID-19 case and death rates.

[2] I also find that good performance stimulates citizens to make requests from government outside election campaigns (Bhandari, Larreguy and Marshall 2023, *AJPS*) and generates trust among beneficiaries abroad (Barham et al. 2023, *WP*). Beyond objective performance, partisan ads also win votes (Larreguy, Marshall and Snyder 2018, *JEEA*).

also devises a new test to establish that dense social networks coordinate electoral responses to revelations of incumbent malfeasance in Mexico, in addition to diffusing this information. To isolate the role of mass media's reach, my coauthors and I partnered with Borde Político to randomly vary whether 0%, 20%, or 80% of adults within 128 Mexican municipalities were targeted with Facebook ads reporting the share of local government expenditures subject to irregularities (Enríquez, Larreguy, Marshall and Simpser 2024*b*, *JEEA*). The increase in vote share of the best-performing incumbent parties—in both directly and indirectly targeted electoral precincts—was around four times larger in the 80% relative to 20% saturation municipalities. The interactions between citizens generated by mass-reach campaigns help to explain why radio and television also amplify voter punishment of poorly-performing governments (Larreguy, Marshall and Snyder 2020, *EJ*; Marshall 2024*b*, R&R *JEEA*).

More generally, I find social media to be a double-edged sword: while its mass reach can coordinate voters, the misinformation and polarization it fosters misleads and distracts from incumbent performance. Two of my recent working papers explore how to combat these contemporary threats to political accountability. As fact-checking is slow, expensive, and can only disprove verifiable claims, a field experiment in South Africa shows that sustained exposure to entertaining podcasts that explain how misinformation is debunked can *pre-emptively* help citizens to discern true from false information and doubt conspiracy theories (Bowles, Croke, Larreguy, Liu and Marshall 2024, R&R *APSR*). Whereas most efforts to combat misinformation stop at evaluating citizen beliefs and skills, we further establish that this approach to instilling media literacy matters for rekindling confidence in South Africa's government and reducing risky health behaviors. Enríquez, Larreguy, Marshall and Simpser (2024*a*, wp) turns to polarization by evaluating the effect of nudging voters to consider information without getting carried away with their emotions or political preferences. In the context of COVID-19 under Mexico's polarizing president, Data Cívica's Facebook ads reporting accumulated COVID-19 cases and deaths backfired among voters who did not receive nudges. Remarkably, however, the nudge activated unbiased thinking which reversed this behavior, instead reducing the vote share of municipal incumbent parties that tackled COVID-19 less successfully than other governments in their state. These findings provide blueprints for mitigating the potential for populists from Trump to López Obrador to ignore swathes of their electorates or undermine democratic institutions with few repercussions.

How does information affect government responsiveness?

Using information to elect better governments is an important step, but effectively delivering public goods is what ultimately improves citizens' lives. Yet, there remains much variation across and within countries in whether the policies implemented by politicians and bureaucrats reflects voters' priorities. Another aspect of this puzzle is understanding why citizens fail to take up public services. My current research explores three ways that information may shape the supply of and demand for public services: generating electoral accountability, informing or incentivizing bureaucrats, and cultivating citizen demand.

Extending the logic of electoral accountability to politician behavior, Henn, Larreguy and Marshall (2024, wp) finds that incumbents deliver better services in anticipation of their performance being revealed to voters before elections, but only where political institutions prevent the subversion of information flows. Like other studies, we first find that the threat of transparency—in the form of introducing third-party certification of investments in the state's capacity to provide services—caused Mexican municipal governments to improve public service provision. But there is also a novel twist: because citizens only experience the fruits of these investments after elections, service improvements were negligible where governments exploited this information asymmetry to collude with certifiers. Electoral accountability thus requires independent institutions to credibly produce performance indicators.[3]

Even when elected officials wish to deliver services that citizens want, their policies must be implemented

[3]Incumbents also control information to engage in electoral clientelism. Larreguy, Marshall and Querubín (2016, *APSR*) shows that politicians devise performance-contingent contracts and carefully monitor to incentivize brokers to buy turnout on election day.

by multilayered bureaucracies. Such co-production is especially challenging in the Global South, where bureaucrats often lack resources, expertise, and oversight. Contributing to recent efforts to center bureaucrats as agents of policy provision, I theorize that indicators of local service quality could improve services via two main channels: (a) informing frontline service providers and their overseers of problems they were unaware of; or (b) incentivizing bureaucrats to avoid formal sanctions (e.g. promotion, relocation, or firing) or community punishment for failing to address service failures that will or have already been revealed. The answer will guide how scarce funds should be allocated to state building.

Two ongoing field experiments with my former student Dylan Groves and other new collaborators test whether activating these informational mechanisms improves health service delivery in Tanzania. The first project works with investigative journalists to document service delivery challenges at 600 health facilities across the country. Our experimental design distinguishes the degree to which changes in service delivery are driven by informing district overseers of the challenges identified, anticipation of a follow-up radio program assessing improvements made, and responses to this program airing. We argue that mass media may be particularly effective at enhancing bureaucratic accountability when agency relationships are unclear. This is because the media can inform various potential principals, ranging from district officials to politicians and even citizens, and thus induce the relevant agents to self-select into responding. A second new project with Afya Pamoja and the Government of Tanzania evaluates whether an e-health platform aggregating citizens' anonymous feedback can improve local services. We further explore who oversees frontline service providers in practice by varying whether local elected officials—who possess different connections and more holistic concerns—have access to the e-health dashboards as well as district bureaucrats.

In addition to supply-side interventions, provision and especially uptake of public services may also depend on citizen demand for services. Two active field experiments evaluate whether radio—the primary media source in many parts of Africa—can combat misinformation and social norms limiting citizen demand for health services.[4] The first study in Tanzania combines the investigative journalism intervention just described with an entertaining and locally-tailored radio series increasing awareness of health services. By fusing these demand- and supply-side forces, our innovation is to test a novel theory predicting that boosting demand will be most effective when citizens expect to be allocated high-quality services; otherwise, boosting demand could breed lasting distrust in government services. The second study partners with Family Empowerment Media to provide information about family planning options through locally-influential sources to help women exert greater control over the number and spacing of their births in Nigeria.

1.2 When politically-relevant information is produced and obtained

The preceding research found that *encouraged or forced* exposure to information helps voters to select and monitor governments. And yet, why are governments not more responsive and effective? One possibility is that the information citizens normally consume is quite different. My latest research thus delves into when favorable information environments emerge: how often and why do citizens consume politically-relevant information, and when is such content available? My answer, unfortunately, is that citizens are often inattentive to news, while media outlets often lack the audience, capacity, or freedom to produce it.

How and why do citizens become politically informed?

Since no single citizen can reasonably expect to affect election or policy outcomes, why do citizens commit time and resources to becoming informed in the first place?

In contrast with instrumental accounts emphasizing voters' capacity to affect elections, I argue that active and passive news consumption reflect factors largely disconnected from casting informed ballots. The

[4]My research in six Latin American countries with Sarah Daly and four of our PhD students shows that lack of knowledge, untrusted messengers, and coordination problems limited early demand for COVID-19 vaccines (Argote, Barham, Zuckerman Daly, Gerez, Marshall and Pocasangre 2021, *PLoS One*; Argote, Barham, Daly, Gerez, Marshall and Pocasangre 2021, *npj - Vaccines*).

first source of *active* news consumption is enjoying political news as a consumption good. This interest is generated in the long-term by formal education and the paths it takes people down (Croke, Grossman, Larreguy and Marshall 2016, *APSR*; Larreguy and Marshall 2017, *REStat*) and stimulated transiently by election campaigns (Marshall 2024*b*, R&R *JEEA*). The second is social approval, at least in networks where political sophistication is viewed positively. In Marshall (2019*b*, *JOP*), I develop and empirically support a theory of social signaling where citizens acquire information to either avoid looking unsophisticated to their peers or to cultivate a reputation as more sophisticated than others. I also find that *passive* exposure through social networks may be just as important, with information about unemployment and incumbent malfeasance diffusing between citizens (Alt, Jensen, Larreguy, Lassen and Marshall 2022, *JOP*; Arias et al. 2019, *APSR*). All three factors explain variation in political engagement within populations, but—more worryingly for democratic representation—imply informational inequalities across groups with different preferences.

Citizens' unprecedented ability to opt out of political content in the social media age compounds these already-weak incentives to become informed. However, while their content may seem frivolous, two new projects conduct the first experiments in the field testing whether social media influencers (SMIs) can serve as engaging and trusted messengers for politically-disengaged citizens. The first study, which is just concluding, seeks to reduce belief in and sharing of misinformation by supporting micro SMIs in Kenya and South Africa to provide digital literacy trainings devised by Africa Check. A second study with colleagues at Columbia, which goes live during the 2024 US presidential election campaign, encourages individuals—financially, algorithmically, or through recommendations—to follow more or less politically-oriented SMIs for five months. Each SMI works with the Better Internet Initiative to produce ideologically-progressive messaging about economic, climate, health, and democracy issues. In addition to estimating whether SMIs influence the political knowledge, attitudes, and behaviors of disinterested audiences, and do so more than alternative dissemination tools, both projects will explore the sustainability of such interventions by further estimating the effects of producing political content on an SMI's audience and online engagement.

What shapes the news that media outlets produce?

Most accounts treat media content production as demand-driven (satisfying consumer preferences) or supply-driven (reflecting owner biases or regulatory constraints). While these factors are clearly important, little is yet known about the *process* through which journalists and media outlets produce the information citizens use to select their representatives. My current and future research instead centers media organizations and journalists to explore what shapes the production of the news available to consumers.

Motivated to understand why reporting on corruption and legislator performance varies across media outlets, data collection recently concluded for a three-year field experiment I led with 1,604 local radio stations and newspapers across Mexico (Larreguy, Lucas and Marshall 2024, wp). The basic intervention delivered information about municipal audit reports and legislator activity in Congress to relatively low-capacity media outlets. Testing our theoretical model of news production, the experimental design distinguishes the effects of search costs, incentives to follow popular stories reported by competitors, the relevance of the political moment, and learning about consumer interest in governance on whether accountability-enhancing content is reported. Drawing on more than 20 million online newspaper articles, around-the-clock radio streams, measures of politician behavior in office, and precinct-level election returns, the final results of one of my most ambitious projects yet will soon illuminate—in unprecedented detail—both the drivers of media coverage of politicians and, ultimately, whether such coverage matters for political accountability. Initial findings support all but the relevance of upcoming elections for shaping coverage.

Looking within media organizations, my next major project plans to explore the understudied role of individual journalists. I will start by establishing whether journalists are simply epiphenomenal to their organizations. Drawing from newspaper corpora in several countries, I plan to study journalists who move between newspapers to quantify individual journalists' contribution to article topics, sentiments, and style

relative to a newspaper's editorial line. If individual journalists make a difference, the next step would be to investigate how factors like childhood experience of politics influence who becomes a journalist and how the changing nature of, and proximity to, sources affects journalistic impartiality.

What are the political consequences of the news citizens consume?

My ongoing book project draws together the preceding insights to explore how the news citizens ultimately receive shapes electoral selection. Expanding on my model and evidence in Marshall (2024*b*, R&R *JEEA*), I integrate theories of news acquisition *and* production to argue that inattention and limited access to politically-relevant news conspire to help bad governments survive. In this equilibrium, a small group of engaged voters—often nested in elite networks—obtain news regularly enough to accurately infer the incumbent government's competence. But electoral selection works poorly because most voters (and their peers) only sporadically consume politically-relevant news, relying on a few noisy signals of performance.

My observational and experimental analyses pinpoint how the news consumption link breaks the chain of electoral accountability in Mexico. Although citizens update from news in sophisticated ways once exposed to it, I find that citizens with less education and who inhabit less-engaged networks disproportionately consume news before elections. This causes less-engaged voters to sanction municipal governments for homicides and malfeasance revealed by local media at this time, at least before news reporting norms shifted away from gruesome coverage of homicides. Using these imprecise signals of incumbent performance leads voters to downweight other more informative factors, such as economic performance and service delivery, in their voting decisions.

This project thus explains why elected governments often fail to serve poorly-informed voters, but also provides a new rationale for "political business cycles"—politicians' greater propensity to serve voters before elections—that relies on rational inattention rather than voters' short memories or evolving politician types.

When will elected governments censor critical media content?

Where the media is able and willing, its capacity to expose governments and affect citizen behavior can hold incumbents to account at the polls. But incumbents are not powerless to resist this threat to their survival. Examples from Hungary to India to Russia show how media markets can be reshaped by modern "spin dictators" to persuade their electorates to keep them in power without resorting to repression. Given the obvious appeal, what remains puzzling is why elected autocrats exercise restraint in limiting media freedoms and what precipitates censorship in the absence of societal transformation or regime change.

My recent research theorizes the tradeoffs guiding the decision of vote-maximizing incumbents to censor private media outlets. Kronick and Marshall (2024, wp) extends models of Bayesian persuasion—which show how biased media can maintain enough credibility to increase a government's expected popularity—to highlight two subtler competing incentives to restrict honest media outlets. On one hand, in addition to reducing exposure to bad news, our model highlights how censoring critical media outlets can help incumbents to optimize media persuasion: by reducing competition with a more informative rival, pro-government outlets can bias their coverage with limited loss of audience among consumers seeking truthful news. On the other hand, censorship can backfire if voters sanction the government for curtailing access to valued entertainment or news content. Consequently, a fertile media market structure—with polarized objectives across competing content producers and content that is not too valuable to consumers—can explain when incumbents restrict media freedoms; otherwise, they will be reticent of democratic backsliding.

The same working paper substantiates all three mechanisms in Venezuela, where Hugo Chávez refused to renew the public broadcast license of RCTV—the nation's leading TV station—in 2007. To assess whether the electoral benefit to Chávez of reducing exposure to more critical news overpowered the cost of voter sanctioning for losing popular content, we compare changes in vote share in electoral precincts where more households had TVs without cable, and thus lost access to RCTV after it became cable-only, with changes

in precincts where many households had cable TVs. While we find that favorable news coverage was persuasive, the sanctioning effect dominated. On the face of it, this suggests that Chávez made a mistake. And yet, an original corpus of newscasts reveals a countervailing equilibrium effect that could have increased Chávez's popularity among both cable and non-cable consumers. Using recent advances in large language models to classify the topic and sentiment of 25,000 news segments, we find—as our theory predicts—that RCTV's competitors began covering Chávez's government more favorably.

A related working paper examines the consequences of enabling and restricting access to social media in Uganda (Bowles, Marshall and Raffler 2024, wp). Corroborating the hopes of those regarding social media as a "liberation technology," the first field experiment of its kind in the Global South shows that subsidizing individual access to social media—in a context where lower barriers to entry permit more opposition content than traditional media—reduced support for the NRM government among its supporters outside election time. The government may thus benefit from banning social media. As in Venezuela, however, we find that the "general equilibrium" impact of nationwide policy reforms differs from "partial equilibrium" effects in an experiment with isolated participants. Our panel survey shows that VPN users, who were more likely to remain online during Uganda's election-time social media ban in 2021, became relatively more favorable toward the government. In line with the theory in Kronick and Marshall (2024, wp), this reflects both dissatisfaction among non-VPN users who lost access to social media as well as the ban disproportionately reducing opposition-leaning content on Facebook.[5]

Government regulation of the media may be needed in other cases, such as protecting media outlets from big tech's capture of traffic from traditional news outlets and use of digital ad technologies to extract revenues. A new project with Antoine Zerbini will develop the first model of the consequences of this technological revolution for the topics, quality, and survival of investigative journalism. Given the news environment's electoral implications, we will then analyze what policy tools could be effective *but also politically-feasible* for sustaining the deep and balanced media markets needed to support political accountability.

1.3 How education shapes informed political participation

Education is seen as a key driver of the informed citizen participation required to avoid low-attention political equilibria where governments need not be responsive to their electorates. Political scientists stretching back to 1950s modernization theorists argue that formative education cultivates political engagement, instills liberal values, and mobilizes pressure for democratization among the middle classes. Politicians from China to the US thus battle to shape their country's curricula and access to schooling. But establishing if and how education matters is difficult because individuals become educated for a variety of confounding reasons and education's effects may take decades to materialize. My third research agenda addresses these challenges by leveraging compulsory schooling laws—which dramatically increased post-WW2 educational attainment across the globe—as natural experiments to understand secondary education's long-term effects.

I find that education generates informed political participation, but its form depends on the nature of democratic institutions. In Mexico and Nigeria's competitive democratic periods, I observe the expected story of greater political engagement. Nigeria's 1976 universal primary education reform, which also increased secondary enrollment, led affected individuals to consume more political news and become more likely to vote and participate in community meetings (Larreguy and Marshall 2017, *REStat*). My ongoing book project establishes similar results in Mexico after the PRI's hegemony. Although less-educated citizens may be under-represented, these major education reforms created a foundation for political accountability.

In contrast, educated voters act quite differently when participating in democratic institutions is viewed as inconsequential or as legitimizing a broken system. In Croke, Grossman, Larreguy and Marshall (2016,

[5]The latter effect is not unique to actors within the state; in a new paper coauthored with one of my advisees, Lucas, Marshall and Riaz (2023, wp) shows that drug cartels pressure the media to mute rather than publicize their activities.

APSR), we introduce the concept of "deliberate disengagement." In Zimbabwe's paradigmatic electoral authoritarian regime, we show that a comparable secondary education reform led educated citizens to participate *less* in elections and local governance. While education increased news consumption, labor market prospects, and democratic values, as it did in Nigeria, we argue that these better-informed voters with greater expectations of democracy disengaged because they viewed participating in Mugabe's repressive regime as futile. Supporting this theory, the educational participation gap narrowed during Zimbabwe's democratic opening in 2008. The extent and scope of this institutional contingency are avenues I intend to study further.

Whereas education shapes the essence of political participation in young democracies, I find that it more narrowly affects distributive preferences in established democracies. In the UK and US, additional years of secondary education substantially increased support for the Conservative and Republican parties later in life (Marshall 2016*b*, *JOP*; Marshall 2019*a*, *AJPS*). Contrary to consternation among conservatives that schools instill liberal values, I show that secondary education's enduring effects are driven by hard-nosed economic incentives. In both countries, educated citizens earned more and opposed taxation (while working), but political engagement, spending priorities, and socially liberal values were unaffected. In Cavaille and Marshall (2019, *APSR*), we further find that additional years of secondary education increased tolerance for immigrants—who typically compete for lower-wage jobs and complement workers with greater human capital—in Western Europe. Suggesting that political context moderates these distributive economic motives, this division emerged in the UK with the rise of populist anti-EU parties.

1.4 Contributions to quantitative methodology

Beyond applying quantitative methods, my substantive research has inspired theoretical and practical contributions to observational causal inference, experimental design, and measurement.

Most recently, I dissect a method used in more than 100 published articles to investigate whether the characteristics of elected politicians matter (Marshall 2024*a*, *AJPS*). What I've termed politician characteristic regression discontinuity (PCRD) designs compare outcomes of interest across districts that narrowly selected politicians who differ in an observable characteristic X—such as gender, education, or party affiliation—from the candidate they defeated. Many papers suggest that, by virtue of receiving almost identical vote shares, PCRD designs allow researchers to isolate effects of characteristic X on downstream outcomes relating to government responsiveness, electoral success, or citizen participation and welfare.

However, I show that this application of the regression discontinuity design bundles effects of multiple characteristics for two reasons. The obvious reason is that politicians possess correlated characteristics, e.g. women are more likely to be Democrats. But I also highlight a subtler source of treatment compounding that PCRD designs introduce even when X is randomly assigned: if, for example, electorates discriminate against women, then—by conditioning on a close race—women who narrowly win must possess compensating differentials that appeal to voters, e.g. being unusually competent. Rather than isolate the causal effect of X, PCRD designs thus identify effects of a heterogeneous bundle of (observed and unobserved) characteristics accompanying politicians of type X. In contrast with standard discontinuity designs, analysts must then either impose strong additional assumptions to identify effects of characteristic X or embrace a bundled treatment that may be policy-relevant but less useful for testing theoretical mechanisms. This paper's quickly accumulating citations suggest it has helped to clarify the limits of what PCRD designs can and cannot say about the effects of electing particular types of politicians.

My other methodological contributions similarly address common problems facing applied researchers. One theoretical paper characterizes "coarsening bias"—a source of upward bias which emerges when using an instrumental variable to estimate effects of a multi-valued treatment variable that a researcher dichotomizes (Marshall 2016*a*, *PA*). I prove that this arises because the instrument activates effects at treatment intensities not captured in the first stage, and thus violates the exclusion restriction. Other more practical in-

novations include developing cluster-robust variance estimators for the two-sample instrumental variable methods I used to estimate education's effects (Marshall 2019*a*, *AJPS*), generating local TV audience predictions from aggregated marginal distributions (Kronick and Marshall 2024, wp), and pioneering the experimental use of antennae in Nigeria that obviate the need to work with many media outlets or bundle exposure to all of a radio station's programming by replacing specific programs within a small radius.

2 Teaching

Beyond offering a thorough grounding in classic and frontier topics in comparative politics and political economy, my teaching philosophy is to provide students with a lifelong analytical toolkit. These tools empower students to develop and evaluate sound arguments in their academic, vocational, and political lives. To do so, I lay out various (often-competing) theoretical approaches for analyzing salient issues, instill the importance of trading off competing objectives to discern between potential solutions, and explain how to evaluate and produce evidence. I bring classes—and even problem sets and exams—to life by centering them around topical applications of key theories to help students apply rigorous and precise abstract reasoning.

The analytical skills I cultivate in the classroom aim to prepare students to become effective decision-makers and leaders. The jobs in public policy, finance, law, and data science that many Columbia students aspire to routinely require individuals to absorb, structure, and critically assess large amounts of information in limited time-frames, often before having to act on it. Beyond instilling durable general skills, I help students form personal political opinions in considered ways—even inspiring several students to pursue careers in economic and social justice—and devise research questions for undergraduate theses or graduate study. My course evaluations and students' frequent requests for letters of recommendation in pursuit of further study suggest they enjoy and benefit from this approach.

2.1 Undergraduate teaching

My three undergraduate classes reflect the analytical emphasis just described. The media and politics seminar begins with theories of why citizens become informed about politics, how they process news, and what citizens need to know to participate effectively. I then encourage students to apply these frameworks to structure discussions—and write final papers conducting original research—about the causes, effects, and implications of electoral accountability, media bias, protest, production and censorship of news, political polarization, and misinformation. My two undergraduate political economy lecture classes similarly link individual-level theories of collective action, belief formation, and principal-agent relationships to macro phenomena such as political participation, democratic representation, and economic development.

Undergraduates can initially struggle with the rigorous concepts and papers I teach. Drawing from the more critical reviews I received when I first taught the Political Economy class required of Economics and Political Science joint majors, my lectures have evolved to begin from recent cases that connect abstract theories to contemporary debates and I now use initial lectures and recitations to ensure students with rusty mathematical backgrounds avoid getting lost. Students often still describe my courses as demanding, especially in the mid-semester reviews I conduct. But, by the end of the semester, most come to appreciate the analytical skills they have developed and their ability to apply them to real-world problems.

2.2 Graduate teaching

I teach three classes tailored to PhD and master's students. Every other year, I teach the first half of the year-long comparative politics field survey class. This seminar shapes expectations of what academic research looks like, emphasizes the value of different approaches and methods, and prepares students for comprehensive exams. It can be challenging to teach due to students' diverse entry points into PhD programs. Accordingly, I shape class discussions to balance broad understanding of core concepts through clear exposition of key arguments with encouraging active and inclusive discussion that builds students' confidence

and helps them develop constructive responses as well as critiques. As student evaluations attest, I go out of my way in office hours and in personalized essay feedback to encourage and support students struggling with the transition to a PhD program. The final week is a Q&A session devoted to providing advice and answering the many questions students have about what to expect and how to succeed in PhD programs.

I am especially passionate about my two-class comparative political economy sequence, which focuses on cutting-edge topics and applying game theoretic and statistical tools with the aim of kick-starting students' research. The first class explores the foundations of citizen behaviors (collective action, belief and preference formation, culture and identity, accountability and representation, and social networks), while the second class analyzes elites (politicians, bureaucrats, media outlets) and institutions (e.g. state capacity, democratization, electoral rules). Both emphasize applying theoretical models to interpret empirical findings. To do so, the seminar oscillates between weeks of theory and empirics on a given topic and both classes shift from reading to applying these tools in a replication assignment and original research paper/proposal. These classes form the basis of a political economy textbook I hope to write in coming years.

2.3 Advising and mentoring

I am deeply committed to training and mentoring the next generation of scholars. As an approachable faculty member with broad research interests and recent training in formal and quantitative methods, I have become one of my department's most in-demand PhD advisors—both for our best students and those who had felt lost in the program. Providing support from feedback on early ideas to advice on submitting papers for review, I am proud to have helped 18 former advisees place well in academic and non-academic positions and intend to continue doing so for the 11 students whose dissertation committees I currently serve on.

In addition to advising and mentoring, I believe students benefit from collaborating with faculty. Rather than hiring graduate students as research assistants, I help students learn the craft of designing, analyzing, and framing research by including them at each stage of the research process and helping them to publish coauthored work early in their careers. I have now collaborated with 10 graduate students at Columbia, thus far yielding publications in the *American Journal of Political Science*, *PLoS One*, and *World Politics*. I hope to eventually lead a "lab" structured around the dual goals of conducting group projects, like the COVID-19 vaccine uptake research project I initiated during the pandemic, and providing a forum and commitment mechanism for my advisees to regularly present their research in progress as well as discuss how political science theories and methods could illuminate topical issues.

3 Service

Beyond my teaching and advising, I have served and helped to build academic communities in various ways listed on my CV. Within my department, I have served on three faculty search committees, taken my turn to run comparative politics and political economy external speaker series, regularly participated in our PhD admissions committee, taken a leading role in modernizing our department's quantitative methods training, served as a panelist for student professionalization workshops, and organized five conferences. I have also advocated for junior faculty across the university as a member of the Junior Faculty Advisory Board (only leaving my two-year term after a year due to the birth of my daughter).

Beyond Columbia, I serve the broader fields of political science and economics. I conduct $\sim$20 peer reviews across both fields a year and co-convene two regional academic networks. In the Northeast Workshop in Empirical Political Science (NEWEPS) and Political Economy of Latin America (PELA) groups, I have organized conferences to showcase cutting-edge research (especially by students on the academic job market) and led efforts to increase the appeal, inclusiveness, and transparency of these organizations. The intersection of my research between academia and policy has also led me to consult, provide training, and conduct reviews for BBC Media Action, Internews, JPAL, the Mercury Project, USAID, and the World Bank.

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