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COLUMBIA UNIVERSITY

Election Administration and the Role of Higher Education FEBRUARY 2022

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ACKNOWLEDGEMENTS

We are grateful to those who participated in a series of meetings on election administration for their continued collaboration and commitment to this effort, and to Columbia World Projects colleagues for their contributions, advice, and overall support. We also thank our student assistant, Sarah Moon, for conducting valuable research that informed the report's contents.

ABOUT COLUMBIA WORLD PROJECTS

Columbia World Projects (CWP) is a university-wide initiative that forges close connections between Columbia University's scholarly capabilities and efforts to address significant challenges regarding democracy, urbanism, cross-generation responsibility, and thriving communities in the United States and across the globe. CWP's activities include targeted convenings and projects and efforts to advance connections between rigorous knowledge and effective action. 4

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FOREWORD

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Deputy Director, Columbia World Projects and Ruggles Professor of Political Science and History, Columbia University **Building Trust** proposes that higher education should mobilize to buttress America's system of elections, the central mechanism that realizes the once-radical idea that sovereignty rests with the people. This report's call to assemble and rally academic talent and capacity in partnership with persons who conduct the system for voting rests on the understanding that trustworthy, and trusted, elections are essential to constitutional democracy.

Elections make manifest the will and intentions of voters, and thus provide legitimate foundations for lawmaking and public administration. Elections designate leaders under conditions of uncertainty. Unless citizens believe the procedures for voting and the certification of results are fair; unless they can count on reciprocal trust by contestants for power; unless the process is impartially monitored for irregularities and corruption; and unless a commitment to the results by the contending

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parties is credible, the willingness of citizens to accept leaders, laws, and executive actions, especially those they do not prefer, is called into question. There is ample evidence that persons who believe institutions proceed fairly are much more inclined to accede to personally unfavorable decisions and policies.

Successful democracies are based on popular consent tethered to systems of rights, representation, and the rule of law. Every one of these political ideals is conditional on electoral arrangements that manifestly are fair, inclusive, and transparent. None of these features is self-propelling. Each is produced by institutional design. Elections depend on arrangements that ensure open debate, the availability of relevant ideas, and clarity about the issues at stake. Voting also rests on basic, even mundane, practical decisions, including the design of ballots and the mechanical and electronic means that are utilized to accurately receive and record the vote, and on means to hold to account officials who direct and manage the electoral process.

The individuals responsible for running elections need and deserve normative and practical support as they organize

and navigate the electoral system. The environment within which they perform their essential tasks is inherently contentious. Precisely because elections are so central as procedures, and because so much is at stake, not least the peaceful selection of leaders and clusters of policies, the very system for choice is frequently beset with controversy. In the recent past, there have been major concerns with inequalities and invidious discrimination, fears of illicit interventions and outright manipulation by foreign states and actors, alarms about distortions in the marketplace of ideas through opportunities for mischief created by new technologies of communications, and risks of authoritarian actions to undermine the standing of elections, challenges that go well beyond healthy skepticism. Trust destroyed is difficult to recapture.

Despite their centrality to our democracy, elections are not attended to or supported at the level demanded by something so vital. One reason concerns the country's constitutional federalism. Elections are overseen almost exclusively at the state and local levels. Resources, skill levels, and degrees of political support for robust and effective election arrangements thus can vary from place to place. Moreover, since elections are episodic, problems that occur are often noted at the moment but then are overtaken by other issues before effective remedies are put in place.

The great strength of the decentralized system is its possession of trustworthy foundations. Elections in the United States are conducted with great integrity by enormously capable and dedicated public servants. These very positive realities make the role for higher education delineated in *Building Trust* so very promising, especially at a moment when the electoral system is being questioned, and when it must confront no small set of practical and political challenges.

In this situation, a significant prospect beckons for universities to advance a great public good. Given the central importance of elections, and given the fact that their viability is completely dependent on not being partisan, the opportunity for colleges and universities to serve the public good is considerable. To date, in the main, higher education has not sufficiently offered its distinctive talents and capacities to those who conduct our elections. Within our campuses, scholarship on the practice of elections, as distinct from assessments of partisanship and political behavior or of constitutional law, is rather narrow, peripheral even within the most relevant academic fields and disciplines, notably law and political science. Thus a more robust relationship characterized by direct engagement between scholars and practitioners of the kind proposed in this report with the primary aim to strengthen the system of elections also promises to extend and deepen university-based scholarship and teaching.

Presently, American higher education is looking to discern more ways to advance the public good, in addition to achieving the traditional missions of research and teaching. At our university, Columbia World Projects, the site of convening and engagement that has generated *Building Trust*, is playing a principal role to realize this ambition. Not just at Columbia, of course, but across the country, our academic institutions will not find a more compelling opportunity than elections to strengthen American democracy.



EXECUTIVE SUMMARY

Building Trust advances recommendations in the public interest for more effective engagement by higher education institutions with election administrators to help buttress trustworthy election administration processes, strengthen the resilience of U.S. election infrastructure, and improve trust in election outcomes. The report is premised on the tenet that colleges and universities possess the capacity and the responsibility to reinforce trustworthy and trusted electoral systems.

The recommendations in this report are organized around a core set of ambitions. These include sustaining and increasing collaboration between academic researchers and election officials by crafting vibrant networks, improving data collection and data sharing practices, and promoting the study of election science across a more diverse range of institutions, disciplines, and researchers.

These suggestions fall into four principal categories:

Promote academic consultations with election officials. Universities should sustain and expand forums for election stakeholders and researchers to convene and discuss design deficiencies, administrative shortfalls, and innovative practices with the aim of offering under-resourced election offices guidance borne of rigorous expertise.

2. Reshape research practices to better serve election departments. Election science scholars should attune their research agendas, data collection, and visualization methods to the requirements and schedules of administrators to increase the probability that insights emerging from scholarly analyses will translate into procedural and administrative improvements.

3 Diversify institutions engaged in election research. The field of election science should reflect the diversity of the nation's voters. A wider range of academic institutions, including land-grant universities, Historically Black Colleges and Universities, and community colleges, should become key participants in this work. Additionally, these institutions should forge new pathways geared to recruit a more diverse generation of academics to work on issues concerning election administration.

Invest in higher education-election administration partnerships. Significant investment
 by government and philanthropy is required to increase engagement by a greater array of universities, disciplines, and faculty and increase the number and depth of partnerships with practitioner groups and persons who administer the electoral system.

The report's analysis and recommendations were developed within the framework of two convenings where Columbia World Projects (CWP) gathered election officials, practitioners, and scholars, resulting in a bi-partisan group of 42 experts, including four secretaries of state. Their deliberations highlighted the roles and responsibilities of election science scholars and higher education institutions more broadly, pinpointing how they might promote innovation in administration to enhance election security and public trust.

INTRODUCTION

In the wake of the 2020 presidential election, Columbia World Projects (CWP) organized two convenings in spring 2021 with election officials, practitioners, and scholars to appraise the resilience of the nation's election administration system—even as trust in the process was eroding. The meetings gathered leading experts and practitioners across party lines; they included secretaries of state, local election officials, leaders in civic technology organizations, election administration advocacy groups, and academics from a range of universities, each with distinct perspectives and experiences. Notwithstanding the polarized political climate, accusations of irregularity, and complexities generated by the COVID-19 pandemic, the group collaborated to examine existing fragilities and opportunities to strengthen the country's democratic infrastructure. Participants were keen to secure a voter-centric system that promotes access, election security, and transparency. They also sought to preserve gains, including experimentation at state and local levels that provided insight into opportunities to strengthen the system, support local election offices, and help smaller jurisdictions come together to scale innovations. These discussions underscored opportunities to rethink and improve the institutions and practices undergirding our election system.

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Among other matters, the participants examined the high variation of local election standards to begin pinpointing measures for improved election laws, policies, and practices. If the focus was on how to build resilience within election administration, participants at these convenings continually returned to the role of universities in supporting local election officials, identifying how researchers and institutions of higher education have engaged—and can further engage—the system to spur innovation and restore public confidence in the integrity of vote counts.

This report has two sections. The first reviews the robust role universities have played in supporting election administration. The second suggests how these activities might be enhanced in ways that will address obdurate challenges and the decline of trust in the system, with long-term implications for the perceived legitimacy of election administration and outcomes. The task is urgent. Unaddressed, waning public confidence in elections will be corrosive for American democracy. As a source of knowledge and public education, higher education offers a significant means to assess and renew fundamental democratic infrastructure.

The following questions animate this report:

What is the appropriate place of universities in election administration?

What is the role of universities in bolstering public confidence in election protocol, processes, and outcomes?

How might the study of elections be amplified so that evidence-based solutions are translated into actionable interventions adopted by election officials?

I. UNIVERSITY SUPPORT FOR ELECTION ADMINISTRATION

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As institutions tethered to local communities, universities are a significant avenue for public education and knowledge generation. Across higher education, many institutions have been renewing and reviewing place-based civic infrastructure by conducting vital work to improve elections. By apprehending the existing range, we can discern pathways for enhancement, which is the focus of the recommendations in the following section.¹

ASSESSING AUDITING TECHNIQUES AND AUDITORS

Universities are continually researching auditing technologies and methodologies to improve the accuracy of current methods and devise new, more efficient review processes.² For instance, Rice University and Clemson University research revealed that hand-counting ballots during recounts or postelection tabulation audits may produce significant errors.³ The study is one of several pointing to the need for more effective and cost-efficient audits, providing support for the adoption of more rigorous, risk-limiting techniques. The Brennan Center for Justice at New York University directs a project promoting these techniques involving state-level pilot studies of audit methods.

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These efforts are vital to local election offices, as participants representing these offices noted at our convenings. While auditing technologies and methods may bolster confidence in the act of certification, by the same turn, the very complexities of these risk-limiting systems and the requirement for high degrees of numeracy to understand the methods and findings do little to strengthen public trust in these systems.⁴ A challenge before university-based efforts is to experiment with activities that strengthen confidence in election outcomes among both election administration officials and broad publics. Doing so might require becoming as proficient in communicating research findings to the broader public as scholars are in applying statistical models to voting data; it certainly requires researching and addressing distrust with the same rigor.

> "A challenge before university-based efforts is to experiment with activities that strengthen confidence in election outcomes among both election administration officials and broad publics"

LEGITIMIZING AUDIT RESULTS

12%

reduction from 2016 to 2020 in overall confidence that one's personal vote was accurately tallied.

The 2020 presidential election generated unusually pronounced levels of distrust.

Source: https://www.voterstudygroup.org/ publication/crisis-of-confidence.

Post-election periods are critical for election administrators. In addition to the demands of routine audits, possibilities for automatic recounts and litigious battles are sources of strain for resource-strapped election offices. Academic partnerships and appraisals of local auditing procedures can help administrators rebut election conspiracies that have ballooned recently. One convening participant pointed to the pilot partnership between the Caltech/MIT Voting Technology Project (VTP) and the Orange County Registrar of Voters (OCROV) as a model for mutually-beneficial collaborations that might lessen or discredit claims of fraud. In 2018, the project tested election auditing methodologies during the primary and general elections with the goal of creating performance measurement tools for uptake by the OCROV.⁵ As noted by the participant, this project, "Monitoring the Election," resulted in reports which the Orange County Registrar regularly references when refuting present-day accusations of partisan misconduct.

CREATING AND AGGREGATING ELECTION TOOLS

Election science researchers develop resources to inform the planning and implementation of elections and improve the voter experience. The Stanford-MIT Healthy Elections Project, created to promote safety and equal access throughout the 2020 elections, aggregates tools for managing ballots, designing healthy in-person polling places, and collecting data. Pinpointing accessible and equitable locations for inperson polling places is the aim of the Voting Location Siting Tool, developed and maintained by the Center for Inclusive Democracy (CID) at the University of Southern California. This operational support tool uses a web-based interactive data mapping system to locate areas where the broadest array of voters might access polling sites. The University of Rhode Island Voter OperaTions & Election Systems (URI VOTES) was created after the 2016 presidential election to facilitate shorter voting lines through the use of simulation models. It offers election officials a variety of digital tools, based on substantial, long-term research projects, to track their onsite voting operations and create system flow simulations of Election Day operations. Similarly, the Voting Technology Project's Election Management Toolkit helps election workers assess whether their resources are sufficient to handle expected Election Day voters through the use of digital calculators. The emergence of customizable, easy-to-use resources has optimized local preparation for and response to what was once much of a guessing game: anticipating voter turnout.6

ORGANIZING CONVENINGS

"For every vital voice in political science and law that has strengthened the rigor with which elections are both studied and implemented, there are many more in relevant fields ranging from computer science to history who are not yet engaged in issues related to election administration" Academic conferences forge connections between election researchers and practitioners. Regular gatherings, such as the annual Election Sciences, Reform, and Administration conference, allow attendees to access new research and debate pressing issues facing election officials. These efforts foster collaborations of various kinds even though this academic community remains of limited size and occupies a relatively small subfield of law, political science, and public administration. While conferences help to build the field of election science and develop networks that link university researchers to election officials, they commonly feature a set of experts from a discrete set of disciplines and approaches. For every vital voice in political science and law that has strengthened the rigor with which elections are both studied and implemented, there are many more in relevant fields ranging from computer science to history who are not yet engaged in issues related to election administration. The level of attention given by academia is not yet commensurate with the importance of this topic, which is foundational to democratic norms, institutions, and practices. There is ample opportunity to attract a broader range of researchers and academic institutions to contribute to this emerging field, develop curricular materials, expand election administration research, and make it more widely available. Collecting information on how those engaged in

CONDUCTING ANNUAL SURVEYS

elections see the evolution of their roles and the field as a whole is at the core of long-term improvements to election administration. The decentralized structure of U.S. election administration, in which state and local officials carry out elections through practices that differ according to jurisdiction, makes the need to gather localized insights more critical. The Democracy Fund-Reed College Local Election Officials (LEO) survey, which aggregates and analyzes responses from a random selection of local officials nationwide, is one of several projects aiming to capture the collective experience of this workforce. Until recently, local officials received insufficient attention from researchers. While the LEO Survey is a promising effort, more qualitative research is required to understand how current officials and their staff consider their positions compared to other forms of governmental work.⁷ MEDSL's Survey of the Performance of American Elections (SPAE) operates at the other end of the spectrum, taking stock of voter behaviors and perspectives from year to year. This information is vital because there is a lack of consistent data representing this country's long history of election administration. It is challenging to understand which trends are a constant feature of our election system and which represent changing dynamics without a longer arc of data to support analyses. Moreover, efforts to continually improve voter access, election security, and election integrity depend on such data.

SERVING AS A CLEARINGHOUSE FOR ELECTION DATASETS

At the forefront of data collection, a number of universities develop and aggregate open election-related data sources for public use. Key datasets include those from the Voting Technology Project's Dataverse, statistics on voter turnout from the University of Florida's United States Elections Project, and MEDSL's GitHub repository of software tools to access election data through select programming languages. In addition to advising Indiana election authorities on the technical certification of voting equipment and poll worker training, Ball State University's Voting System Technical Oversight Program (VSTOP) is home to a database of all voting machines used in Indiana.

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PROVIDING ELECTION TRAINING AND CERTIFICATION PROGRAMS

While professional certification and continuing education programs for current and prospective election officials are scarce, two programs at Auburn University and the University of Minnesota provide up-to-date training on the legal, technological, and organizational aspects of election work. In Minnesota, the Hubert H. Humphrey School of Public Affairs offers both post-baccalaureate and undergraduate certificates in election administration. The programs were designed in response to the Presidential Commission on Election Administration's 2014 report urging universities to "integrate election administration into their curriculum" to expand expertise in the field.⁸ In collaboration with the National Association of Election Officials (also known as the "Election Center"), a nonprofit providing election administrators with professional services, Auburn University oversees continuing education units as part of the Election Center's Professional Education Program. Auburn University also offers a Graduate Certificate in Election Administration within its MPA program. Other post-secondary institutions are home to election-related courses, which are detailed in a continually-updated list maintained by the Network of Schools of Public Policy, Affairs, and Administration (NASPAA). At times, universities have partnered with local election offices to tailor training programs to the needs of officials. Such was the case with Towson University, which partnered with the Anne Arundel County Board of Elections to design digital modules that instructed election judges on points of election cybersecurity, modules which other counties across Maryland later deployed.⁹

There are opportunities to expand these efforts. One option is to create a consortium of regional universities that might offer professional certification programs for election officials. Another is to develop university-credentialed suites of training and certification modules that provide instruction in the rigorous use of credible data, attend to the rapid evolution of election law, focus on the history of voting access, and examine distinct legal and technological challenges facing election offices, as well as emerging challenges relating to public trust.

Well-run elections depend on sufficient anticipation of potential problems at the level of local election offices, as these efforts support. Local civic institutions tend to enjoy a higher degree of public trust than their national counterparts, and academic partnerships with local offices help maintain this trust by supporting the efforts of local election administrators to implement thoughtful, responsive systems.

> "Well-run elections depend on sufficient anticipation of potential problems at the level of local election offices"

I. RECOMMENDATIONS

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The recommendations summarized here concern opportunities for higher education to enhance support for election administrators and place-based election systems. These suggestions advance collaborations between universities and election offices, amend academic practices within election science, and broaden the institutions and group of researchers informing election administration.

RECOMMENDATION 1

PROMOTE COLLABORATIONS AMONG ELECTION SCIENCE SCHOLARS AND ELECTION PRACTITIONERS

It is essential to generate and support increasingly robust networks between academics and those operating in the realm of election administration, from public officials to private vendors. Universities can serve as sites for cross-sector collaboration, where election officials, researchers, and advocates come together to share expertise, grapple with common problems, and advance reforms. One example is the Election Integrity Partnership, a coalition of research entities devoted to detecting and combating efforts to suppress voter participation and delegitimize election results. Formal and informal opportunities for sustained communication and data exchange among these groups could prompt new thinking and long-term innovations at election departments nationwide.

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Create a program modeled on the Department of Agriculture's Cooperative Extension System (CES) to institutionalize networks and best practices at the local level.¹⁰

The CES is a national educational network that responds to community needs through the provision of higher education and evidence-based technical instruction for local farmers. Through the system, university faculty transmit agricultural insights from their research into actionable lessons.¹¹ Establishing a similar program to reinforce the work of local election officials with targeted academic consultations would link the latest research discoveries with the communities from which they emerge. As primarily technical institutions serving regional communities, community colleges can occupy a central role in this system by harnessing existing expertise and partnering with universities, aligning the place-based strengths of community colleges with research capacities in universities that have already invested in the field of election science research.

"Universities can serve as sites for cross-sector collaboration, where election officials, researchers, and advocates come together to share expertise, grapple with common problems, and advance reforms"

RECOMMENDATION 1

Locate cross-agency partners, including those from nonprofit, philanthropic, advocacy, and civic technology sectors to serve as intermediaries between election researchers and election officials.

Given some misalignment between the objectives of election workers on the ground and research-intensive university faculty, more conducive collaborations might occur if academics directly partner with nonprofit stakeholders such as the Center for Civic Design, the Center for Technology and Civic Life, and the National Vote at Home Institute, regarded as some of the most trusted voices in the application of best administrative practices. While election researchers are often in search of, according to one participant, "high-powered randomization opportunities," election workers on the ground need practical enhancements. Having stakeholders who focus on actionable improvements to the voting experience filter between these groups is one way to proceed.

Another pathway is more direct, with the problems faced by local offices addressed through academic partnerships between researchers and election officials rather than intermediary organizations. Collaborations between external organizations either aligned with a political party or engaged in advocacy work would spell peril for these officials; civil servants risk being maligned for their association with partners regarded as overtly political. Respecting the boundaries of engagement between 501(c)(3) and 501(c) (4) organizations is a constant challenge for the election community. Academics must be cautious when negotiating the lines among organizations providing generalized expertise, advocacy, and assistance, particularly when operating in the realm of election cybersecurity.

Coordinate with private-sector vendors working with local election jurisdictions. By offering

evaluative support to election vendors, such as registered voting system manufacturers, researchers might help election officials tackle endemic scalability concerns in which the sheer number and variation of local election offices yield resource inefficiencies and standardization difficulties. One model for this work is an ongoing webinar series between a voting system manufacturer and Auburn University exploring election accessibility and security issues.

> "Academics must be cautious when negotiating the lines among organizations providing generalized expertise, advocacy, and assistance, particularly when operating in the realm of election cybersecurity"

RECOMMENDATION 2

MODIFY ACADEMIC APPROACHES TO DIRECTLY RESPOND TO THE NEEDS OF ELECTION OFFICIALS

Due to the difficulties election departments experience in allocating scant resources, convening participants stressed the importance of increasing data collection and attuning research to practitioners' immediate concerns. With more data on election participation trends, additional opportunities may arise for election officials and administering organizations to implement process improvements to voter registration protocols, dropbox usage, and polling place layout. Regarding these matters, schools of architecture, departments of sociology, economics, and engineering might all play crucial roles. Some of these collaborations are already taking place, but not at the required scale. We thus urge the following role for university-based researchers:

Engage in more robust qualitative election research. According to several

participants, the academic community should focus on having direct conversations with election workers at every level of election administration organization. Linking big statistical datasets with information derived from in-depth interviews and focus groups might help close well-documented gaps in administrative research on the motivations and experiences of this workforce, including questions surrounding the attrition rate of election workers¹² and how "recruitment and advancement in election administration helps or hinders diversity."13 Other qualitative research, including regular surveys with both election officials and voters on questions of confidence, partisan affiliation, and their possible correlation with auditing practices might inform reforms aimed at enhancing trust in election outcomes.14

Undertake an oral history initiative with retiring election administrators. The 2020 Elections

Oral History Project, created by the Stanford Internet Observatory, is one model for capturing and communicating the distinct experiences of officials charged with administering the 2020 election. With the imminent retirement of more than a quarter of all election administrators, there is urgency in capturing lessons learned by experienced election workers that can be incorporated into teaching modules and efforts to strengthen the election administration system. These lessons, crucial to the efficient management of well-run elections, risk being lost as retirements cascade across election offices.

RECOMMENDATION 2

Prioritize collecting data on a broader set of election workers

than is typically the case, including temporary volunteers and lower-level staffers within election offices—who are left out of nearly all surveys—to understand better where academic study is most needed.¹⁵ The Democracy-Fund Reed College survey of local election officials currently does this work, but the project is limited to collecting information from the single official in charge of election administration within each jurisdiction, stopping short of employees reporting to these officials, as well as volunteers.

Generate actionable data without

straining election departments, which is essential to securing sustainable and successful academic partnerships. For example, the Voting Technology Project in California endeavored to reduce the resources the Orange County Registrar of Voters would need to assign to their collaborative research project by using data the Registrar's office had available at the time, along with data that could be produced and assessed without the election office's involvement.¹⁶ Crossfeed, a vulnerability management tool developed by the Cybersecurity & Infrastructure Security Agency (CISA) and the Defense Digital Service, similarly collects data in a "passive" manner, scanning publicly available resources, data feeds, and open-source tools to provide information on cyberthreats faced by various organizations. Instituting non-intrusive data collection practices is key to ensuring that data providers maintain strong relationships with the researchers tasked with collection and analysis.

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Communicate and visualize data so the public might better comprehend the election process.

While exposure to accurate information and datasets may not be enough to alter public opinion,¹⁷ it is the first step to correcting prevailing misinformation. With this in mind, election data should be used to raise the credibility and efficacy of election functions. Without providing context around election data, it may be subject to misinterpretation and misuse. One participant noted that fears around mobilizing data to discount or criminalize local election operations might hamper academic analysis until or unless legal action occurs. To assuage election officials' concerns about working with researchers, universities could sponsor workshops with local election offices to demonstrate their ability to address everyday problems faced by officials. If academics can "give first," in their words, election workers might be more apt to share their data. CISA's Guide to Vulnerability Reporting for America's **Election Administrators lays out a sequence** of steps election officials can take to optimize engagement with cybersecurity researchers so that they can quickly and transparently secure their electronic voting systems while

advancing the research objectives of their partners. Similar instructions outlining principles for reciprocal collaborations between election offices and research entities are encouraged. An alternative strategy adopted by the Center for Civic Design is to show how to solve problems in election material design with examples that can inspire change and offer practical, wellresearched templates and guidance to act on that inspiration.

Coordinate research schedules to synchronize with periods when election officials can implement recommendations derived from

analyses. Research should take place off-cycle before preparation begins for the next election. For example, promptly reviewing findings from the 2020 elections, rather than a few months before the midterm congressional elections in 2022 or the 2024 presidential election will provide administrators with sufficient time to trial necessary procedural changes.

RECOMMENDATION 3

BROADEN AND DIVERSIFY THE INSTITUTIONS AND RESEARCHERS ENGAGED IN THE STUDY OF ELECTIONS

Election administration often is regarded as a niche subdiscipline at the intersection of public administration and political development. Historically, election science has not been appreciated and rewarded commensurate with its importance in preserving the most fundamental aspect of a democratic society. This standing is due, in part, to perceptions of the field's practical orientation, which is often at odds with prevailing theory-driven approaches adopted by political scientists and social scientists more generally. In addition, a scarcity of scholars and their concentration in particular regions across the United States limits the ability of researchers to thoroughly assess local variations in election management and where improvements are needed. Participants thus encouraged broadening current university sites for election science research and the individuals engaged in this work.

"Election science has not been appreciated and rewarded relative to the discipline's importance in preserving the most fundamental aspect of a democratic society"

Provide incentives for publication and data collection opportunities in election science through university seed grants and similar initiatives.

In addition to funding, which would signal university priorities, it is essential to foster occasions for publication and applied research for early-stage scholars if the field is to expand and attract new, diverse generations of talented researchers. Hire more broadly in the field of election science. Even when universities serve as trusted intermediaries in a space where there is a trust deficit—bringing longstanding non-partisan name recognition, knowledge, expertise, and local assets-there is a perceived elitism of the actors involved in election administration reform and policy. A wider range of universities and a more diverse generation of researchers engaged in this work would help stem this perception while simultaneously drawing vital new perspectives into election administration research. Consortia gathering together land-grant universities, rural colleges, Historically Black Colleges and Universities, and community colleges alongside the current institutions that more frequently occupy this space, can help bring a broader array of perspectives to this work as trusted intermediaries and generate greater regional representation.

RECOMMENDATION 3

Encourage location diversity in the study of election science. To correct the absence of rural representation in national discussions of election administration, universities should support research partnerships with rural election offices. These entities face challenges often overlooked by the election community, from collecting ballots in areas where post offices, mailboxes, or ballot drop boxes are scarce to meeting voters' unique language access needs. Recruiting smaller universities or community colleges, often home to departments pursuing applied design and technological approaches, offers means to improve the study of election administration in local contexts. It may also bridge gaps in understanding rural election management models and elevate the work of a wider range of academic institutions.

Generate opportunities for undergraduate students and faculty to work directly with election

officials. Encouraging poll worker service is one way of increasing contact between these groups, as could be courses co-taught by faculty and election administrators.

Promote the scientific study of election administration and technology across a greater range of academic disciplines, from design schools to schools of public administration, from computer science and education to law, political science, and sociology, to expand the scope of research concerns animating scholarly engagements. This goal might be accomplished by providing election-related curricular materials and incorporating this material into diverse syllabi, such as courses in computer science, exposing new students to the field. Integrating election science subject matter into the undergraduate lecture hall could prove indispensable in generating interest in how elections are managed.¹⁸

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"Integrating election science subject matter into the undergraduate lecture hall could prove indispensable in generating interest in how elections are managed"

RECOMMENDATION 4

INVEST IN HIGHER EDUCATION-ELECTION ADMINISTRATION PARTNERSHIPS

Higher education has an under-realized role to help advance trustworthy, and trusted, election arrangements that promote access, equity, security, and transparency over the long term. This role requires investment both *by* and *in* universities.

These institutions should make significant investments to help train, support, and upskill election workers, nurture new generations of election science researchers from the full range of relevant disciplines, and find means to convene and support senior elections administrators.

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Reciprocally, we endorse the recent call issued by Securing the Vote: Protecting American Democracy, a significant report from the National Academies of Sciences, Engineering, and Medicine that calls on Congress to "authorize and fund immediately a major initiative on voting that supports research relevant to the administration, conduct and performance of elections." Such an initiative will require sustained, long-term investments in the field of election science, in efforts to broaden who participates in this venture, and in work that deepens existing university-based activities. To the extent universities in partnership with elections administrators act to secure a trustworthy system based on rigorous knowledge and practical expertise, they will advance well-earned trust in democratic norms and institutions. It is hard to think of a more pressing task.

ENDNOTES

- 1 This overview is limited to interventions to improve election administration. University-based election projects centered on dispelling election misinformation across a variety of platforms, both public and private, are beyond the scope of this report. See "The 2020 Election Integrity Project" for an example of this type of research at Columbia University.
- 2 One effort to translate the academic insights on new auditing techniques into practical guidelines for election administrators is Democracy Fund's "Knowing It's Right" toolkit (one feature of the Fund's Election Validation Project).
- 3 Stephen N. Goggin et al., "Post-Election Auditing: Effects of Procedure and Ballot Type on Manual Counting Accuracy, Efficiency, and Auditor Satisfaction and Confidence," *Election Law Journal: Rules, Politics, and Policy*, March 2012, https://www. liebertpub.com/doi/full/10.1089/elj.2010.0098.
- 4 Charles Stewart III et al., "Election Auditing: Key Issues and Perspectives," MIT Election Data + Science Lab & Caltech/ MIT Voting Technology Project, 2018, http://electionlab.mit. edu/sites/default/files/2019-06/Election-Auditing-Key-Issues-Perspectives.pdf.
- 5 Charles Stewart III et al., "Election Auditing: Key Issues and Perspectives," MIT Election Data + Science Lab & Caltech/ MIT Voting Technology Project, 2018, http://electionlab.mit. edu/sites/default/files/2019-06/Election-Auditing-Key-Issues-Perspectives.pdf.
- 6 While not directed at election officials, voter-facing resources include WhosOnTheBallot.org, an online voter engagement initiative established by researchers at the Columbia University School of International and Public Affairs. This website and mobile app provide New York City citizens with information on the location of polling places, candidates, sample ballots, and voter registration processes.
- Paul Gronke, Paul Manson, Jay Lee, and Heather Creek, "Stewards of Democracy: Pursuing diversity and representation among LEOs," Democracy Fund: ElectionLine Weekly, May 2021, https://electionline.org/electionline-weekly/2021/05-20/.
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- 8 Nathaniel Persily et al., "The American Voting Experience: Report and Recommendations of the Presidential Commission on Election Administration," Presidential Commission on Election Administration, January 2014, http://web.mit.edu/ supportthevoter/www/files/2014/01/Amer-Voting-Exper-finaldraft-01-09-14-508.pdf.
- 9 "Anne Arundel County Board of Elections (MD) 2020 Clearinghouse Award Winner," U.S. Election Assistance Commission, https://www.eac.gov/election-officials/annearundel-county-board-elections-md-2020-clearinghouse-awardwinner.
- 10 There have been earlier calls for this sort of system, particularly within the following: R. Michael Alvarez et al., "Voting: What Has Changed, What Hasn't, & What Needs Improvement," Caltech/ MIT Voting Technology Project, October 18, 2012, https://www. eac.gov/sites/default/files/document_library/files/VTP-Voting-Technology-Report.pdf.

- 11 National Institute of Food and Agriculture, "Cooperative Extension System," https://nifa.usda.gov/cooperative-extensionsystem.
- 12 Zach Montellaro, "'Potential crisis for democracy': Threats to election workers could spur mass retirements," Politico, June 2021, https://www.politico.com/news/2021/06/16/electionworkers-mass-retirements-494790.
- 13 Paul Gronke, Paul Manson, Jay Lee, and Heather Creek, "Stewards of Democracy: Pursuing diversity and representation among LEOs," Democracy Fund: ElectionLine Weekly, May 2021, https://electionline.org/electionline-weekly/2021/05-20/.
- 14 Questions around which more qualitative research is required are detailed in this Democracy Fund blog post by Reed College Professors Paul Gronke and Paul Mason and Democracy Fund Strategy and Learning Manager, Heather Creek, https:// democracyfund.org/idea/paths-forward-lessons-in-supportinglocal-election-administration-and-officials/.
- 15 Gronke and Lee note that the vastly unequal distribution of election officials across states renders sampling of this population incredibly complex. To correct for methodological difficulties in sampling a population such as this, they call for using unequal probability sampling—choosing sampling probabilities relative to the size of the underlying unit—so that a useful distribution of large and small election jurisdictions can be properly analyzed.
- 16 Charles Stewart III et al., "Election Auditing: Key Issues and Perspectives," MIT Election Data + Science Lab & Caltech/ MIT Voting Technology Project, 2018, http://electionlab.mit. edu/sites/default/files/2019-06/Election-Auditing-Key-Issues-Perspectives.pdf.
- 17 Conor M. Dowling, Michael Henderson, and Michael G. Miller, "Knowledge Persists, Opinions Drift: Learning and Opinion Change in a Three Wave Panel Experiment," American Politics Research 48(2), 2020, https://journals.sagepub.com/doi/ pdf/10.1177/1532673X19832543.
- 18 The following work explores questions around increasing undergraduate study of elections in more detail: Paul Gronke, "When and How to Teach Election Law in the Undergraduate Classroom," St. Louis Law University Law Journal 56(3), 2012, http://people.reed.edu/~gronkep/docs/ TeachingElectionLaw2012.pdf.

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