COMMONWEALTH OF PENNSYLVANIA HOUSE OF REPRESENTATIVES

STATE GOVERNMENT COMMITTEE CAMPAIGN FINANCE AND ELECTIONS SUBCOMMITTEE PUBLIC HEARING

STATE CAPITOL HARRISBURG, PA

IRVIS OFFICE BUILDING ROOM G-50 & VIRTUAL

TUESDAY, SEPTEMBER 14, 2021 2:00 p.m.

PUBLIC HEARING ON BALLOT ORDER SELECTION RANDOMIZATION

BEFORE:

HONORABLE RYAN E. MACKENZIE, MAJORITY SUBCOMMITTEE CHAIR HONORABLE MALCOLM KENYATTA, MINORITY SUBCOMMITTEE CHAIR HONORABLE SETH GROVE, HONORABLE DAWN KEEFER HONORABLE JEFF WHEELAND HONORABLE JARED SOLOMON HONORABLE BRETT MILLER (VIRTUAL) HONORABLE FRANK RYAN HONORABLE FRANK RYAN HONORABLE KRISTINE HOWARD HONORABLE BENJAMIN SANCHEZ HONORABLE JOE WEBSTER HONORABLE CHRISTOPHER M. RABB HONORABLE JOSEPH WEBSTER (VIRTUAL)

* * * * *

Pennsylvania House Of Representatives Commonwealth of Pennsylvania

SUBMITTED WRITTEN TESTIMONY

* * *

(See submitted written testimony and handouts online.)

1	PROCEEDINGS
2	* * *
3	MAJORITY CHAIRMAN MACKENZIE: All right. Well, I
4	will call this meeting to order. This is our second of two
5	subcommittee hearings that we are holding today. This
6	subcommittee hearing is on the topic of ballot order
7	selection and randomization. This is an, I think,
8	important topic, and I think we're going to learn. I think
9	a lot of folks are going to learn a lot more about this
10	topic because it's not something that has come up very
11	often, at least to my knowledge, in previous discussions.
12	But as of late, I've seen that there is a growing interest
13	in this topic.
14	This topic has been gaining interest in many

15 states around the country as they've realized that current 16 laws may be providing an unintended boost or hindrance to 17 certain candidates based on unrelated factors like luck of 18 the draw or the parties -- whoever has the sitting governor 19 in those particular states.

The increased statistical evidence demonstrating this impact has led to both reforms as well as lawsuits against current practices. And in Pennsylvania, we currently follow a two-part system. For primary elections lots are drawn, and candidates are places on the ballot in a random order through that method. Then for the general

election, the party of the current governor is listed first of the ballots in all races. Other states have followed similar methods, but most notably, California has recently shifted to a more randomized system.

5 In this hearing, we hope to gain an insight into 6 both the impact of our current approach, as well as 7 practical implications that any reform would have on the 8 administration of elections. We're going to hear three 9 panels really today. Two are listed here. The first is 10 Professor Darren Grant. He's a professor at Sam Houston 11 University. We will then have a county election director, 12 Forrest Lehman, from Lycoming County.

And then finally, we're going to close with two of our own members, Representative Solomon and Representative Rabb, who have both, I guess, either introduced or circulated co-sponsor memos on this topic. So we will hear from them and their thoughts on that. So with that, I will turn it over to the Democratic Chair for any opening comments.

20 MINORITY CHAIRMAN KENYATTA: Thank you so much, 21 Mr. Chair. You know, we're two for two today in terms of 22 some really good substantive topics in front of us, and I 23 look forward to a robust conversation. I think exactly 24 what you said is spot on. We want a process that does not 25 advantage anybody, a process that allows people to come in

1 and vote as easily as possible, but also make sure that the 2 choices are presented in a way that's fair. And so look 3 forward to hearing from the testifiers today, and in 4 particular, my colleagues who've been bringing these issue 5 before all of us, so thank you, Mr. Chairman. 6 MAJORITY CHAIRMAN MACKENZIE: Great. Thank you. 7 So the first panel, as mentioned, we have Dr. Darren Grant, 8 and he is joining us virtually. And actually, before we do 9 that, why don't we just go around? Myself and the 10 Democratic chair have presented ourselves here in person, 11 but we'll go around with the other members. 12 REPRESENTATIVE WHEELAND: Thank you. 13 Representative Jeff Wheeland, 83rd District, Lycoming 14 County. 15 REPRESENTATIVE RYAN: Representative Frank Ryan 16 101st District, Lebanon County. 17 REPRESENTATIVE NELSON: Representative Eric 18 Nelson, 57th District, Westmoreland County. 19 REPRESENTATIVE KEEFER: Representative Dawn 20 Keefer, 92nd District, York and Cumberland Counties. 21 REPRESENTATIVE GROVE: Seth Grove, 196th 22 District, York County. 23 REPRESENTATIVE SANCHEZ: Ben Sanchez from the 24 153rd and Montgomery County. 25 REPRESENTATIVE SOLOMON: Jared Solomon, State

1

25

Representative in Northeast Philadelphia 202nd.

2 MAJORITY CHAIRMAN MACKENZIE: Thank you. And I 3 see Representatives Howard, Webster, and Miller joining us 4 virtually. All right. I will turn it over to Dr. Grant. 5 DR. GRANT: Thanks, sir. Thank you for having 6 It's nice to be here. And I'm going to just kind of me. 7 testify following the written outline I gave you, and then 8 that maximizes the opportunity for you to ask your 9 questions. I serve as an economics professor at Sam 10 Houston State University in Texas. I've been tenured for 11 10 years. In theory, we have a hurricane over us right 12 In practice, I bicycled into work an hour ago. now. 13 I've been through Pennsylvania several times. 14 Familiar with the state. I have offered expert advice on 15 this ballot order issue in several states in the past 16 couple of years at the behest of Democrats, Republicans, 17 and Libertarians. I've been a professor for over 25 years, 18 and in that time since gaining my Ph.D. in economics, I've 19 published almost two dozen research studies in 20 (indiscernible) academic journals. Several of those 21 concern elections and voting. 22 Some of my voting research, along with some 23 current research that's ongoing explores both the 24 determination of candidate order on ballots. That is

ballots that are putatively randomized, but maybe not

actually randomized in practice. And then also the
 effective ballot order on vote share.

Now, I will first discuss -- and I published a study in the journal Public Choice on this topic in 2017 where I examined the effective ballot order on vote share in primary elections in Texas for statewide office. And Texas uses a system that is, in fact, not uncommon across the country in primary elections, which is that candidate order could be randomized at the county level.

And Texas has 254 counties, so that's a lot of randomization, a lot of variation. And so you can conduct a statistical analysis that's pretty solid from a research perspective because that randomization process really helps you there in terms of credibility. And look at the effect of being first on the ballot relative to being second, or third, or less.

17 Now, I did this for statewide office. So I 18 didn't look at, you know, elections for county clerk or 19 what have you. But there was still a reasonable amount of 20 variation in the offices that were being contested. We 21 had, you know, primaries for U.S. senator, governor, and 22 then we also had primaries for less visible offices, shall 23 we say, such as land commissioner, railroad commissioner, 24 comptroller, and positions on both of Texas' two supreme 25 courts. We've got a criminal supreme court, so to speak,

called the Court of Criminal Appeals and then the Supreme
 Court, which focuses more on civil matters.

3 And the bottom line there is that there was a 4 ballot order effect observable and you know, statistically 5 significant by the standards of, you know, social science 6 research in virtually every race that I looked at. But its 7 size varied. And the positions where people were most 8 likely to be aware of the candidates, and maybe have heard 9 of the candidates, and learned about the candidates, this 10 ballot order effect was fairly small, but nonetheless, a 11 person who was listed first on the ballot might gain a 12 point or two, one percentage point or maybe two percentage 13 points in vote share compared to someone who was listed 14 last.

And so that means that if you had a two candidate race, for example, then the candidate who was listed first might get an extra point or two in vote share, and that can make the difference in a close race.

Now, for these other state offices the ballot order effect was quite a bit larger, and it wasn't unusual to someone gaining four or five points in vote share from being listed first instead of last on the ballot. And then in these judicial races, it was pretty common for the ballot order effect to be about 10 percentage points. And that means that maybe in a race where people are otherwise

split, if a candidate was listed first on the ballot, they get 45 percent. I'm sorry. They get 55 percent of the vote, and their opponent would get 45 percent. But then if you switch their ballot positions, it flip-flopped, and the other guy would get 55 percent, and that first person would get 45 percent.

7 In that study, I actually found one race where we 8 had two candidates. The two candidate judicial primary, 9 and both candidates had a last name of Green. One was Rick 10 Green, and one was Paul Green. And in that case, voters 11 were so doggone confused that the ballot order effect was 12 actually almost 20 percentage points. And whoever was 13 listed first tended to get about 60 percent of the vote, 14 and whoever was unfortunate enough to be listed second in 15 that county got 40 percentage points.

16 Now, those are primary elections. Also of 17 interest, perhaps of particular interest today, are general 18 elections, and I have some ongoing work on that topic. Ι 19 actually came up with kind of a set of results this summer 20 that's I'm comfortable with probably six weeks ago. So no 21 one's heard about them yet. You'll be the first. But this 22 research is going on with the co-author of Stanford 23 University and some others at the University of Wyoming. 24 And it's looking at the effect ballot order on vote share 25 in general elections for statewide office in Wyoming.

1 And Wyoming uses a system that's both similar and 2 different from Pennsylvania's. It does award first 3 position on the ballot to whichever party won the previous 4 cycle, but they do it at the county level. And they're 5 using the congressional race since they just have one 6 Congress person. And so they're looking back at who won 7 that particular county in the previous electoral cycle in 8 the congressional race. And so in some counties you have a 9 Democratic win. In some cases you have a Republican win, 10 but that can flip up over time. And so you're able to 11 tease out the effective ballot order.

12 And so that research find no effect. Nothing 13 significant, nada for the highest profile general elections 14 for president, U.S. senator. But in all the other races I 15 looked at U.S. House, governor, auditor, treasurer, 16 secretary, state, and superintendent of public education --17 that's what they do in Wyoming -- there's an effective two 18 or three percentage points in vote share, which would favor 19 the persons listed first.

These findings are consistent with a pretty large literature in the United States that examine ballot order effects. The handout that you may have received has these studies listed. My findings are a touch stronger than this literature as a whole. But the literature as a whole does find, you know, sizeable ballot order effects in primary elections, especially, but smaller but still positive effects in general elections. And also these ballot order effects tend to be stronger in less visible races where voters may be less informed.

5 So when I testified to the Wyoming legislature a 6 few months ago, I said that the effect in the general 7 election was one or two percentage points. And then once 8 we got the data and ran the numbers, it turned out I was 9 just a touch light on that. The data's indicating two to 10 three percentage points.

Now, in addition to that, I have some additional research that deals with the fact that ballot order can -the determination of ballot order is not perfectly observed. Ballot order can be manipulated by the person who's in charge of, you know, determining that order. Can be manipulated, and therefore, can be not determined randomly across the entire state.

18 And to clarify what I mean, you know, Texas has 19 254 counties. And you know, most of those counties, 20 they're going to follow the law and draw numbers out of a 21 hat or what have you to determine ballot order. But you 22 know, some of these counties are small, and so there's not 23 a lot of visibility there. And even though candidates are 24 invited to the drawing, maybe they show. Maybe they don't. 25 Maybe there aren't contested primaries.

1 And so I've actually uncovered evidence in Texas 2 and in West Virginia that there are a few instances where 3 you can analyze the data statistically and see that not 4 everybody determined candidate order randomly on these 5 ballots. Most people did, but some people didn't. And so 6 you can just imagine the legal issues that could result if 7 non-random ballot ordered favored a particular candidate, 8 maybe determine the outcome of a primary election.

9 So I have developed some and published some 10 techniques that are designed to identify when that happens, 11 and I'm working some more general techniques to do the same 12 thing. The main takeaway from that research is just 13 because you say it needs to be randomized doesn't mean it's 14 always going to work out that way. You know, there 15 probably should be some sunlight, some way of kind of 16 observing the process just to make sure that things work 17 out the way that you want them to. So let me stop there 18 and then take any questions that you have.

19 MAJORITY CHAIRMAN MACKENZIE: All right. Well, 20 thank you, Dr. Grant. I appreciate that opening testimony 21 that you offered. And I think, you know, those numbers are 22 pretty staggering, some of what you presented there. And 23 obviously, even small numbers can swing races. And so we 24 are seeking fairness in all of these elections, and we want 25 to do away with as much of that benefit or you know, loss

1 that some candidates would receive from being places on the 2 ballot first as opposed to maybe further down on the 3 ballot.

4 So my first question, just to gain some general 5 perspective on this, how many states do it in a way similar 6 to where we do it where it's maybe just a lottery or 7 something like that, and that is consistent across the 8 entire races versus how many do different types of 9 variation? I'll get into the breaking down of the 10 different types of randomization. But how many do a static 11 method versus a randomized method?

DR. GRANT: Yes. It's a great question. And we don't actually have a census of what each and every state does. About 20 years ago, there was a paper that did go through and roughly categorize the different regimes used by different states. That's a little bit old, and even then they weren't completely thorough in their kind of census of what everyone did.

So speaking in more general terms, you find two major systems that are used within the states and/or across the states. And these are, you know, much more common in primary elections. So one is a randomization system, and so in that case you often randomize at the county level. And so you've talked about that in Pennsylvania, and it's not clear you're randomizing at the county level or

1	otherwise. But it's not uncommon for their to be
2	randomization at the county level. Is that what you do?
3	MAJORITY CHAIRMAN MACKENZIE: So in the primary
4	or general are you speaking about here?
5	DR. GRANT: In the primary.
6	MAJORITY CHAIRMAN MACKENZIE: In the primary it
7	could be. For statewide offices, it is drawn at the
8	Department of State, and so that is consistent and held
9	across the state, but then other primaries could be county
10	elections, you know, obviously done with their own methods
11	at county levels.
12	Okay. So that is a little different. So if I'm
13	going to characterize two main types. The randomization
14	technique often occurs at the local or county level, even
15	for statewide office. And so, you know, in Texas, in
16	Florida, in West Virginia, you have someone like Jim
17	Justice is the governor of West Virginia. So when he was
18	in the primary, then his position on the ballot was going
19	to be placed randomly in the primary within each county.
20	And what that means is, you know, Governor Justice gets a
21	boost in some counties because he's first on the ballot,
22	and then he doesn't get a boost. Somebody else gets the
23	boost in other counties.
0.4	

And so it tends to average out. West Virginia has 55 counties, so there's a, you know, decent amount of 1 kind of averaging out there. Florida has 67 counties, same 2 kind of deal. And so that tends to average out. Texas has 3 254 counties. You also got a lot of averaging out there. 4 Although I will stipulate that it's not perfect because 5 some counties have much more population than others. And 6 so, you know, there's really about 10, 12 counties in Texas 7 have a whole lot of people.

8 So if you're lucky enough to be placed first in 9 those counties, you're definitely getting a boost. So for 10 local office, if you're running for county coroner, if you 11 have that office, then it's a one and done. And if you 12 happen to be placed first on the ballot, then that's it 13 because it's only -- the race is only happening within that 14 county. But if you're talking about statewide office, you 15 know, like governor or Supreme Court justice. Then this 16 averaging out effect tends to occur. So there's definitely 17 some randomization occurring. You also will see it in 18 local races -- California, and Illinois, and elsewhere.

19 The other system that I think that's pretty 20 common is a rotation system. And so that is often done at 21 the precinct level. And so you know, you pick someone 22 who's first. Maybe you start in alphabetical order. But 23 then you just rotate across precincts. Wyoming does that 24 in their primary elections. North Dakota does that in 25 their primary and general elections, I believe. California

1 does it in their -- not in their local races, but in their, 2 you know, statewide races. They will rotate across 3 assembly districts, I believe. And so you will see these 4 rotation systems occurring, as well. 5 So those are the two most common. There is a 6 real variety out there in the systems that you see, though. 7 You've mentioned a slightly different randomization system 8 that you use in your own state. And some places it's done 9 at the whim of the person conducting the election. Ι 10 believe in Utah, they just get to do whatever they feel 11 like. 12 And then there are different kind of permutations 13 of those systems that occur. Sometimes it's an 14 alphabetical order system that occurs. Although I think 15 states have been moving away from that. Sometimes it's an 16 alphabetical order system with a randomly drawn alphabet. 17 Well, that really amounts to a randomization system. 18 So I think the bottom line is you do have a real 19 variety of systems across the state, but there are these 20 two themes of randomization or rotation, both of which are 21 designed to address this issue of not -- trying not to 22 give someone a systematic advantage in terms of ballot 23 position. 24 MAJORITY CHAIRMAN MACKENZIE: All right. And

I'll ask one more follow-up before I turn it over to some

of my colleagues. So my gut reaction says that out of those options, randomization at a county level and rotation being what you said was at a precinct level, it would seem that rotation would do away with the most amount of variation coming from ballot position because you're dealing at the smallest level. Is that correct?

7 DR. GRANT: That's correct. Randomization, you 8 know, is both -- tends to be, though, at a larger 9 jurisdiction, as you just mentioned. And then also, isn't 10 as failsafe as rotation in terms of evening out ballot 11 position. It's always possible for a coin -- you flip a 12 coin it could come up heads 10 times. It can happen. But 13 if you're rotating, it's like heads, tails, heads, tails, 14 head, tails. I mean, you're going to have five heads and 15 five tails. And so it definitely is a more even system in 16 that respect.

MAJORITY CHAIRMAN MACKENZIE: Okay. Thank you.
I'll turn it to my Democratic Chair for his question.

19 MINORITY CHAIRMAN KENYATTA: Thank you so much, 20 Professor. My question is about how this works. And I'm 21 hearing about California, which I know has really robust, 22 obviously, mail-in options for folks to vote that way. And 23 so can you talk about how that is happening and how you've 24 seen that play out in different states for folks who are 25 mailing in their vote? Because obviously, they're just 1 getting one piece of paper that you're not going to 2 randomize.

3 Sure. And I will tell you I have DR. GRANT: 4 talked to county clerks in Texas and in West Virginia. You 5 know, I tend to call the ones in small places. So you 6 know, these are people that -- you know, county jobs are 7 absolutely respectable jobs, and the people who fill them 8 are esteemed by the community. At the same time, they're 9 not just overpaying you a ton. And there's a ton of work 10 to do. And so you appreciate that, the dedication of these 11 people.

12 And so you know, there's guidelines that's put 13 out by the Secretary of State or whoever it is. You know, 14 here's the laws, here's the rules, here's how we do it. 15 Now, they're going to follow. They all have been trained 16 umpteen times probably on these rules. And so you know, 17 the rules going to be safer for Texas. And similarly for 18 West Virginia, there's some point in time at which you've 19 got to have a sample ballot ready.

And in West Virginia they actually have a website. You can go up and look at sample ballots for anything. That's available so many days before the election. Probably several weeks before the election. In Texas, it's no so systematic. But you know, you can go up to most counties' websites if, you know, if they have websites. And some of them it's pretty low-key stuff. But and you can go up, and you can pull that sample ballot down. And you probably got to put the sample ballot right there in the courthouse and tape it on the door or what have you.

6 So there's a sample ballot that's prepared in 7 And remember, these are randomized at the county advance. 8 level. And by that I mean that within the county whoever 9 won that drawing they're listed first across the entire 10 county. So you know, back when Beto O'Rourke was in a 11 primary against a couple other people, you know, in some 12 counties he's going to be listed first on the ballot in 13 that entire county. And then in other counties he's going 14 to be listed third on the ballot in that entire county.

15 So the county clerk or whoever is the elections 16 administrator is going to set up those sample ballots. And 17 then they got the names on them right there. And then, you 18 know, the actual ballot's going to, they got to match those 19 sample ballots. And so then you had a mail-in election, 20 that wouldn't cause any particular problem because those 21 ballots have already been ordered, been determined. It's 22 been published, you know, weeks in advance. And then you 23 get those ballots printed. And if you get them in the mail 24 or what have you, that doesn't really pose an obstacle. 25 MINORITY CHAIRMAN KENYATTA: All right. Thank

you.

1

2 MAJORITY CHAIRMAN MACKENZIE: Yeah. And I would 3 just note that, you know, obviously, we have always had --4 or at least since the 68th Constitution here in 5 Pennsylvania that I'm aware of -- I won't speak to before 6 that -- but we had absentee ballot voting. We now have 7 mail-in voting. And those ballots do go out both in 8 primary and general elections where there are precinct-9 specific ballots. So in a primary there would be ballots 10 going out for at the smallest level that I'm aware of in 11 Pennsylvania is, like, Republican or Democratic county 12 Committee people are elected at our precinct level. And so 13 therefore, the county board of elections are sending out 14 precinct-specific ballots already. So I would assume that 15 would continue with any kind of change in the process. Ι 16 will next go to Representative Keefer.

17 REPRESENTATIVE KEEFER: Thank you, Mr. Chairman. 18 Mr. Grant, so coming from a county where they have a --19 they're very challenged. They couldn't print enough 20 ballots, figure out how to make ballots to print just in 21 general for the last election that I had creating four-hour 22 lines. This seems a little overwhelming for at least my 23 county. And so do you see a trend of this? Like, do you 24 see as more information or more states are using this 25 methodology, do you see this growing as a trend anywhere

1 nationwide?

2 There has been some movement toward DR. GRANT: 3 a -- how would you put it? A more randomized -- there's 4 more randomization, more rotation over time. I think there 5 is some movement in that direction. And most recently, 6 probably, it's the State of New Hampshire, which moved to 7 a -- I think it's a municipal level randomization system in 8 general elections.

9 And so I do see some movement in that direction, and I do appreciate -- so I live in a -- kind of a union-10 11 sized county. If you take the prisoners out -- and we've 12 got a lot of prisoners -- we're running a little over 13 50,000 people in the county. So I do see the challenges 14 that, you know, our local officials have to deal with in 15 terms of staffing, and volunteers, and you know, people 16 doing those kind of thankless jobs in county government. 17 People, you know, they rarely thank you, but boy, they know 18 how to complain.

And I do think that -- you know, I've seen numerous county clerks and election officials both in Texas and in West Virginia, you know, manage to cope with these things pretty well. In Texas, we not only have county and city positions on the ballot, but we have school districts that just kind of -- they just draw those lines at random, as far as I can tell. And then we have emergency service 1 districts. You know, but community wants to set up water 2 or whatever.

3 And so there's just lines going all over the 4 place. And yet, you've got enough time, and you know, it's 5 fairly systematic at the state level in terms of the state 6 level support for the process that, you know, it definitely 7 takes work. There's no two ways about it, but it does seem 8 to be, you know, something that these officials are able to 9 handle pretty well. Just in my experience interacting with 10 it.

11 REPRESENTATIVE KEEFER: Right. In Pennsylvania 12 we have over three thousand municipalities and you know, 13 school districts, and you know, committee people. And it 14 changes all the -- you, know all the -- just in my county 15 alone or last election there was 1,400 different ballots 16 that they had to print already to do that. I think we're, 17 like, the eighth largest county in the Commonwealth of 18 Pennsylvania. So we have about half -- just under half a 19 million people in the county. So just trying to figure 20 out, you know, how those counties would navigate it. But 21 thank you. Thank you, Mr. Chairman.

MAJORITY CHAIRMAN MACKENZIE: Thank you. Next upwe have Representative Wheeland.

24 REPRESENTATIVE WHEELAND: Thank you, Mr.
 25 Chairman, and thank you Professor for participating today.

How's the wind out there? Little breezy? 1 2 It's actually just fine, and I DR. GRANT: 3 bicycled in here to the office about 90 minutes ago. It's 4 been a letdown, but a letdown in a good way. 5 REPRESENTATIVE WHEELAND: That's good to hear. 6 DR. GRANT: Yeah. 7 REPRESENTATIVE WHEELAND: You've discussed that 8 your research finds statistically significant benefits for 9 candidates listed first on the ballot, particularly for low 10 information down ballot races, perhaps up to ten percent 11 benefit. Can you compare that 10 percent benefit to the 12 impact of other facets of an election that is like other 13 events? Poor performance at a debate, a scandal of some 14 sort? Is there anything in your research that has -- is in 15 comparison to the ballot location? Have you done any 16 research on other factors? 17 DR. GRANT: You know, I have some, although I 18 haven't looked at the effects of individual other factors 19 in kind of a determined enough manner to comment from my 20 own personal researching findings on that issue. 21 Obviously, one thing that comes to mind is campaign 22 spending. And you know, there y'all have a body of 23 knowledge yourselves from experience. But in, let's say, 24 the governor's race in Texas, one percentage point, how 25 much money would you have to spend in Texas to get one

1 percentage point more of the vote in the general election? I don't have to tell you that's going to be a very, very large number. And 10 percentage points in a state, you know, State of Texas Supreme Court or Court of Criminal Appeals elections.

2

3

4

5

6 So if you run -- and I'm talking about one of 7 nine positions on the state Supreme Court, which would be a 8 big deal in any state. And you know, in the State of 9 Texas, the budgets of those people when they're running in 10 the general, they tend to run around \$300,000. I mean, for 11 the entire election. You can look up, of course, all this 12 stuff online. And you can look up how much money they got 13 and where it came from. So literally, a ten percentage 14 point effect, there is no financial equivalent because 15 those candidates are never ever going to raise the kind of 16 money that would even get them a lenth of the way to 10 17 percentage points more in vote share.

18 In terms of other events like debate performance 19 and what have you, I can't speak authoritatively from my 20 I mean, we do kind of watch the polls wander own search. 21 around, you know, in comparison to things. And so I don't 22 know that I can add to that. But certainly, in terms of 23 campaign spending these types of effects could be fairly 24 significant. I hope that answers your question as well as 25 I can do given my exact knowledge base.

1 REPRESENTATIVE WHEELAND: Okay. Well, thank you 2 very much. That was helpful. Thank you. 3 MAJORITY CHAIRMAN MACKENZIE: Thank you. Next up we have Representative Solomon. 4 5 REPRESENTATIVE SOLOMON: Thank you, Mr. Chairman. 6 I just wanted to follow up on the question you had asked, 7 because I wasn't sure there was an answer. Professor, in 8 terms of the number of states that either randomize or 9 rotate, you said there was old research, do you have that 10 number or no? 11 I do have that paper. I don't have DR. GRANT: 12 it right in front of me. So I did not give you an exact 13 number because I do not have that tabulation in front of 14 I could with about four minutes pull that thing and me. 15 run through it, or I could send that citation to a staff 16 member, perhaps, who could then pull that paper for you. 17 Again, it's a little old, but it does do something of a 18 census across the different states. I did not give you an 19 exact number cause I do not have an exact number. 20 REPRESENTATIVE SOLOMON: Okay. Yeah, if you 21 could follow up on that, Professor, that would be great. 22 And I wanted to ask you just kind of in general what the 23 number one position means in being the number one candidate 24 on a ballot, but also in other contexts. So I would 25 assume, Professor, like, if you have a power ball

1 situation, like, that's completely randomized where it 2 doesn't matter which number is drawn first, right, because 3 you need to get all the numbers to win. But then as being 4 a candidate, for instance, sometimes candidate will like to 5 speak first at a political event. Or you watch American 6 Idol, and does the first candidate who's up have any 7 particular advantage from the other two, three, or four 8 that follow? And how are those situations different from 9 the ballot position scenario?

10 DR. GRANT: That is a fantastic question, sir. 11 And believe it or not, some of the research I'm working on 12 right now, there's the abstract, and it talks about 13 American Idol in addition to the ballot context. So I 14 think you asked -- there were kind of two questions there. 15 Let me answer the second one about how it differs from 16 American Idol. And if you don't mind, I might ask you to 17 go back and restate the first one because your mic came in 18 and out a little bit.

But your question about, say, how about American Idol compared to the ballot situation is a good one, and it gets at a point that psychologists have been exploring, which is the sequencing effect on decisions. And it turns out that there are two types of sequencing effects. There's a primacy effect -- sometimes it's called -- which is where it's advantageous to be first. And then there's what's sometimes called a recency effect where it's advantageous to be last.

3 Now, in my own opinion -- and I'm not a trained 4 psychologist, but in my own opinion, having looked at this research, we don't have a fully convincing thoroughly 5 6 supported by evidence reason for exactly why all these 7 things occur. However, in American Idol, specifically, 8 there's evidence that it helps to be last, to be the person 9 who performs last on the program. And this also is 10 supported by evidence in other competitions such as figure 11 skating competitions, where it's also beneficial to be 12 last.

13 In contrast, if you are doing food tastings, it 14 helps to be first. And in the ballot order context, you 15 know, my research and pretty much all of this research, 16 it's kind of open-minded in the sense that it doesn't -- it 17 allows -- if there was an effect of being listed in the 18 middle, my research design wouldn't obscure that; it would 19 display that. So my research design is agnostic as to what 20 I'm going to find. And then what comes out of the data is 21 an advantage to being listed first.

The thought that is probably most common among people who study this issue is that maybe there's something about a kind of what's called a satisficing procedure going on where rather than, you know, looking at all six 1 candidates and kind of juggling them all in your mind, you
2 go through sequentially, and as soon as you hit one that's
3 okay by you, you just pick that. And so whoever's up there
4 first, they get first dibs at being acceptable, and so
5 that's what gives them that primacy effect.

6 So in fact, the psychological kind of basis for 7 what's going on here is not perfectly understood, but this 8 issue of sequencing effects does show up in all kind of 9 decision-making, not just votes. And I hope that answers 10 your second question. And then you're welcome to follow up 11 on that or to restate your first just because some of that 12 didn't come through.

13 REPRESENTATIVE WHEELAND: No, that was a very 14 thorough answer, Professor. I appreciate that. The first 15 one was just like -- I was just using an example of, you 16 know, the Pennsylvania lottery. Is that kind of the 17 ultimate randomization that you would look to or no?

18 DR. GRANT: Well, and you won't see it here, but 19 part of the research I'm working on involves the power bowl 20 lottery. And so I would say the lottery is a little 21 different because there you have kind of a -- I mean, it's 22 a pretty low-probability thing to hit that lottery, and you 23 kind of got to hit all the numbers. So I wouldn't draw too 24 close a tie between that and the randomization system I'm 25 talking about. If that's what you're thinking, I would

discourage you from making that tie too closely.

1

2

REPRESENTATIVE WHEELAND: Thank you.

3 MAJORITY CHAIRMAN MACKENZIE: Thank you. And 4 just to follow up on that. So obviously, your data and 5 your research so far has shown the benefit of being first, 6 that primacy effect, have you seen in any races where there 7 are more than two candidates, multiple candidates on a 8 ballot that there is any kind of benefit or recency benefit 9 for being last? You know, even if the biggest benefit is 10 maybe being first, but is there any kind of benefit to 11 being last in elections?

12 Two answers to that. DR. GRANT: The short 13 answer is in my own research, no. In other people's 14 research occasionally. In my own research, it's kind of 15 the biggest bump being listed first compared to last, and 16 then there's a notably smaller, but still some bump for 17 being listed second maybe out of five candidates, let's 18 say. And then after second, there really isn't much bump, 19 but there's no -- you know, being in third position, or 20 fourth position, or fifth position, doesn't seem to be any 21 difference.

22 So I personally am not seeing a recency effect. 23 It has happened probably a couple of times. There's 24 probably around 14 studies now of the United States, you 25 know, ballot order effects in the United States and probably a couple of those, say two, that have found some evidence of a recency effect. So it's not common, although it has happened on occasion.

MAJORITY CHAIRMAN MACKENZIE: Okay. All right.
5 Well, thank you. Next up we have Committee Chairman Grove.

6 REPRESENTATIVE GROVE: Thank you. Thank you so 7 much for your time this -- or this afternoon, Professor. 8 Just can you give me a brief description of just kind of 9 your research design and methodology? I'm just interested 10 in how you kind of set that up just for my own kind of 11 research background.

12 Sure. So in (indiscernible) and the DR. GRANT: 13 Wyoming analysis is ongoing, and it's more complex. But 14 the Texas analysis is published and a little more 15 straightforward. So in most races in that analysis, when 16 you first kind of look, and you see if there's any evidence 17 that ballot order hasn't been randomized across the state. 18 And it's not unusual in some of -- you know, most of these 19 races, some of the lower profile races. Nobody goes in 20 there and says, boy, I can't -- I just wait to manipulate 21 ballot order, you know, or land commissioner. That just 22 doesn't really happen.

23 So then you look there, and maybe there's two 24 candidates, and you know, it's pretty much a coin toss. 25 And so you're like, okay, and maybe you look at it a couple 1 other ways, you know, bigger counties and more rural counties, taking this person over that person, and kind of poke around at it. And no, it really does just seem to be just randomized across these two candidates.

2

3

4

5 Okay, great. So now, you know, you're kind of in 6 the position like they're doing for these clinical trials, 7 well, where, you know, you either get the drug or a 8 placebo, and it's done at random. You know, and that's 9 what the FDA does for every drug. We don't have to deal 10 with present controversies. We just look at any old drug. 11 If you're going to be -- you know, go through the FDA 12 approval process, they just want to make sure that you're 13 randomizing who gets the drug compared to who gets the 14 placebo so that you got kind of an even-handed research 15 design. Let's put it that way.

16 So then in that situation, then you look at the 17 vote shares across counties, and you can compare the vote 18 shares in counties that had, you know, one candidate --19 where, say, Candidate X was listed first compared to the 20 other counties where Candidate X was listed second and the 21 other person was listed first. And there you got a difference in the vote shares. That's your estimate of the 22 23 ballot order effect.

24 And then you don't stop there because you're an 25 economist, and so you're a little OCD, maybe a little too

OCD for your own good. So then you gather some what we call control variables. And I gathered maybe 10, 11 control variables, you know, education aides, measure of the agricultural production to see if you're looking at real agricultural counties and race stuff. You know, how many people own their own house, which is really important for voting.

And so then you come back at it again, and you say, well, hey, could this difference across these counties be explained somehow by these other factors? And then you hit it with that, and by golly, nothing changes. And so then you say, yeah, this difference between when this person was listed first and listed second, that difference is my estimate at the ballot order effect.

15 And then, you know, the statistics, there's 16 people that works on the formulas to tell you how precise 17 you want to treat those estimates. And you know, we were 18 in Delaware where there's only three counties, then you 19 wouldn't get estimates that were worth anything. But you 20 come into Texas, you got 254 counties. Then you got 21 something. And so those formulas tell you, yeah, okay, 22 here's your estimate. And you know, maybe got a little bit 23 of like, statistical, like, random error in it. But it's 24 not very big, and so you can kind of hang your hat on that 25 estimate.

So that's kind of an informal presentation.
 You're welcome to probe further if you want, but I figured
 I'd start there.

4 REPRESENTATIVE GROVE: Yeah, no, that's 5 interesting. Did you, like, look at incumbents versus 6 challengers or campaign spending of one candidate over the 7 other, or you know, I mean -- York County where I'm from 8 from Pennsylvania, there's literally areas where if you 9 have -- if your family hasn't lived there for, like, eight 10 generations, you're not considered from there. So do any 11 of those -- and I'm thinking of this, like, very local 12 races, right? You have a certain last name that's prolific 13 in those areas. Did you kind of look at that kind of 14 genealogy or anything like that, also?

15 DR. GRANT: You know, I'll tell you, sir, where 16 I -- I mean, I definitely know what you're talking about, 17 and I've actually seen that most strongly in Wyoming, where 18 there was one race, I don't know, 30 years back or what 19 have you, and the county had always been -- and I can't 20 remember if it always been Democratic or always been 21 Republican. Wyoming's actually flipped around a lot. But 22 you get some of these little counties, and by golly, this 23 one candidate overperformed by about 35 percentage points. 24 And so we dug into it, and sure enough, they were from that 25 And so even in a general election, it just caused area.

1 people to vote for that person.

2	But you are also correct. That is a local
3	phenomenon. And I only studied statewide races because
4	that's really where you got all 254, you know, counties or
5	coin flips. And I also did not I did not account for
6	well, let me rephrase that. I did not separately account
7	for being an incumbent because it's kind of already baked
8	in there.
9	So in the last primary for governor, you had the
10	incumbent. And you may have heard of this guy by now,
11	Greg Abbott, running. And then you had some other people
12	who really weren't well-known, including some guy whose
13	literal name on the ballot was (indiscernible) in capital
14	letters. And so you don't have to separately take out
15	the and recognize the fact that Governor Abbott was the
16	incumbent. It's already baked in there. Governor Abbott's
17	going to have a certain kind of popularity level, general
18	popularity level on account of how people perceive him and
19	what he's done in office, et cetera, et cetera, et cetera.
20	And the same things this (Indiscernible) person.
21	And so everything that has to do with that person is kind
22	of already baked in there. And then you're looking at how
23	those vote shares differ across the counties based on being
24	first or section, which is determined at random.
25	Now, the campaign spending could vary across

1 county. And so but it's very difficult to parse out the 2 spending by county. I can tell you where the money comes 3 from. I can't tell you exactly where to spend. And you 4 pay for ads. You know, you pay an ad agency somewhere in 5 Dallas or what have you, you know, and they make the magic 6 happen.

7 So I did not account for spending separately, but 8 because of the randomization, that kind of addresses this 9 issue because the randomization is happening -- you know, 10 they're first or second on the ballot at random. And so it 11 shouldn't have any systematic relationship with campaign 12 spending. So that may be more in the weeds than you 13 (indiscernible) looking for, but the bottom line is, you 14 know, I did think about both of those things, even if I 15 can't go out and put a number on it and throw it into the 16 analysis.

17 REPRESENTATIVE GROVE: Fascinating. Like, if 18 you're a candidate, you're looking at your strong 19 positions, maybe your candidates from -- like, your 20 opponents from western Texas. You're going to put your 21 resources in Eastern Texas. You might not have as much, 22 you know, volunteers, operations out there. So yeah, okay. 23 That's it. Thank you.

24 DR. GRANT: (Indiscernible - away from 25 microphone) it does come in handy because you -- it is

1 legitimate to be concerned about some of those -- all those 2 things. And so it just sure is wonderful to know that 3 whether your first and second on the ballot is random, so 4 it's probably not related to any of that in a systematic 5 way. And that alleviates those concerns that your 6 estimates are, you know, polluted in a sense. 7 MAJORITY CHAIRMAN MACKENZIE: Great. Thank you 8 again. 9 Representative Nelson? 10 REPRESENTATIVE NELSON: Thank you, Mr. Chair. 11 And I appreciate the testimony. And just kind of in 12 summary from your starting testimony, the acknowledgment 13 through your research and the research of others that, you 14 know, major headliners might be one percent due to ballot 15 orders, and then a little bit further down the ballot are 16 races that with lower-level tier candidates that could be 17 as much as three percent. 18 In the acknowledgement that there is an order 19 advantage, if we look to address this issue, it really 20 focuses on the randomization process itself, the selection 21 process. And you know, coming from industry, I'm familiar 22 with the random drug test. And I cited the example in

23 preparation for today of the random winner of the 50-50 24 that just maybe happens to be a family that really needs 25 that, you know, those dollars.

1 So you can have randomization for good, but also 2 for bad. And in your research are there some best practice 3 methods, so -- as a earlier representative said, too much randomization, I don't know that our counties can 4 5 effectively handle because they've demonstrated significant 6 of stumbling when it comes to printing ballots and getting 7 that stuff accurate. So what is a good, consistent, you 8 know, common ground so that you can achieve some 9 randomization, but not be so detailed that you're going to 10 create a problem? 11 DR. GRANT: So I appreciate your question, sir. 12 And I appreciate the question when asked previously, as 13 well. So I appreciate the question, generally. So let me 14 try answering your question by answering a slightly 15 different question. If someone came to me and said, 16 Professor Grant, what do you think about switching Texas' 17 procedure. And let's just stick with the primaries and 18 leave the generals of out of it. You know, Texas uses a 19 procedure in the general that's kind of like what 20 Pennsylvania does right now. But let's just leave that out 21 of it and go to the primaries. 22 Professor Grant, would you advocate switching 23 from a county level randomization system to a precinct 24 level rotation system? Would that be something you'd

25 advocate? I've been prepared to answer this question,

although I don't believe I've ever been asked it. My answer would be neutral on that point because, you know, Texas' procedure in the primaries has been around for quite some time, and it's actually kind of a right of passage if you want to say it for everybody to get together for the drawing. You know, it's kind of maybe almost like a campaign kickoff in a way.

8 And so it has legitimacy among, you know, the 9 public. It's been kind of -- there's a procedure. It's 10 standard knowledge. And these county clerks don't turn 11 over all that often. So you learn it. Then maybe you know 12 it for the next 25 years as you're serving in that 13 position. So to move from that approach to a precinct 14 level randomization approach would reduce the amount of 15 kind of -- there's still a little bit of random favoritism 16 in the randomization system because things don't have to 17 perfectly balance out across the state.

18 A rotation system would really make things 19 balance out quite evenly, but would have some trade off, 20 perhaps, in terms of legitimacy of the public and perhaps, 21 in terms of the complexity of ballots. And so that is a 22 tradeoff that is not the professor's to judge. I mean, 23 certainly, I would acknowledge that it is a legitimate 24 consideration to take into account. You know, legitimacy 25 and the complexity of administration as well as the

evenness of outcomes.

2	I will note that when I testified in Wyoming,
3	they were actually suggesting that individual ballots be
4	randomized. And I don't mean at the precinct level. I
5	don't mean at the county level. I mean at the individual
6	ballot level. And the Association of County Clerks for
7	Wyoming, they have 23 counties, did not object to that
8	procedure. So they didn't feel like it would have raised
9	too great a burden.
10	So it is a good question as to what that
11	administrative burden would be, also a question as to what
12	the effect on legitimacy would be, as well as the effect on
13	fairness of outcome. You know, use a randomization system
14	at the county level, things are going to even out pretty
15	well at the state level, but not going to even out so well
16	at the local level. State legislators may come from just
17	one or two counties. And then, of course, there's a lot of
18	county level positions. So there's definitely some
19	tradeoff involved.
20	REPRESENTATIVE NELSON: The
21	DR. GRANT: And I would just say one last thing.
22	I know I've been too long on this one. In Texas I think
23	Pennsylvania's different we have a four our county
24	commissions all have four seats on the, and then a county
25	judge makes five. And so you know, an option within our

counties would be to go Republican, Democrat, Republican, Democrat across those four county commission zones, so to speak. That would be another kind of hybrid approach that might balance those concerns in an effective way. My pardon if that was too long. (Indiscernible - away from microphone).

7 No, I think that was REPRESENTATIVE NELSON: 8 helpful. The second part of that question is, is there a 9 method, or have you researched a method that if we would, 10 you know, implement some type of randomization selection 11 that you'd be able to identify manipulation even if it was 12 after the election? So if there were shenanigans in 13 selection, how would you go about after the fact, and you 14 know, how would you address that?

15 DR. GRANT: So that is the focus of some of my 16 ongoing research. I published a paper last year with two 17 co-authors of University of Washington that presented, you 18 know, formal statistical methods with all the charts, and 19 numbers, and equations. But doing exactly that, if you 20 knew how the ballots were going to be manipulated, that you 21 could somehow read the minds of anybody who might be 22 tempted to manipulate a ballot and say this is what we're 23 looking for.

I think what you really want is something that you don't have to read anybody's mind. It just looks at,

you know, how many time this person is first, and second, 1 2 and third, and fourth across all the different counties. 3 And so you look at all the hoarderings [sic] across the 4 different counties, and then you put it through the 5 process. And it says something ain't right. Something 6 smells fishy here. And so you don't -- you know, the 7 analyst doesn't have to somehow magically know how the 8 ballots might be manipulated. It's just going to smoke out 9 manipulation whenever it occurs.

10 And that is what I'm working on right now in a 11 working paper whose link I will provide. I'm going to 12 provide some follow-up and as -- I have a couple of 13 contacts here. So I'll provide follow-up through those 14 contacts. But definitely what you want -- because you want 15 a process that allows you to look at the orderings across 16 counties, let's say, like in Texas, to look at them. And 17 if there's a problem, you want to be able to smoke it out 18 before the election if you can, and otherwise, right, maybe 19 you smoke it out after the election.

So in Texas they -- maybe five years ago they went to requiring counties to submit their ballot orders to the state, and the state puts that stuff on the Internet. And so I had the whole list of ballot orders for the 2020 primary before that primary was held. And so in theory, I would be able to actually run those tests before that

primary's even held. And there have been a few times where the ballot orders are definitely not random. And you can see that in Republican primaries and in Democratic primaries. You can see it in both of them. You don't see it in every race, but you do see it in some of those races.

6 So that's a little sunlight that help -- and I 7 have, in fact, communicated to people on occasion -- we'll 8 just leave it at that -- that things don't look good. And 9 I think that -- you know, so I think that that kind of 10 visibility as to what those ballot orders are is important. 11 And the tests that I'm developing and have published in a 12 working paper form can be used for that purpose, to go in 13 there and look and say, hey, do these ballot orders look 14 reasonable, or does it look like somebody's getting some 15 benefit here?

And then also, of course, it could be possible to have some visibility in the process that, you know, maybe these drawings should be videotaped and just posted on the Internet, or maybe there should be, you know, certain witnesses. Maybe you should have to have some witnesses just to make sure that things are on the up and up. REPRESENTATIVE NELSON: Great, great. Thank you.

23 Those are some really detailed answers, and I appreciate
24 you sending that after request, as well.

Thank you, Mr. Chair.

1 MAJORITY CHAIRMAN MACKENZIE: Great. 2 DR. GRANT: Sometimes not --3 MAJORITY CHAIRMAN MACKENZIE: Thank you. 4 DR. GRANT: Sometimes not giving detailed answers 5 is not my strength. 6 MAJORITY CHAIRMAN MACKENZIE: No, no, we 7 appreciate your answers and the insight that you're 8 providing. I think it's very helpful here in our process. 9 So we do have a question from a member joining us 10 virtually, Representative Miller. 11 REPRESENTATIVE MILLER: Thank you, Mr. Chairman, 12 and thank you Professor for your testimony here today. Ι 13 want to follow up on what Representative Nelson asked 14 previously, and has to do with the issue of audits related 15 to actually finding out what happened. And you kind of 16 detailed some of what your studying and what other --17 Texas, in particular, has been looking into. 18 My guestion has to do with this, if it's pure 19 randomization, then it is possible that candidate A is 20 always first. And then there's no way of finding out if 21 there's a problem. So what my question is, is it 22 randomization, or is it a fixed rotation? So ballot 1 is 23 candidate A is first. Ballot two, candidate B is first. 24 Ballot 3 A, 4 B, and so on. 25 DR. GRANT: So I would agree with you 100 percent

1 that the rotation procedure, that can be checked 100 2 percent. And so, for example, in Wyoming my team that I'm 3 working with looked at every primary ballot in every 4 precinct in Wyoming. There's 500 precincts or something, 5 which I think there's one precinct for each voter. And so 6 they were able to check that, and they were able to confirm 7 that ballot order was determined correctly in every 8 precinct in Wyoming in that election. And there's no 9 ambiguity because there's a rule or an algorithm, and you 10 follow that rule or algorithm, and then you can just check 11 whether that algorithm is followed.

12

[Started at 1:06:07]

13 DR. GRANT: So that's 100 percent. Now, in the 14 randomization process, you get into the statistical realm, 15 and that means that you can't know for sure. Now, if one 16 candidate was listed in a two-candidate race -- if one 17 candidate was listed first across the entire state of Texas 18 of 254 counties, and they came up heads in every single one 19 of them, man, the chances of that happening are really 20 quite low.

But you are right. But do you get -- you're into the statistics. You're into the odds here. And so statisticians often use a baseline that, oh, you know, the chances that this could've happened by just randomness are only about five percent. So probably that wasn't the deal. Someone was monkeying with these orders.

1

2 And you could change that cut off. You could 3 say, you know, I don't want to be suspicious unless the 4 chance is really small that this would've happened by 5 random chance. Maybe only a one percent chance that pure 6 randomness leads this particular candidate to be listed 7 first disproportionately. But you're never in the realm of 8 absolute certainly because it is always possible for 9 lightening to strike multiple times. And so you can 10 definitely get cases where the data are suggestive, but not 11 determinative. You look at it, and you think, well, there 12 could be some manipulation going on here, or it could just 13 be random chance. You know, the data really doesn't let me 14 nail that down. That is something that happens with 15 statistics, and it would be an issue with the randomization 16 procedure. I think that answers your question.

17 REPRESENTATIVE MILLER: Okay. So are you
18 recommending an exact rotation? Candidate A is first on
19 ballot 1. Candidate B is first on ballot 2. Or are you
20 advocating for randomization?

21 DR. GRANT: Well, I'm not going to advocate for 22 either one of those because I do appreciate that there are 23 tradeoffs here. And you had mentioned an additional 24 tradeoff that is worth considering. You know, there's 25 legitimacy in the procedure. There's the effect on how

1 much it kind of balances things out. There's the 2 administrative costs. And then the thing that you had 3 mentioned, Representative, is the ability to confirm that 4 the procedure was followed correctly, which is also a 5 legitimate consideration. 6 So we've listed four things, and some of them 7 favor the rotation system, and some of them favor the 8 randomization system. And you know, my expertise lies in 9 the analysis of these ballot order effects, but I myself 10 don't want to get into the business of trying to steer you 11 across those considerations. I think that that I would 12 want to be in the political arena if need to. 13 REPRESENTATIVE MILLER: Okay. 14 DR. GRANT: Yeah. 15 REPRESENTATIVE MILLER: Yeah. Well, thank you. 16 And I think just as a final comment, I appreciate your 17 research and the information you're providing for us. And 18 whichever system we employ, if any, will have to address 19 the auditing provision to ensure confidence, as you well 20 know, across the nation. There's a lot of people that are 21 questioning the results. And if we're adding another 22 dimension that adds a question mark, that may not be 23 helpful for a lot of folks. So I appreciate your 24 testimony, and thank you very much, Mr. Chairman. 25 MAJORITY CHAIRMAN MACKENZIE: Thank you. Next up 1

is Representative Ryan.

2 REPRESENTATIVE RYAN: Professor, thank you so 3 much for your time. And I appreciate you being here. You 4 know, I'm not exactly sure where I stand on the issue. And 5 it's not really relevant to the discussion, but I do want 6 to -- I'm talking about the legislation, by the way. I 7 don't mean the study.

8 And so the questions I'm asking I want to be 9 offered in the spirit of getting the better perspective of 10 what's going on and not -- I think it's for me, anyway, 11 it's really clear. I don't want ballot position to have a 12 favorable or unfavorable effect on any one particular 13 candidate because it's not any significant part of the 14 person's capabilities of being in office. But I'm worried 15 about in the studies and looking at them are certain 16 comments such as -- I'll give you an example, unintended 17 consequences.

18 So kind of frame issues up in the way I would 19 look at it as a business person. For a challenger to 20 compete against an incumbent is quite difficult from my 21 perspective. And I have no statistical basis for that 22 other than I hear it all the time that there's a value of 23 being an incumbent. And election results, generally 24 speaking, support that when 98 percent of incumbents are 25 getting reelected.

1 And so what my concern is, does the -- and have 2 any of your studies shown that the randomization or the 3 ballot position makes it harder or more expensive for a 4 challenger to, in fact, then challenge an incumbent? 5 Because when you're doing your marketing, and your mailing, 6 and your advertising, you might say pull lever 2, pull --7 if you know your ballot position. If it's randomized, you 8 can't do that. And so have you don't any research to 9 indicate whether or not that has an effect? 10 DR. GRANT: I have thought about it, but I 11 haven't been able to research it, and so bottom line is no. 12 In fact, even in the randomization system, when there are 13 deviations from randomization when some people manipulate 14 the orderings, what tends to happen is they tend to list 15 these popular incumbents first. 16 So that's, you know, going back to the previous 17 question about auditing and making sure the rules are 18 followed. When there is manipulation, you tend to be, you 19 know, helping those people who already are incumbents and 20 have that incumbent benefit to start. But that is a 21 legitimate consideration, and what you've really done is 22 listed a fifth consideration to take into account. 23 We talked about the ease of administering this 24 process, but then there's also the ease of informing 25 voters. And you know, again, that falls outside of my

particular expertise. The ballot order effect itself probably results in part from poor information on the part of voters. So they don't really know the different candidates, so they just tend to pick that person that's listed first. But as to whether randomization would make it harder for candidates to inform voters and get their word out is just not something that I'm an expert on.

8 REPRESENTATIVE RYAN: Okay. Thank you very much. 9 In that same line -- and again, I appreciate because I -- I 10 know Representative Solomon and I have actually had this 11 discussion, and I really like the concept, but I want to 12 make sure that I'm solving a problem and not creating one. 13 And so on the same issue, in my prior life I was a business 14 person, and I would look at ballot positions as almost a --15 like a shelf position in a grocery store. If you are 16 checking out and there's an impulse item, you want to put 17 it right by the cash register, and someone's doing it.

And so I know when we do shelf space analytics, being on the bottom shelf versus the top shelf is really a big deal, and that's part of a determinative demand aspect of -- but that's one factor of the determinative demand. Should we be looking at this the same way?

DR. GRANT: You know, it's not illegitimate to
look at it that way. I mean, you're absolutely right. You
know, which shelf you're on in the grocery store just

1 matters a big old deal. And so I would say the analogy is 2 sound. And you know, you got someone sitting there in 3 that, you know, one shelf down from the top right there at 4 eye level versus someone sitting down there in the bottom 5 shelf. It's not a level playing field. I mean, it's not. 6 REPRESENTATIVE RYAN: And you know, I taught 7 economics at Franklin and Marshall for about 10 years, and 8 when -- as an adjunct faculty member, and when I did it, I 9 would frequently use a term ceteris paribus, right? Ι 10 would freeze all the variables except the one. 11 In the studies that you've seen, have we frozen 12 all the other variables and looked only at the 13 randomizations issue? Or have we looked at the impact of 14 it being a multivariate expression for which the 15 correlation coefficient can be significantly different 16 based upon other variables as they interrelate and interact 17 with one another? 18 DR. GRANT: The short answer to your question is 19 both. So when I was discussing my research design with one 20 of your colleagues, I mentioned that I came at it two ways. 21 And the first way was really not the multivariate thing. 22 It really was just relying on that randomization. So you 23 know, the FDA, when they're looking at a clinical trial, 24 they're really going to hang their hat on that 25 randomization that you randomize across who gets it, who

1 doesn't. Then all these other factors are going to balance 2 out. And so then if there's a difference in survival 3 rates, or recovery rates, or whatever, you really got to 4 credit it to the drug. 5 So in the same way in my study of Texas or if I 6 was looking at you know, Florida or Pennsylvania, I think, 7 with -- well, no, use a different system. Florida, Texas, 8 or some of these other places. When it is, indeed, 9 randomized, then you're -- you know, you're kind of hanging 10 your hat on that same deal that the randomization process 11 means that all these other things are going to tend to 12 balance out. They're not going to be systematically 13 related to the first ballot position versus second ballot 14 position.

15 But then being an economist, you know, we got to 16 do our OCD run the numbers, fire up the computer thing. So 17 again, I gathered about 10, 12 variables about each county 18 that would help to predict, you know, maybe who's going to 19 vote for the two-party candidate versus the establishment 20 Republican or whatever in the primary. And so I threw 21 those into the mix in a multivariate analysis, and by 22 golly, I got same (indiscernible) results with just really 23 similar across the queue. So I really came at it both 24 ways, got the same answer both ways.

25

REPRESENTATIVE RYAN: Outstanding. If I could

1 | ask you one final follow-up question.

And Mr. Chairman, thank you for your flexibility
with this.

Did you see anything where -- as example, if you had a predominantly Democratic county or district or predominantly Republican district that if there was a randomization the candidate from the opposing party that might've gotten first ballot position might've done better under those races than not? Which to me would reinforce that randomization really is a big effect.

DR. GRANT: Well, if you're thinking about general elections, Texas does not use randomization in general. So I was only looking at primaries.

REPRESENTATIVE RYAN: Okay.

14

DR. GRANT: It's only in Wyoming where I was able to look at the general.

17 REPRESENTATIVE RYAN: Okay. Fantastic. But so 18 you didn't see anything that would indicate to you that in 19 predominantly Democratic or Republican districts reversing 20 to randomization would have -- in other words, enough 21 study's not been done on that issue?

22 DR. GRANT: I'm not certain of your question. If 23 you want to know whether the ballot order effect seems to 24 be stronger in one party versus another, doesn't seem to 25 be.

1 REPRESENTATIVE RYAN: Okay. 2 DR. GRANT: Doesn't seem to be a whole lot of 3 difference there. And then in Wyoming -- maybe this will 4 get at your question -- you know, you wouldn't think 5 there'd be any party changes in Wyoming, but in fact, over 6 the last 40 years you had about 25 counties go from 7 Democrat in one cycle to Republican in the next. But you 8 also had about 25 counties go the other way. And this is 9 again over a long period. 10 So you know, you have cycles in politics. And so 11 12 REPRESENTATIVE RYAN: Sure. 13 DR. GRANT: -- some counties, sometimes they 14 shift from Democrat to Republican. Sometimes they shift 15 back the other way. And so in Wyoming those estimates of 16 the effect of ballot order are kind of based on things 17 going both ways. 18 REPRESENTATIVE RYAN: Okay. 19 They're kind of both in there. They DR. GRANT: 20 got the Democrats going to Republicans. And so that's 21 switching up ballot order in some counties. And then you 22 got going the other way around in some other counties. So 23 it's kind of a balanced analysis in that respect if that's 24 what you're thinking. 25 REPRESENTATIVE RYAN: Sort of along those lines.

1 I think what the issue if, if I ran in Representative 2 Solomon's district as Republican, would I win if I was 3 first? I'm just kidding. He's got a very heavily 4 Democratic district, and that would not -- I was just 5 teasing Representative Solomon. I apologize. Sorry, 6 Jared. 7 DR. GRANT: You know, because it's so hard to 8 even get an estimate for the state as a whole, just to get 9 a general estimate, I didn't try to break those estimates 10 down, you know, kind of cut them up and break them up more 11 finely. 12 REPRESENTATIVE RYAN: Okay. 13 DR. GRANT: I will tell you that in Texas I took 14 several variables like education, income, median age, 15 couple others I can't remember, and I just looked to see if 16 the ballot order effect really varied with respect to that. 17 You know, hey, in places that are more educated or 18 wealthier, does there seem to be a larger effect or a 19 smaller effect? And I really didn't find that. 20 So you know, I can't say that this is an 21 authoritative statement, but given the limited knowledge 22 out there, it's probably best to think of it as being kind 23 of a human effect that is reasonably similar across people 24 and not highly sensitive to whether they're Democrats, or 25 Republicans, or wealthy, or not wealthy, or highly educated

1 or not, or whatever. Tends to be more of just a people 2 thing. 3 REPRESENTATIVE RYAN: Okay. 4 DR. GRANT: That's the way I at least think about 5 it. 6 REPRESENTATIVE RYAN: Professor, this has been 7 very helpful. Thank you so very much. 8 And Mr. Chairman, thank you. 9 MAJORITY CHAIRMAN MACKENZIE: Thank you. Final 10 question we have for the professor is from Representative 11 Wheeland. 12 REPRESENTATIVE WHEELAND: Thank you. Has your 13 work or any work you're familiar with analyzed this topic 14 in relation to ballot questions? Does it seem to make a 15 difference whether the affirmative or negative is listed 16 first? 17 DR. GRANT: Great question. And the answer is 18 yes, and the answer is also yes. I myself have not looked 19 at this, but there are a few studies that have. I think 20 they tend to look at, like, a bond election, or in 21 California you've got those things that's put on the ballot 22 -- whatever those things are called. Propositions. Thank 23 you. 24 So and so those tend to be yes, no. Right?

25

Shall we raise X amount of money by levying X amount of

tax? Yes? No? Shall we do X? You know, shall we amend the Constitution in such and such a way? Yes? No? And so it doesn't look at whether you flip the answer because you aren't going to have anybody put it on the ballot and then put no first and then yes second. You know, it's just always going to be yes first and then no second.

7 But what they do look at is how far down the 8 ballot they are. So sometimes you get a whole bunch of 9 these propositions are bond issues, or Constitutional 10 amendments, and sometimes you just have a few. And they do 11 find, in fact, that the further down you are in the ballot, 12 the less likely that thing is to pass. So indeed, this 13 kind of mental fatique effect, this -- it's kind of not 14 sequencing exactly, but just the order in which questions 15 appear. You get more tired as you work your way down the 16 ballot mentally, and then they're less likely to pass. So 17 there is research on that question. I'm aware of a couple 18 studies in the last five years.

19 REPRESENTATIVE WHEELAND: So it would be obvious 20 that, perhaps, not only candidates, but also ballot 21 questions should be placed in random order?

22 DR. GRANT: I probably wouldn't offer a judgment 23 on that myself. I think that I would have to think about 24 it more than I have. That is a very good question. And 25 you would again possibly be trading off multiple

1 considerations. Possibly one question is going to garner 2 more attention than the others. It's actually an excellent 3 question. I really haven't thought about it. It's an 4 excellent question, and I will be chewing on after we've 5 finished this hearing. 6 REPRESENTATIVE WHEELAND: Well, it gives you 7 something to think about while you're hunkered in for the 8 hurricane or tropical storm. Thank you, Professor. 9 DR. GRANT: Thank you. 10 MAJORITY CHAIRMAN MACKENZIE: Great. Well, thank 11 you again, Professor. I think we all enjoyed your 12 testimony and some of the insights that you've gleaned from 13 your different studies over the years and the studies of 14 others, as well. So I want to thank you again. And the 15 only follow-up was if you can provide that information 16 about randomization and rotation from other states. Even 17 if it's outdated, it will give us some knowledge of what 18 other states are out there and what's going on. So thank 19 you again. We really appreciate it. 20 DR. GRANT: That sounds great. Thank you for 21 having me, and I will follow up with the staff who reached 22 out to me originally and be sure to provide that soon. 23 MAJORITY CHAIRMAN MACKENZIE: Fantastic. Well,

24 keep on the interesting work on randomization and rotation.

25 We in the legislature certainly appreciate it and enjoy

1 reading your work. So thank you. 2 DR. GRANT: My pleasure. 3 MAJORITY CHAIRMAN MACKENZIE: All right. The 4 next panel that we have is Forrest Lehman, who is going to 5 be joining us virtually, I believe, or we will cue him up. 6 MR. LEHMAN: Yes. 7 MAJORITY CHAIRMAN MACKENZIE: All right. 8 MR. LEHMAN: Hello. 9 MAJORITY CHAIRMAN MACKENZIE: Thank you for 10 joining us. Forrest Lehman is the director of elections 11 and registration with Lycoming County. He will be 12 providing some input, and then we will move to questions. 13 So I don't believe -- you did not provide written 14 testimony. Is that correct? 15 MR. LEHMAN: No, I don't have any prepared 16 testimony. 17 MAJORITY CHAIRMAN MACKENZIE: That's quite all 18 right. 19 MR. LEHMAN: I just have a couple assorted 20 thoughts here up front that I guess you could say I had 21 them while I was making coffee this morning and listening 22 to what's already been discussed in terms of the testimony 23 and the questions. And I guess the place to start is just 24 that to keep in mind there seem to be two dichotomies here 25 that have to be navigated with respect to ballot order.

And one of them is the divide between what you might
 colloquially call local offices and state offices. And I
 think it's been touched on a little bit already.

4 But in county election offices, we think about 5 state offices as one category. Local is another. State 6 offices being the ones where the candidate has to file with 7 Department of Atate. They file their nomination petitions, 8 their campaign finance, and everything else. Department of 9 State is kind of responsible for them versus the local 10 offices like, you know, the county and the school district, 11 borough, township and so on. That where, you know, those 12 candidates are filing with the county. And so we feel more 13 responsible for them.

14 So you know, that's one kind of dividing line 15 that you'd have to think about. To what extent do we want 16 to look at changes to candidate ballot order affecting 17 state offices versus local offices? And the other is what 18 you do in a primary versus a November election. You know, 19 and that's been touched on a little bit already that in the 20 primary it's already random, but it's -- I guess you could 21 call it uniformly random. You know, when you talk about 22 statewide office where you're doing what's called a casting 23 of lots, and different counties do that in different ways. 24 Currently, these are public events. They're

advertised; they're witnessed. So that part of the

1 equation is actually already contemplated by the election 2 code. And then in November, yes, there is a party ballot 3 order preference that's determined in the gubernatorial 4 election. And one interesting point about that is -- maybe 5 this is just me personally, but it seems to me the way we 6 do that it almost creates a perverse incentive for third 7 parties to run in the gubernatorial election specifically 8 to run for governor because that's a way they can try to 9 secure ballot position for four years.

10 You know, and so it leads maybe parties to run 11 for governor that might otherwise not choose to do so. And 12 so right now, for the next four years, you've got 13 Democratic, Republican, Libertarian, Green, and it's 14 everybody else in alphabetical order.

15 And I guess the other point about November 16 elections is to keep in mind that right now there is some 17 element of merit imbedded in that. You don't see it in a 18 vote for one race, but when you get into a vote for two, 19 three, four, like school director or borough council, if 20 you have multiple Democrats, multiple Republicans on that 21 November ballot, they are ordered based on how many votes 22 they got in the primary. You know, and so that -- I guess 23 that's something to keep in mind because that may be 24 something that's worth holding onto if, you know, you 25 looked at how things were done in the primary. Had an

arrangement that you thought was more fair, more equitable.
 And then there was that element of merit that carried over
 to the November ballot. So something else to think about
 there.

5 As far as county level randomization versus 6 precinct level randomization, I think that was the other 7 kind of -- you know, two different models that were being 8 proposed and prepared. As far as the county lift on 9 implementing either of those, I think the county level 10 randomness would probably represent less of a departure, 11 less of a challenge compared to what we currently do.

12 I don't see any new programming challenges in 13 terms of the voting systems. And in fact, you know, one 14 thing that could be done if it was county level randomness 15 for state races, for statewide races, Department of State 16 could randomize the counties' ballot orders for them. You 17 know, just like the secretary certifies the ballot, the 18 counties now, they could tell, you know, Lycoming County, 19 this is the order you're going to use for the Supreme Court 20 justice race, and you know, Chester, this is the order 21 you're going to use, and everybody do that so that the 22 statistical analysis doesn't need to be done to root out, 23 you know, whether counties are doing it right. It might 24 just be a question of you know, was that randomness done 25 correctly that one time.

1 If that was done at the county level, you would 2 probably still need some rules for local offices, though, 3 to determine party and candidate order if it's not going to 4 rotate at all. And maybe you keep it random in the 5 primary, but in November, you could go purely on the 6 primary results irrespective of party. You know, so 7 whoever got the most votes in the primary on either party 8 ballot goes first in November. Doesn't matter if you're 9 Democratic. Doesn't matter if you're Republican. It's 10 just going to go right down the line. So that's one 11 thought there.

12 I think one, you know, challenge whether you do 13 this at the county level or at the precinct level is it 14 could cause some minor complications for candidates for 15 parties to the extent that a lot of them will circulate 16 prefilled sample ballots. You know, voter guides with 17 graphics of ballots. I'm not sure how easy that will be to 18 continue to do because you could give a voter a ballot 19 filled out to say this is what you need to do, and then 20 they go in, and their ballot doesn't look the way they 21 anticipated. And I think that can happen in either model.

But if you take this down further to precinct level, I think that's where you could really get into some complications for what county offices have to do. I'm thinking about the programming could be more difficult. The ballot proofing could be more difficult.

1

2 Now, I know it was brought up already that, you 3 know, we've had some difficulties with programming errors, 4 that kind of thing. You could have more difficulty with 5 programming, with proofing of ballots because now you have 6 the same contest of hearing multiple different ways within 7 a single county. You know, and it's not like you could 8 look at the ballot and go that I know that, you know, this 9 person's going to go first and this person's going to go 10 second. You really have to scrutinize that contest on 11 every ballot to make sure that all the elements are there, 12 even if they're in a different order. You know, and that 13 makes proofing a little more complicated.

14 And I guess the last part of that with the 15 equipment is the potential complicating element of that we 16 have fix, six different voting systems in use in 17 Pennsylvania. I haven't engaged with this functionality in 18 my system personally because there hasn't been a need to, 19 but when you look at what they already support, what might 20 need to be done to get into certification timelines at the 21 EAC, at the state level, and to the extent that any 22 software updates or changes needed to be made to certify 23 voting equipment to implement this, you could be looking at 24 -- I mean, it could be up to a two-year time frame to get a 25 change in.

1 I mean, some of the companies right now have had 2 stuff sitting at the EAC for a year that hasn't been 3 certified because the EAC, it just -- it moves at a glacial 4 pace even under the best of circumstances. So you know, 5 the timeline on this could get complicated if it involves 6 changes to certify voting equipment. But I guess that's 7 everything I have up front. So we can go to questions. 8 MAJORITY CHAIRMAN MACKENZIE: Great. Well, thank 9 vou. First up, we have Representative Solomon. 10 REPRESENTATIVE SOLOMON: Thank you so much for 11 I just wanted to pick up on your last point first, that. 12 which is sort of the grace period. You talked about the 13 need for counties to adjust. Just talk about your county. 14 How long would it take you, let's say, to be ready for this 15 whether it's randomization or rotational based system? You 16 think you would need a year, two years? What do you think? 17 MR. LEHMAN: If it was at the county level -- if 18 it was limited to the county level where, say, you know, I 19 was told that your statewide offices, this is the order 20 you're going to use as opposed to the order another 21 county's going to use, it wouldn't add any extra time at 22 all because I can just plug the candidates into my ballot 23 software and say that, you know, this candidate's going to 24 be first and this one's going to be second. No big deal. 25 But when you start getting into moving that down

to randomness within the county, you know, that I might -say I have a countywide race like sheriff and they tell me
that, you know, your sheriff -- you know, the Democratic
candidate is going to be first on the ballot, and half the
precincts your Republican's going to be first, and you're
going to use your voting system software to rotate it.

Well, now, you get into how does that work within the software? Does it do everything the statute requires it to do? And is that going to be the case not just for my software, but all the counties in the state that are using different equipment?

12 So that's where you get into a certification 13 problem, software problem that could take anywhere from a 14 year to two years to resolve. To be fair, some of this 15 equipment might support exactly what the legislature would 16 want to do, might support it right out of the gate, but 17 there could by other systems that don't, and that might 18 involve really some outreach to Department of State and 19 those companies to ascertain what are their capabilities 20 right now? How does that line up with the intent, you 21 know, that where do we want this to end up? 22 REPRESENTATIVE SOLOMON: So the randomization you 23 could do in November? You would be ready to go? 24 If it was county level randomness --MR. LEHMAN: 25 REPRESENTATIVE SOLOMON: Right.

1	MR. LEHMAN: county level randomness can be,
2	you know, programmed manually. You know, I can say that
3	everywhere in my county and all my precincts this
4	candidate's going to go first. This candidate's going to
5	go second. And the only randomness is that in my county
6	it's one way. In you know, Philadelphia county it's
7	another way. In Clarion County it's another way. That's
8	fine. But it's when you're going into your own county
9	within your county and telling it I need my ballots to look
10	different within different precincts, that's where you're
11	going to get into some real complications.
12	REPRESENTATIVE SOLOMON: And so in your example,
13	the Democratic candidate for sheriff and Republican
14	candidate for sheriff, if I said to you today I want you to
15	rotate within every one of your precinct to get rid of any
16	advantage that ballot position might give to either the
17	Democrat or Republican, that's what you're saying would
18	take you a longer time to do?
19	MR. LEHMAN: Yeah. That would be a bigger lift
20	because every county would have to ascertain for itself,
21	what can my system do right now going toward that goal?
22	Does it fall short in any way? And if it does, what
23	changes need to be made to the software to support it? And
24	you know, if there's a statute passed and then we're

25 finding out our equipment can't do it, you know, then it's

already too late.

2	So for precinct level, you know, within the
3	county randomness, that's where the capabilities of the
4	software of your certified voting equipment becomes
5	incredibly important and where the timeline to be able to
6	comply could stretch out years just because of how long it
7	takes to make changes to certify voting equipment.
8	REPRESENTATIVE SOLOMON: Thank you.
9	MR. LEHMAN: Yeah.
10	MAJORITY CHAIRMAN MACKENZIE: Great. Thank you.
11	So I think we've addressed the current system we have now
12	versus randomization by county as compared to the rotation,
13	the precinct rotation, which we talked about. And I
14	understand. And maybe, you know, there are different
15	options. You maybe do some kind of phased approach where
16	you go to the easier method that can be done now at the
17	county level randomization, and then maybe you take a
18	second step down the road. So you could do something like
19	that.
20	But let me just ask, the challenges of going
21	straight to a precinct rotation. Because in the discussion
22	that we were having I was having with the Democratic
23	chair when he was here before, I made a comment that, you
24	know, we're already preparing ballots at the precinct level
25	at least in primaries today because you have county

Committee members running for their county party Committee, and those -- at least in our area, those are run at the precinct level.

In our county, in Lehigh County, each precinct is already preparing a unique ballot for the primary. So if they're already doing that and preparing a unique ballot for the precinct, I guess what would the challenge be to adding -- I guess you're adding variation in other races or rotation in other races, but it's still going to result in a unique ballot for that precinct.

11 MR. LEHMAN: The challenge is going to be how far 12 down are you drilling to do the randomness? So what 13 counties are doing right now is -- you know, if you talk 14 about a primary, we're having a random drawing for ballot 15 position where, you know, like in my case, maybe they draw 16 a number out of a hat. Well, this number goes first on the 17 ballot. All that is being determined outside of the voting 18 equipment.

So we do a drawing, and I already know based on that drawing, you know, this candidate's going to be first, second, third. That all gets manually programmed into the system, into the ballot design. To tell it, this candidate's first, this candidate's second, and it's going to appear the same way then all over the county, that contest. 1 And similarly, you know, if randomness was done 2 across my county the same way -- so Department of State 3 told me, you know, in your race you're going to put the 4 Republican first for Justice of the Supreme Court in 5 November, and they told another county you're going to do 6 the Democratic candidate first. We could do that. We can 7 manually program that level of randomness into our 8 equipment because the Republican's going to be first for 9 Justice of the Supreme Court across my entire county.

10 So there's no software magic that is needed. I 11 just tell it this this the way the ballot looks, and it's 12 going to look the same everywhere. Where the, you know, 13 the greater lift comes in is if I need a Democrat to show 14 up first in some of my precincts and I need the Republican 15 to show up first in other precincts and rotate it around. 16 That's where it has to happen, inside the voting system 17 software.

18 And that's where you get into the fact that, you 19 know, that I don't know that it's ever been formally 20 ascertained by Department of State as part of a state 21 certification process because it's never been a statutory 22 requirement in the election. So you know, that's where 23 every county would kind of be scrambling to figure out what 24 can our software do? Does it do what we need it to do? 25 And the better way to approach that problem would

1 be for it to start with the legislature and Department of 2 State deciding, what do we want this to look like? What 3 does the software need to do to make that happen? And 4 we've got to test and certify all the current equipment to 5 make sure it can do that. You know, and there may need to 6 be updates for that. So it gets to be a lot more 7 complicated if counties have to accomplish that on a 8 precinct level.

9 MAJORITY CHAIRMAN MACKENZIE: Okay. Let me ask 10 the question this way. So I have seen lists from the 11 Department of State. Now, I don't know if these are 12 official lists or if it was just somebody's accounting 13 within the Department, you know, or some methodology used 14 within the Department. So I have seen lists where all of 15 the precincts are numbered across the entire state, and 16 each precinct has its own unique number identifier listed 17 next to it. Again, I don't know if that was just in one 18 method that they were providing data or if that is 19 consistent all the time.

But so if the Department of State had a system where each precinct is, you know, listed alphabetically and then by division and ward and subsets within that, and they're all listed out, and they're all given a unique identifier, and then the legislature were to come up with a precinct rotation system where they would be rotating those

1 candidates on the ballot, and then, you know, it starts 2 over once you've gone through all the candidates in that 3 race.

4 If the Department of State were to tell you that 5 this is the order for each of your individual precincts, 6 here is the order for all of the races. Here's the order 7 for president. Here's the order for senator. Here's the 8 order for governor. Here's the order for all of those 9 state determined races. And they told each county -- they 10 gave you that spreadsheet and specifically said here it is. 11 So they took that work away from you. Could you then load 12 that information for each of your precincts?

13 MR. LEHMAN: No. I don't believe the software in 14 my voting system can do it that way. It's not really a 15 question -- the challenge there is not really a question of 16 work that the county would need to do. It really has to do 17 with what are the technical capabilities of the software. 18 And I think that the latter -- what you just described 19 would actually be more difficult because that's -- what 20 you're describing there would be -- I quess you could call 21 it manually determined randomness. I'm not sure if that's 22 a great way to describe it, but it's like, you know, the 23 randomness has been determined outside, as you're 24 describing, by Department of State, and they're telling us, 25 you know, do the contest differently in every precinct, and

here's exactly how it needs to be done differently.

1

The software would not permit that right now. You couldn't program a candidate to appear in this position in one precinct and that position in another. I think to the extent the ballot design software in these systems accomplishes candidate rotation, it's done, I believe, on -- it may be a random basis. It could be a rotating basis, but it does it on its own.

9 You know, it's kind of like you pull the trigger 10 and it does it. I don't know that you have the ability to 11 go in and control precinct by precinct and say, no, no, I 12 want you to do it this way here and that way there. It's 13 kind of like you either turn that function on and let the 14 chips fall where they may, or you don't. But you know, 15 these are all the kinds of things that the counties would 16 have to ascertain in their systems and Department of State 17 would have to ask these vendors about. And it's such a new 18 type of function that it's never been tested in the state 19 that they may want to take a look at everything before they 20 would certify the equipment to be used in that way.

21 MAJORITY CHAIRMAN MACKENZIE: Okay. You know, 22 I'm happy to -- obviously, these hearings, not just this 23 one, but the earlier hearing, as well, they're designed to 24 gain information from experts in the field and understand 25 how the impacts of legislation would play out in practice. So you know, we are going to continue the discussion, and
 we appreciate your joining us here.

We have reached out to the Department of State to gain input from them, as well. At this time, we haven't heard back, but hopefully, they will provide their input, and again, hopefully, we can continue this conversation with the input of all the different stakeholders, county, boards of elections, the Department of State, and any other interested parties, as well.

10 All right. Seeing no other questions, we will 11 wrap up with you. So thank you very much, Mr. Lehman, for 12 joining us. And we will conclude this panel, and we will 13 next go to a third and final panel where we will have 14 Representative Solomon and Representative Rabb providing 15 their input and thoughts on the legislation that they have 16 introduced or either circulated co-sponsor memos on. So --17 MR. LEHMAN: Thank you very much. Good 18 afternoon. 19 MAJORITY CHAIRMAN MACKENZIE: Thank you. 20 All right. Republican Rabb, are you with us? 21 REPRESENTATIVE RABB: Yes. 22 MAJORITY CHAIRMAN MACKENZIE: All right. We will 23 start with you, and then we will go next to Representative 24 So feel free to start whenever you're ready. Solomon.

REPRESENTATIVE RABB: Thank you, Mr. Chairman.

25

1 It's an honor to be on this panel and to benefit from the 2 expertise of the prior two testifiers. Back in June of 3 2019 in the previous term, I circulated a co-sponsorship 4 memo regarding establishing rotating ballot positions for 5 candidates. I went on to introduce it in October of 2019, 6 and I reintroduced it this year. It's currently House Bill 7 1797.

8 And essentially, what this bill seeks to do is to 9 avoid human error and potential foul play in a manner that 10 could be well audited by removing unnecessary barriers to 11 candidate viability. There are a lot of factors that 12 impact candidate viability that are within the control of 13 specific candidates and campaigns. But how it operates 14 now, we have an unnecessary barrier for viability 15 irrespective of the legitimacy or the qualifications of any 16 given candidate.

17 And lastly, there is the technological 18 feasibility to do this with certain voting systems. Ι 19 believe the previous gentleman referenced that there are 20 five or six different voting systems, certified voting 21 systems. I believe most of them can do this, and I think 22 there's room to allow those counties that have the 23 technical capability to do this to do so because it 24 wouldn't be unfair because the very thing that would be 25 embraced is something that would remove those undo

advantages to candidates based on casting of lots.

1

2 So even if there was a way to allow those 3 counties that had the capacity to do so to start and to 4 facilitate and expedite other counties to get to that 5 level, that would be a great step going forward. But as it 6 stands right now, I represent part of Philadelphia, 7 northwest Philadelphia. So I'm in the most populous county 8 in the state. We choose ballot position based on 9 candidates or their designees pulling lots out of an old 10 can, an old coffee can -- and it's quite a tradition in 11 Philadelphia, but it is a tradition whose time should draw 12 to an end simply because it create an unfair advantage to 13 whomever because of the luck of the draw.

14 And when we have technology that can obviate 15 those undo advantages, why not leverage them if they're at 16 our fingertips right now? And as previous commentators 17 have said, we do things on the precinct level when we elect 18 Republican and Democratic Committee people. So given the 19 systems that exist -- I can't speak to all of them, but I 20 can speak to the one that operates in Philadelphia and 21 other counties that this is something that is 22 technologically feasible, and I think it's worth pursuing 23 simply because it is auditable.

You can find out before the election happens if, indeed, there's foul play. But the reality is there could 1 be foul play for the system that has been used for decades, so -- and that is an analog process. That is literally people sticking their hands into a coffee can and pulling out their number.

2

3

4

5 So I think just getting us to the 21st Century 6 and using the technology that is already available for many 7 counties and the voters in it is worth pursuing. When we 8 talk about what it means to have a level playing field and 9 merit, those things go out the window when because you 10 choosing a ballot position that is low -- you could be the 11 most viable candidate. You could've raised the most money. 12 You could've had the longest record in terms of community 13 service, have an outstanding resume. But in places like 14 Philadelphia and other places the party that you're 15 affiliated with may very well tell you don't run because 16 voters are not going to look for you way down on the 17 ballot. And that's a shame.

18 We should do things to encourage good candidates 19 to run. And when you have something like this, this 20 barrier that can so easily be dissolved, I think the 21 impetus is on erring on the side of a level playing field 22 and embracing the technology we've already invested in 23 through our state.

24 So I have a bill. It is materially the same as 25 Representative Solomon's. I believe that getting good

1 feedback from the Secretary of State, and county 2 commissioners, and elections officials makes sense to 3 determine which systems could use this, and how quickly, 4 and what unintended consequences could be avoided. But 5 ultimately, this is a non-partisan approach to helping 6 candidates and the voters they seek to represent. Thank 7 you, Mr. Chairman.

8 MAJORITY CHAIRMAN MACKENZIE: Great. Well, thank 9 you, Representative Rabb, for joining us today and sharing 10 about your legislation and your thoughts on potential 11 changes to the current systems. We appreciate that. And 12 next we will go to Representative Solomon.

13 REPRESENTATIVE SOLOMON: Thank you, Chairman. Ι 14 just want to say that I really appreciate you bringing this 15 issue up before this Committee. It means a lot. I think 16 Rep. Rabb hit a home run in terms of his presentation. And 17 I'm going to pick up where Rep. Ryan left off. Let's 18 assume that the two of us were running in a race together, 19 whether it's in his home county of Lebanon County, or in 20 Philadelphia County, or statewide. There are certain sort 21 of factors that you would assume any voter takes into 22 account, reasonable factors.

He's a Republican. I'm a Democrat. That dictates certain ideology that flows from our party label. How much money we raise. Political insiders and others

will look to that as an indication of how well we are moving our campaign forward. Polling data. Some voters look to that. Media coverage, how the media is portraying the nature of our campaigns. The ongoing narrative of the back and forth between Representative Ryan and myself during a general election battle.

7 Our votes in the legislature. Did I vote a way 8 that maybe his folks think was not in line with his county 9 values? If he ran in my county, did he vote in a way that 10 maybe doesn't reflect some folks in Philadelphia County? 11 These are all reasonable. And we might agree or disagree 12 that one of these variables should be high up on the list 13 as opposed to one or the others. But the one thing that 14 should not matter is ballot position.

15 If Republican Ryan is gaining two to three points 16 because he's one and I'm two, or I'm gaining two to three 17 points or more because I'm first and he's second, that has 18 nothing to do with any of the factors that naturally flow 19 when you have people from different parties, or even within 20 the same parties, or unaffiliated folks running for office.

This becomes worse, right, more complicated if we have more people running. So let's say we brought all the Committee back and Representative Keefer ends up and she's at the bottom of the ballot. She's 10th in a judicial race. She might be eminently more qualified as a jurist 1 than me, but I'm first. It's likely that Rep. Keefer 2 decides to drop out of that race, not because of merit, but 3 because she's 10th and I'm first. And maybe I'm not 4 qualified at all. Maybe I'm just fresh out of law school 5 and I have no clue what I'm doing and actually have never 6 written an opinion or considered any of the legal issues 7 that are going to come before me fast and furious when I'm 8 on the bench. That doesn't speak to any sense of fairness.

In Philadelphia this is worse. This is all done by
this, a Horn & Hardart's can. We literally entrust our
Democratic process to a Horn & Hardart's can where I go
before the voters based on what lot I pick, whether I pick
my name 1st, 10th, 15th, or 20th. This system is not fair.
It's not efficient.

15 A recent article in Philadelphia before the last 16 judicial election in quotes said, hopes of judicial 17 candidates determined by Horn & Hardart's can. Lead 18 headline. So it's not just that we have this process; it's 19 that we're right up and front about it. It's time for us 20 in Philadelphia to kill the can and for all 67 counties to 21 eliminate the added advantage that we get from being on the 22 top of a ballot, that ballot position gives us. Efficiency 23 and fairness dictate that we move in this direction. Thank 24 you, Mr. Chair.

25

MAJORITY CHAIRMAN MACKENZIE: Well, thank you,

1 Representative Solomon for that testimony. That was 2 wonderful. I think you lucked out on two fronts. One, we 3 are going to allow props at this Subcommittee hearing, even 4 though that may not be allowed in other instances. And 5 second, you know, I wasn't about to jump in and comment on 6 the merits of your candidacy versus those of my goods 7 Representative Ryan or Representative Keefer. We will 8 leave that for discussion outside of a Subcommittee 9 hearing. But really do appreciate your passion about the 10 topic, and I know we have spoken about that. 11 I think we share an interest with Representative 12 Rabb and some of the other members here about coming up 13 with a better system that has more fairness built into it 14 so that we aren't depending on these things that are very 15 arbitrary in nature and shouldn't be a factor, and a 16 potentially determining factors in the outcomes of 17 elections. So I will close on that. If anybody else has 18 any other comments or any --19 REPRESENTATIVE KEEFER: Mr. Chairman, I would 20 just like to say --21 MAJORITY CHAIRMAN MACKENZIE: Representative 22 Keefer, by all means. 23 REPRESENTATIVE KEEFER: Thank you, Mr. Chairman. 24 I would just like to say, if I were 10th on the ballot, 25 that would be quite impressive since I have not taken the

bar.

2	MAJORITY CHAIRMAN MACKENZIE: All right. Well,
3	thank you to everybody for joining us. And as always, if
4	anybody outside of the Committee hearing has any other
5	information or testimony that they would like to provide,
6	they can certainly provide that to me or a member of the
7	State Government Committee staff. They can provide that to
8	them, as well.
9	So again, I'd like to thank everybody for joining
10	us for both of our hearings today. This concludes the
11	second of our two hearings, and with that this meeting is
12	adjourned. Thank you.
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	

1	
2	CERTIFICATE
3	I hereby certify that the foregoing proceedings
4	are a true and accurate transcription produced from
5	audio on the said proceedings and that this is a
6	correct transcript of the same.
7	
8	JoAnna Sargent Transcriptionist
9	Opti-Script, Inc.
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	

Γ