

“HOW VOTERS THINK ABOUT SYSTEM SECURITY: RESEARCH FINDINGS AND OBSERVATIONS”

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Massachusetts
Institute of
Technology



MIT ELECTION DATA
+ SCIENCE LAB

INTRODUCTORY THOUGHTS

- + Not much (but something) is known about public attitudes toward voting machines
- + Not much (and almost nothing) is known about public attitudes toward voting system security
- + Public attitudes in this space are driven by...
 - + Partisanship
 - + What's familiar
 - + Actual knowledge (a little bit)

THE LAY OF THE LAND FROM 30,000 FEET

Security against fraud

- Voter impersonation
 - Vote tampering
- “Wrong voters” (immigrants, students, etc.)

Security of “back of the house” systems

- Voter Registration
 - GIS
- Election-night Reporting

Security of “front of the house” systems

- Ballot Marking & Tabulation
 - Poll Books

VOTING MACHINES

THE QUESTIONS

What are your opinions about [machine type]?

- + This system makes it easy for dishonest people to steal votes
- + This system makes it easy for people with disabilities to vote on
- + This system makes it easy for election officials to count votes accurately
 - + Five-point scale: Strongly agree ... Strongly disagree
- + Machine type:
 - + paper ballots that are scanned and counted by a computer (Opscans)
 - + electronic voting machines, that is, voting machines with a touch screen, like an ATM machine (DREs)
 - + paper ballots that are counted by hand (Hand-counted paper)

THE SURVEYS

- + 2012 Cooperative Congressional Election Study
 - + Representative national sample of adults
 - + 2,000 observations
 - + With Paul Groke (Reed/EVIC)
- + 2016 Cooperative Congressional Election Study
 - + Representative national sample of adults
 - + 1,500 observations
- + Sept. 2017 YouGov Omnibus
 - + Representative national sample of adults
 - + 1,000 observations

VOTING MACHINE ATTITUDES IN 2012 (PCT. AGREE)

	Opscan	DRE	Paper
Easy for dishonest people to steal votes	27.8%		
Easy for disabled to vote			
Easy for election officials to count accurately			

VOTING MACHINE ATTITUDES IN 2012 (PCT. AGREE)

	Opscan	DRE	Paper
Easy for dishonest people to steal votes	27.8%		
Easy for disabled to vote	40.0%		
Easy for election officials to count accurately			

VOTING MACHINE ATTITUDES IN 2012 (PCT. AGREE)

	Opscan	DRE	Paper
Easy for dishonest people to steal votes	27.8%		
Easy for disabled to vote	40.0%		
Easy for election officials to count accurately	48.3%		

VOTING MACHINE ATTITUDES IN 2012 (PCT. AGREE)

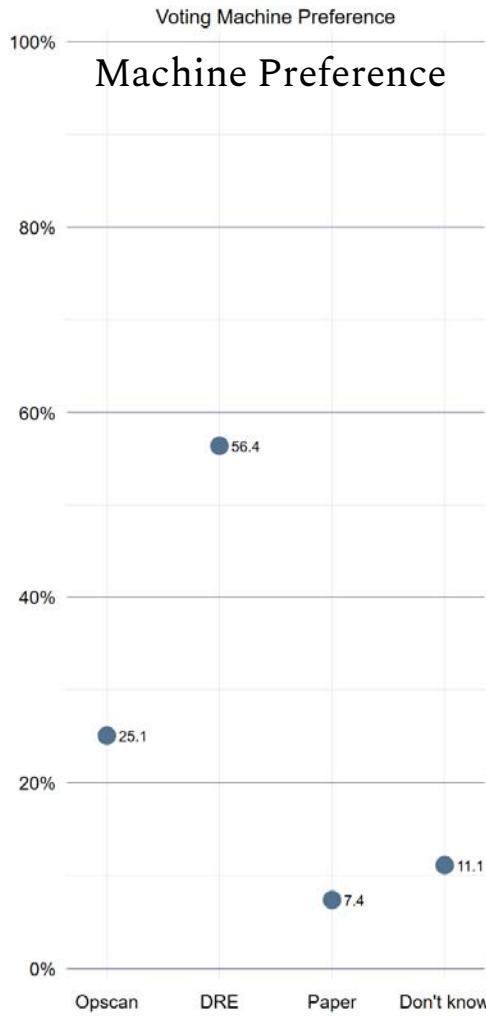
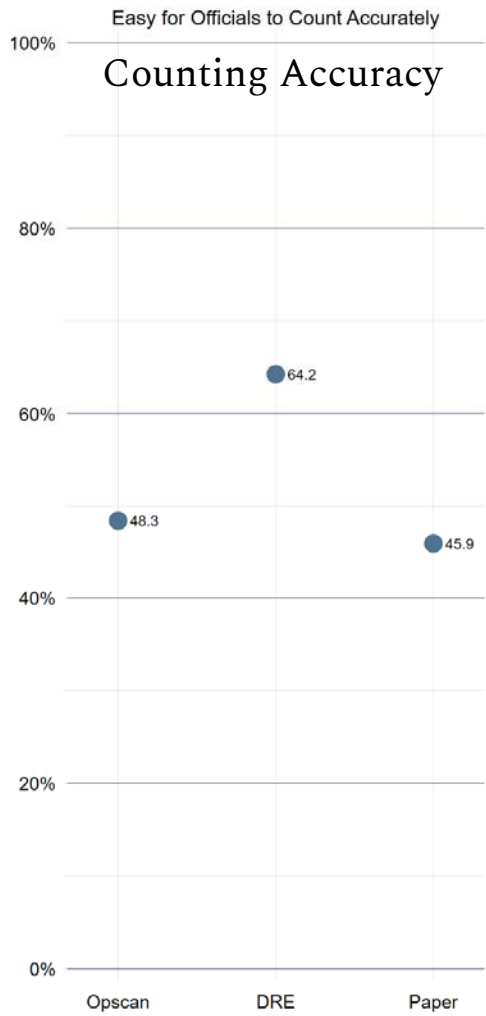
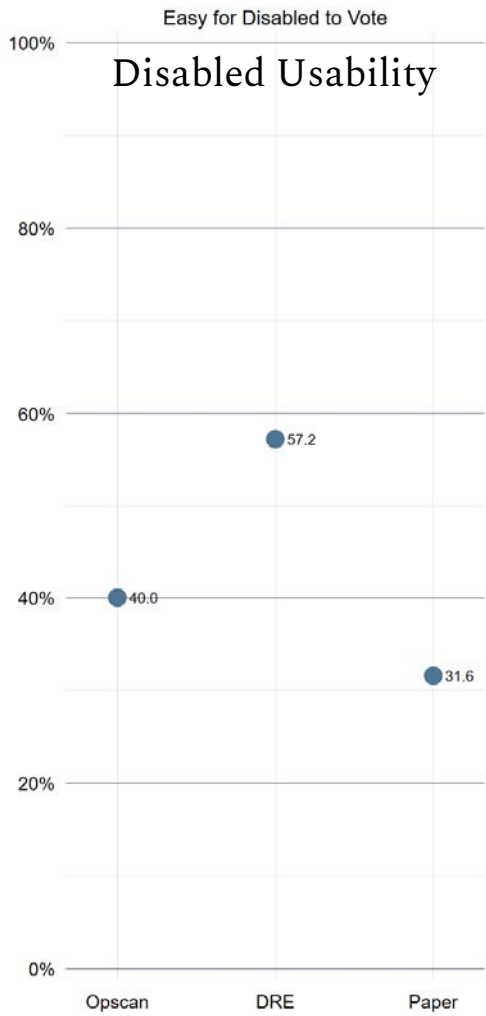
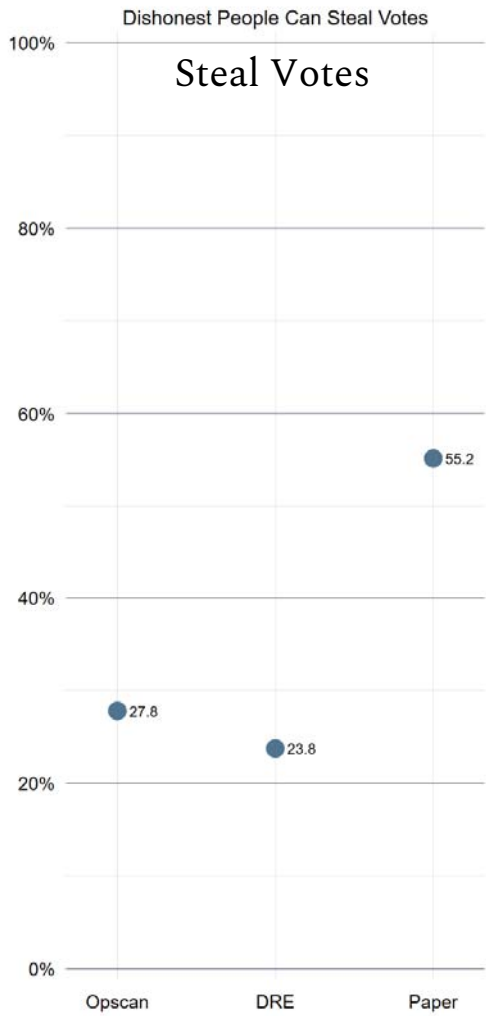
	Opscan	DRE	Paper
Easy for dishonest people to steal votes	27.8%	23.8%	
Easy for disabled to vote	40.0%	57.2%	
Easy for election officials to count accurately	48.3%	60.3%	

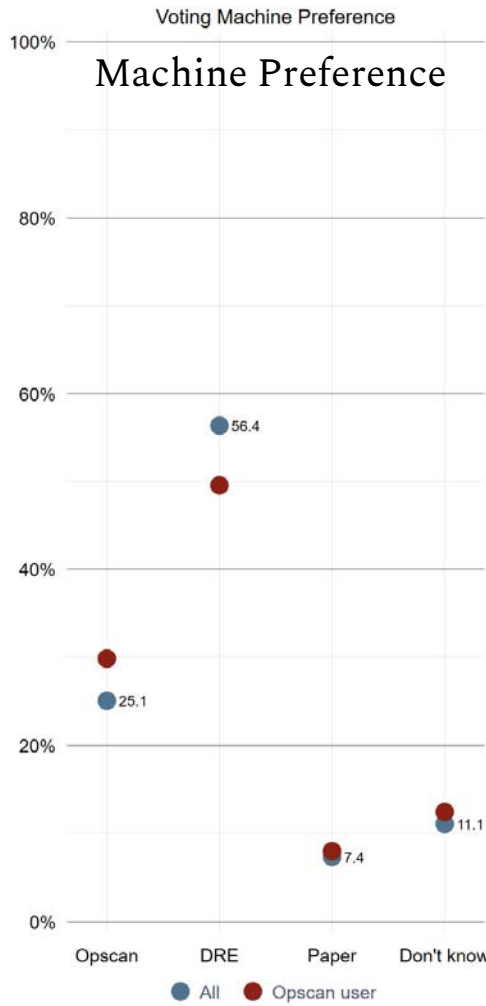
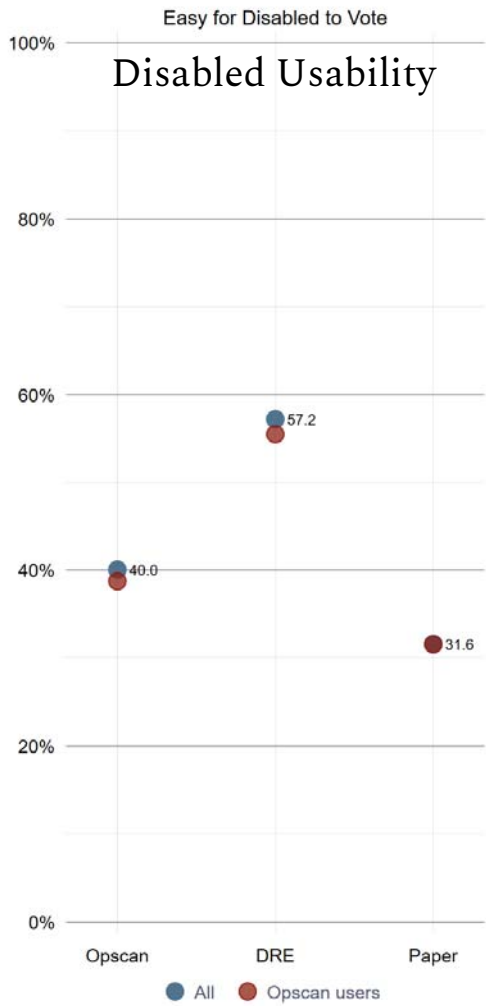
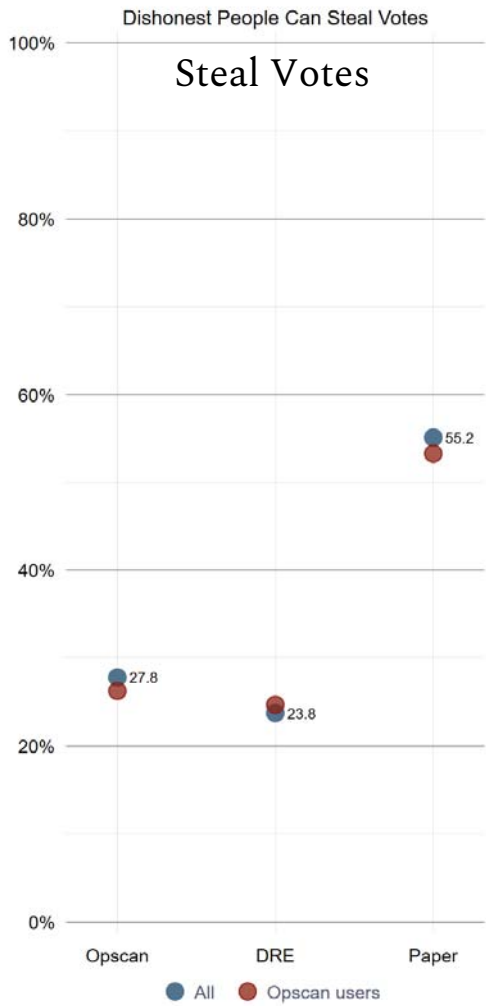
VOTING MACHINE ATTITUDES IN 2012 (PCT. AGREE)

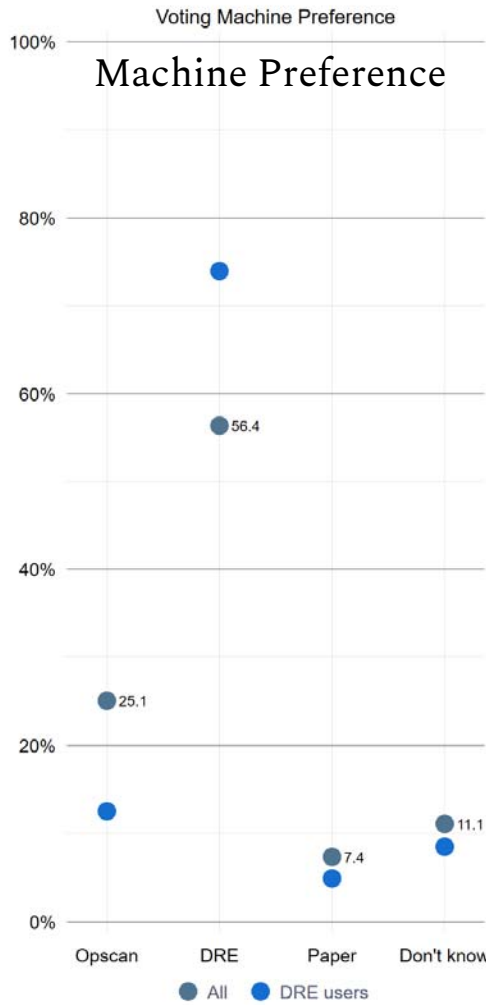
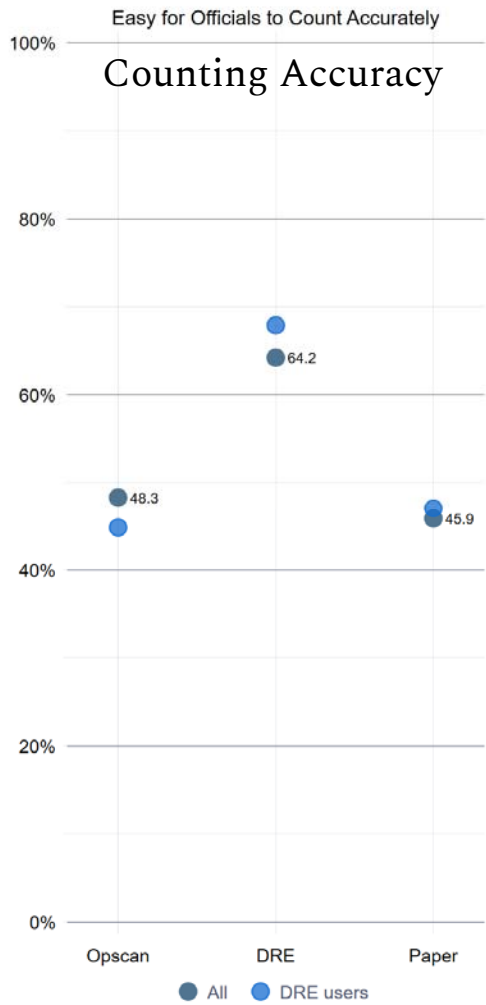
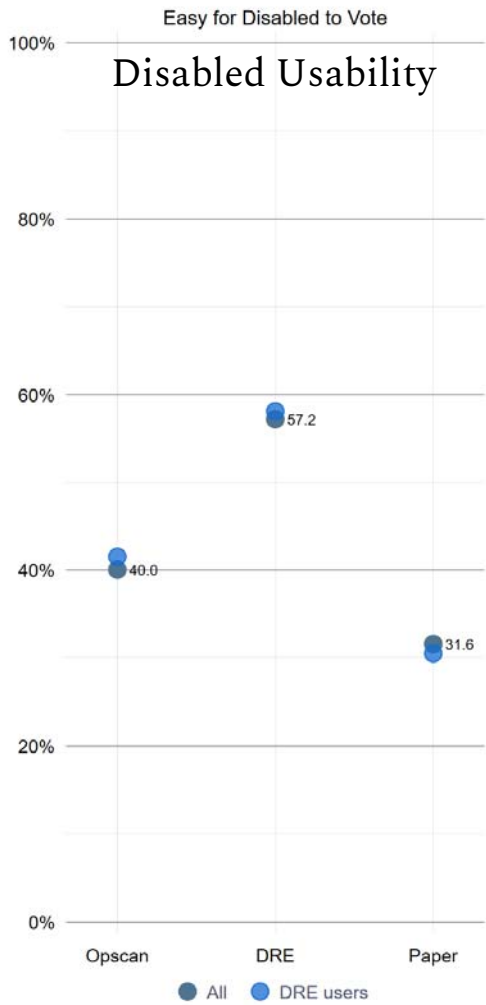
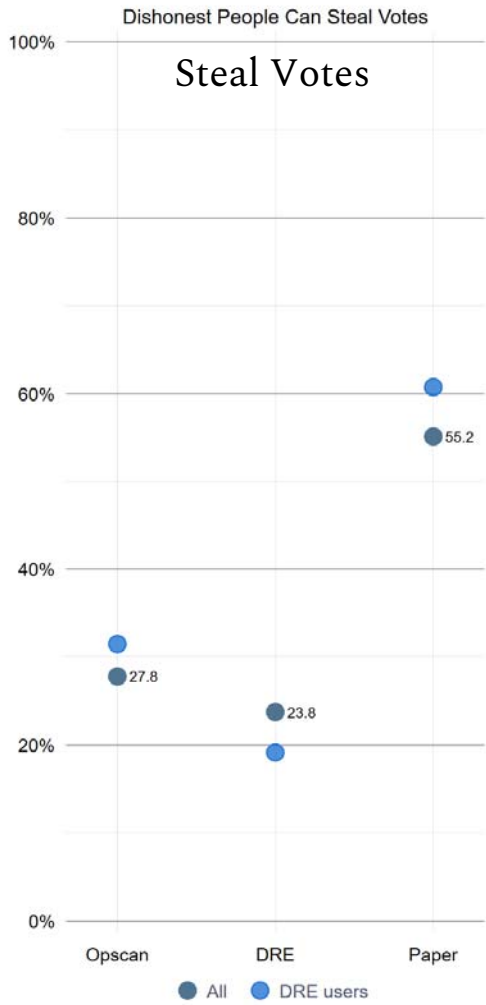
	Opscan	DRE	Paper
Easy for dishonest people to steal votes	27.8%	23.8%	55.2%
Easy for disabled to vote	40.0%	57.2%	31.6%
Easy for election officials to count accurately	48.3%	60.3%	22.8%

VOTING MACHINE ATTITUDES IN 2012 (PCT. AGREE)

	Opscan	DRE	Paper
Easy for dishonest people to steal votes	27.8%	23.8%	55.2%
Easy for disabled to vote	40.0%	57.2%	31.6%
Easy for election officials to count accurately	48.3%	60.3%	22.8%
Preferred method	25.1%	56.4%	7.4% (11.1% dk)







2012 SUMMARY

+ Consensus attitudes

- + Both Opscans and DREs were seen as clearly better than hand-counted paper in guarding against tampering
- + DREs were seen as more usable by the disabled

+ Quasi-consensus attitudes

- + DREs the majority-preferred voting technology, even among users of opscans

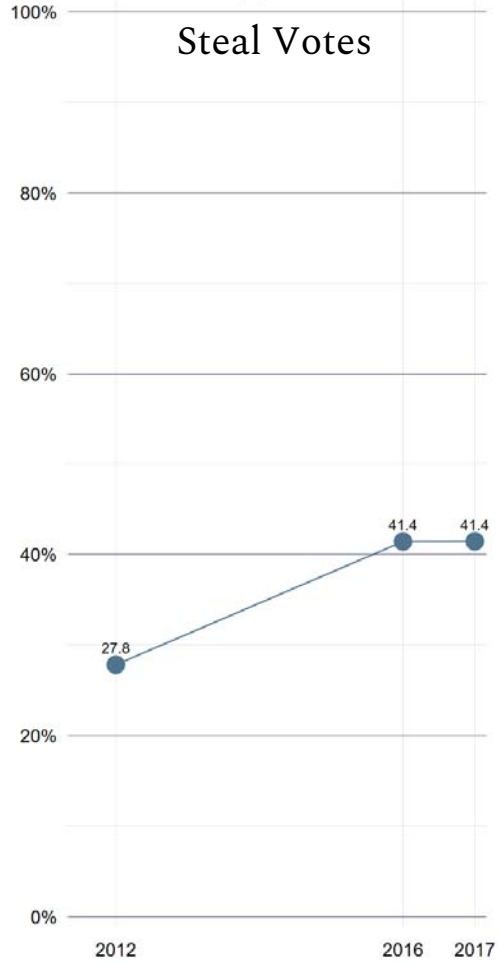
+ Disagreement

- + DRE users stronger in support of “their” machines than opscan users.

CHANGES SINCE 2012

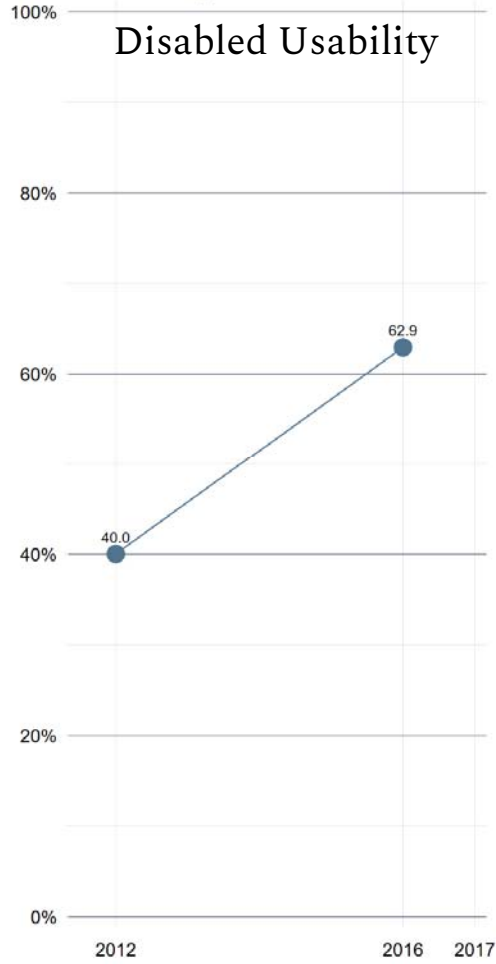
Opinions about Opscans
Dishonest people can steal votes

Steal Votes



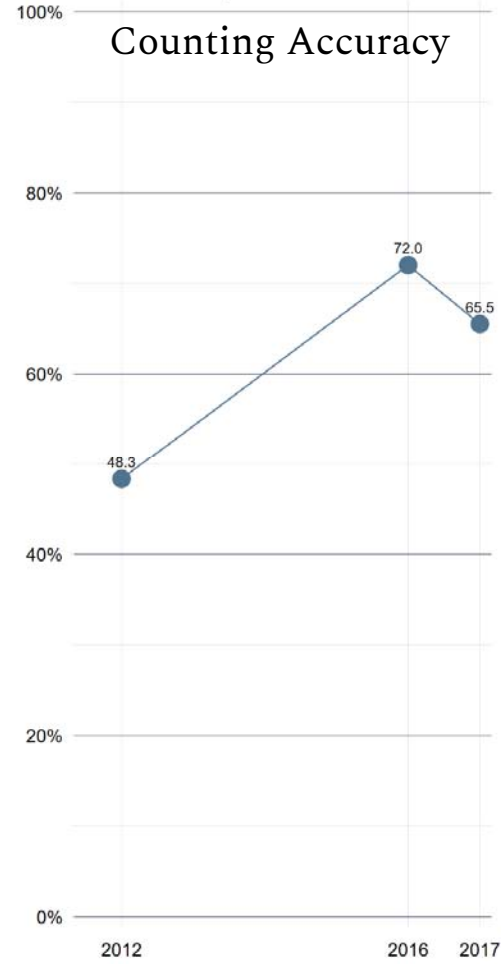
Opinions about Opscans
Easy for disabled voters to use

Disabled Usability



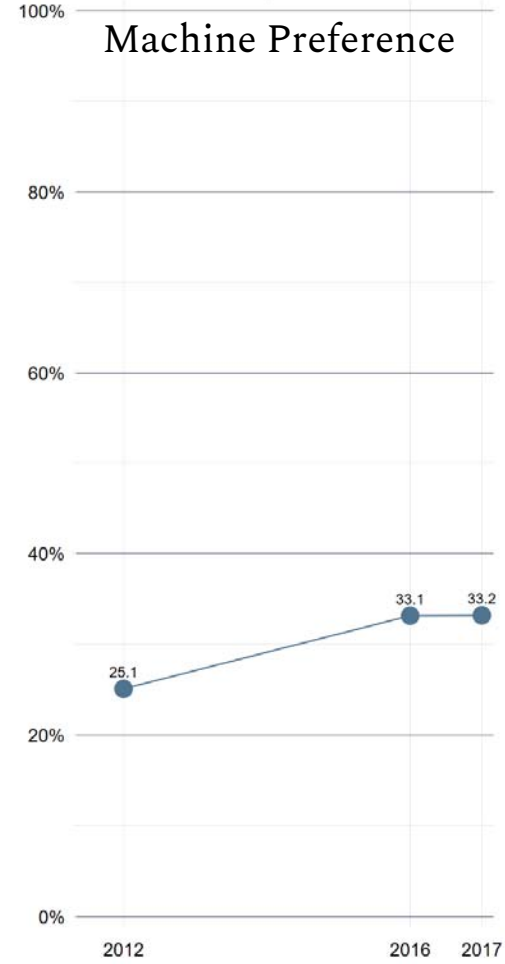
Opinions about Opscans
Easy for officials to count

Counting Accuracy



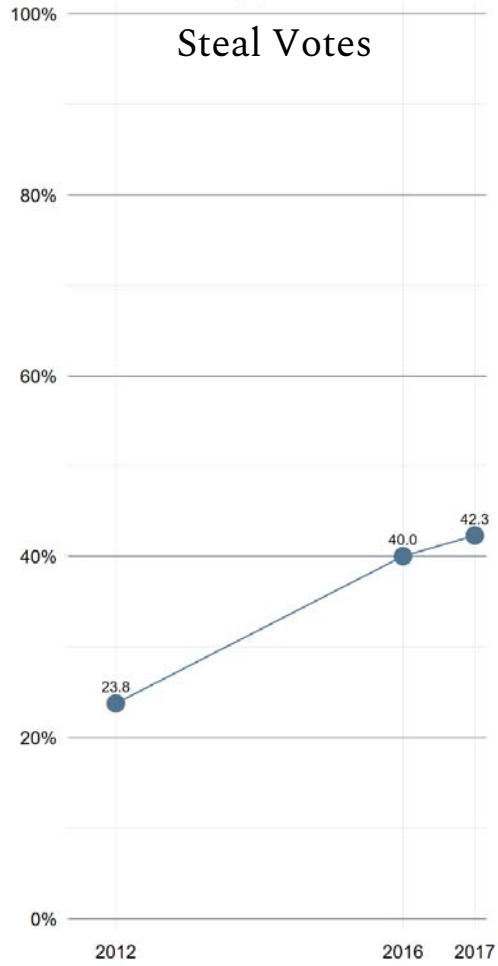
Voting Machine Preference
Opscans

Machine Preference



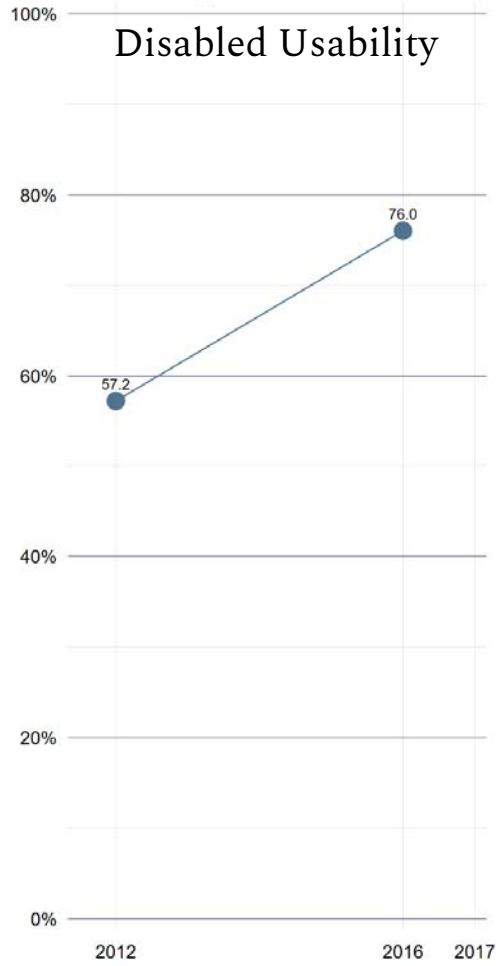
Opinions about DREs
Dishonest people can steal votes

Steal Votes



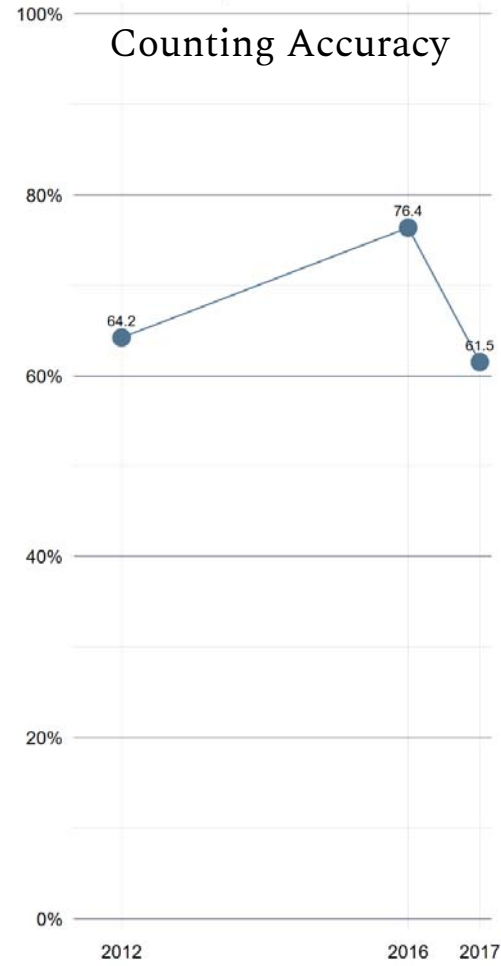
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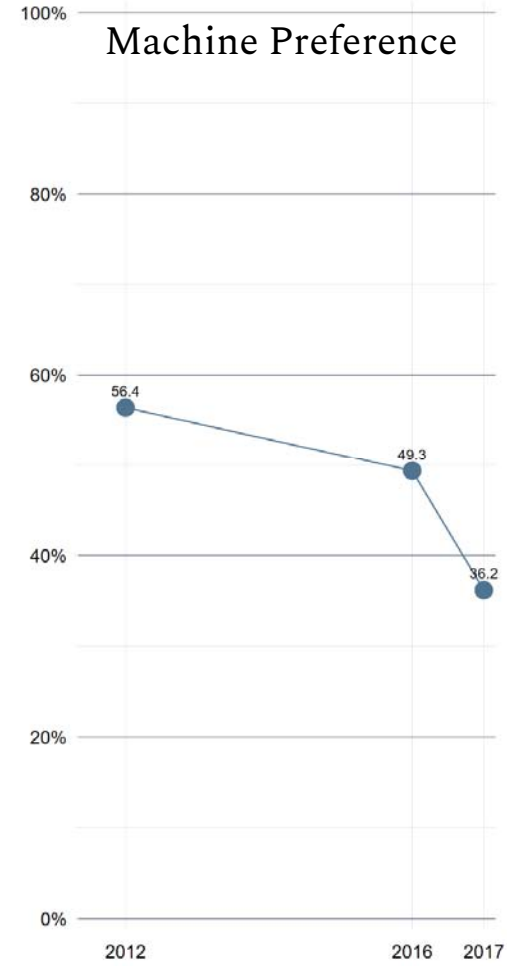
Opinions about DREs
Easy for officials to count

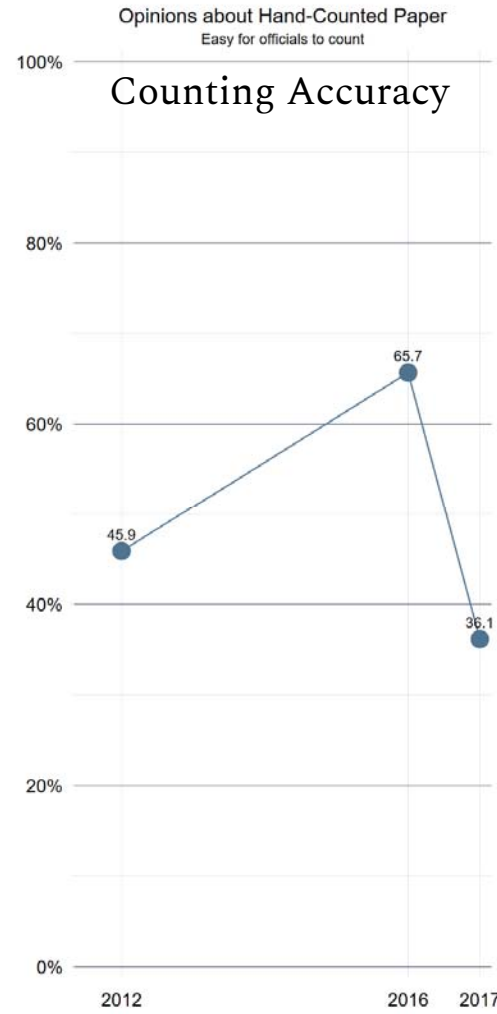
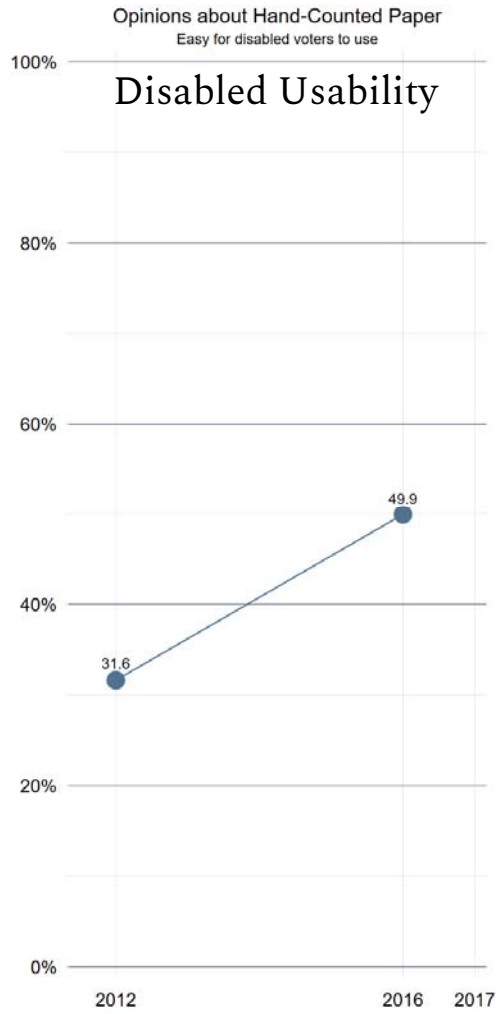
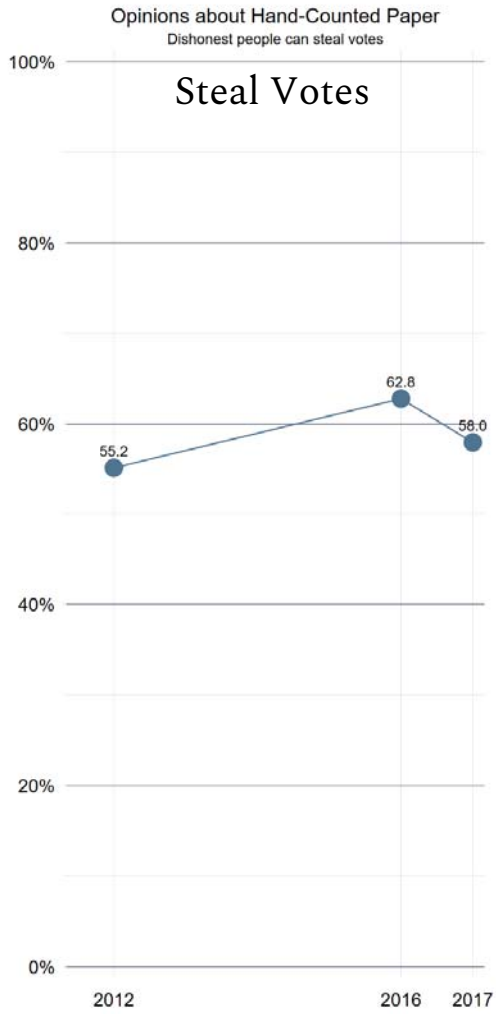
Counting Accuracy



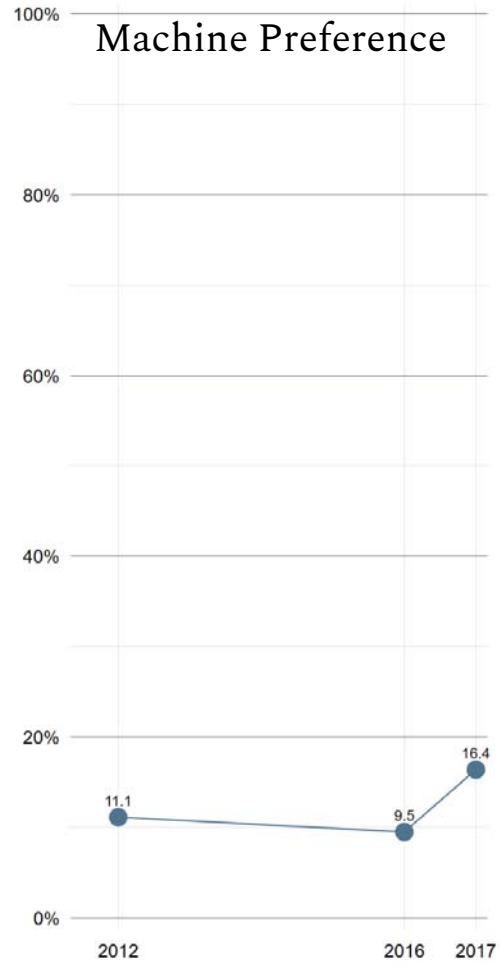
Voting Machine Preference
DREs

Machine Preference





Voting Machine Preference
Don't know



SUMMARY OF CHANGE IN VOTING MACHINE OPINIONS

- + All computer-aided systems are seen as easier to tamper with and as more usable
- + DREs have lost their clear preference among voters especially among opscan users
 - + Most DRE users still prefer DREs
- + Small, but important, growth in “hand-counted paper” and “don’t know” preferences

IMPLICATIONS

- + Popular perceptions of voting equipment seem to be changing
- + The bloom is off the DRE rose
 - + But, DRE users may be reluctant to regard switching to optical scanners as a good thing
- + As Doug Chapin says, “stay tuned...”

ATTITUDES ABOUT CYBERSECURITY

APRIL, MAY, AND JUNE 2018 YOUNG GOVERNMENT OMNIBUS

- + What do people think when they hear of “election hacking”?
- + Do people believe local officials are prepared?

WHAT DOES ELECTION HACKING MEAN TO AVERAGE AMERICANS?

There has been talk in the news recently about computer hacking in American elections. When someone talks about hacking American elections as a general matter, which of the following do you think about first?

Actors	Actions
Foreign actors	...using social media, like Facebook, to influence how people vote
Americans	...trying to break into computer equipment used to run elections, like voter databases and voting machines

+ Something else or nothing in particular

WHAT DOES ELECTION HACKING MEAN TO AVERAGE AMERICANS?

	Social media	Election computers	Row total
Foreign	20%	25%	45%
Domestic	9%	17%	26%
Column total	29%	42%	71%

Something else	8%
Nothing	20%

Source: May 2018 YouGov Omnibus

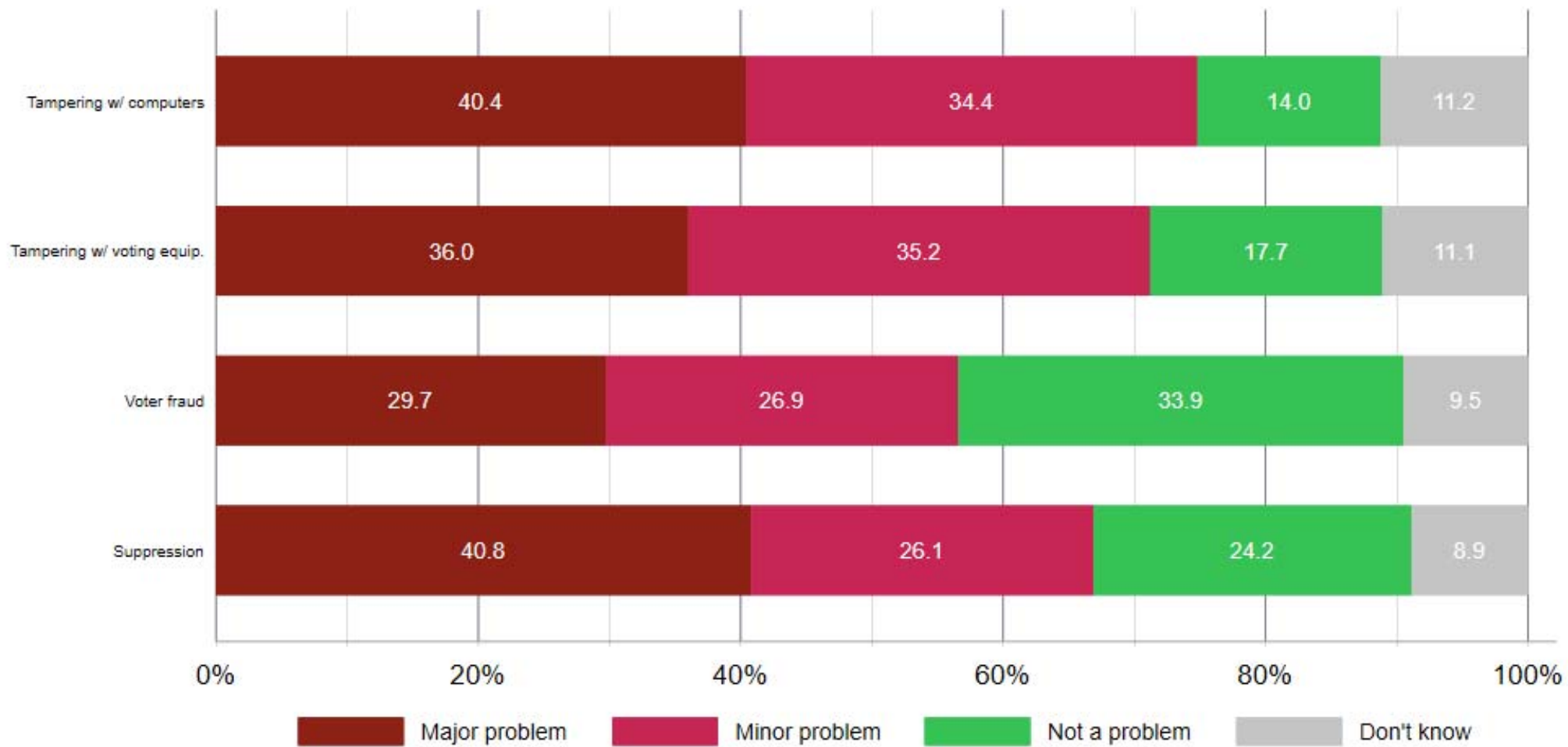
MAIN CORRELATION

- + The better educated and more attuned to politics a respondent is, the more likely s/he is to think of “election hacking” as involving foreigners trying to break into computer equipment.
- + Implication: the people you’re likely to hear from will be better educated and more politically involved (no surprise there)

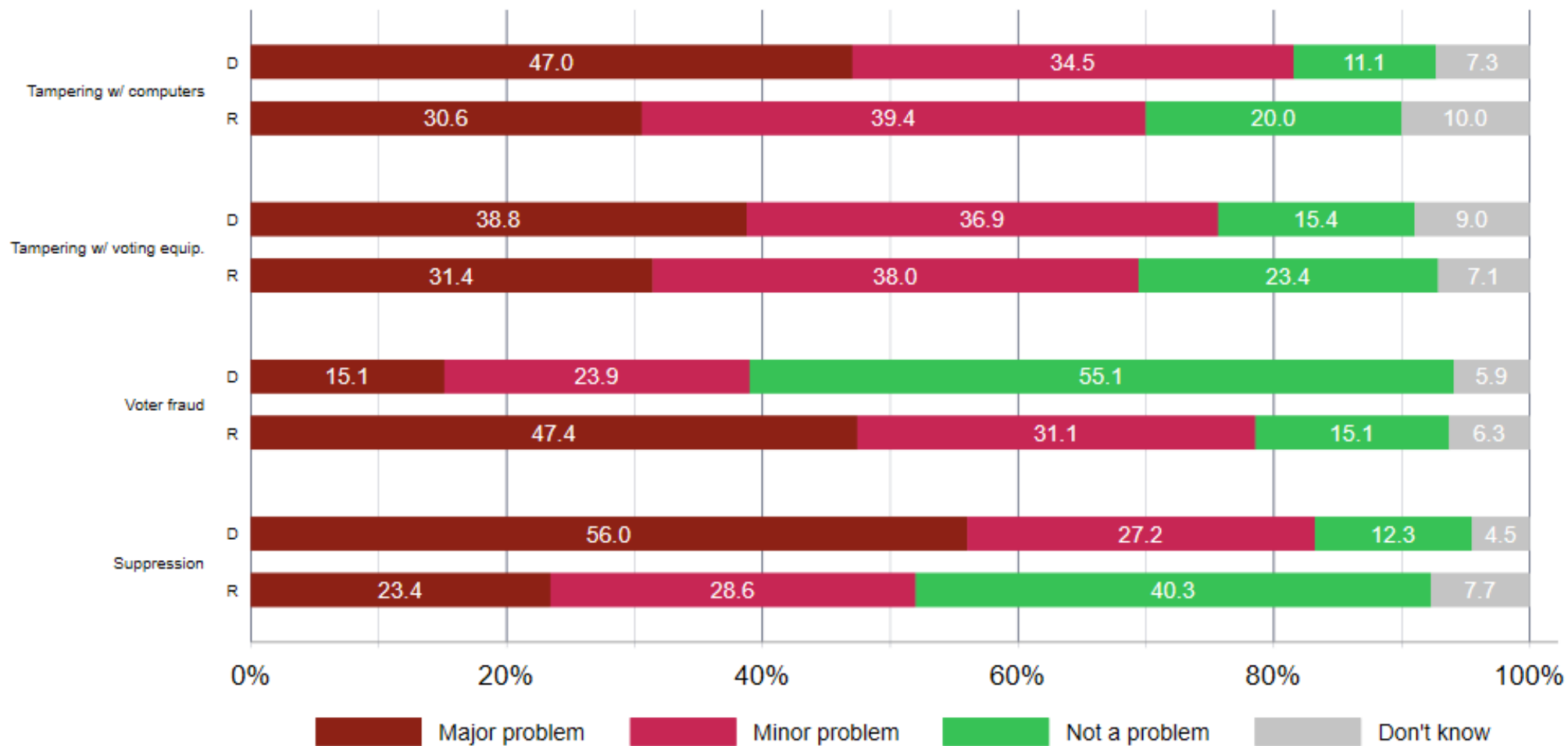
HOW WORRIED ARE VOTERS ABOUT ELECTRONIC SECURITY COMPARED TO OTHER THINGS?

Many people worry that elections might be tampered with, because of the illegal or unethical actions of others. The following is a list of four ways that bad actors might try to tamper with elections. How much of a problem do you consider these to be in a typical election in the United States?

- + Tampering with the computers used by election administrators to run elections
- + Tampering with the voting equipment used to cast or count ballots
- + People trying to vote even though they are too young, don't actually live in the precinct, or are non-citizens
- + Officials trying to keep people from voting because of their party membership or race



Source: June 2018 YouGov Omnibus



Source: June 2018 YouGov Omnibus

IMPLICATIONS

- + The public regards “election hacking” as being as much of a problem as “voter suppression” and “voter fraud.”
- + There is a partisan divide in concerns over hacking, but they aren’t as great as with “suppression” and “fraud.”

ARE ELECTION OFFICIALS PREPARED?

How confident are you that election officials in your county or town will take adequate measures to guard against voting being interfered with this November, due to computer hacking?

	Hacking preparation
Very confident	18%
Somewhat confident	35%
Not too confident	22%
Not at all confident	12%
Don't know	12%

Source: June 2018 YouGov Omnibus

ARE ELECTION OFFICIALS PREPARED?

How confident are you that election officials in your county or town will take adequate measures to guard against voting being interfered with this November, due to computer hacking?

	Hacking preparation	Confidence <u>your vote</u> will be counted as cast in 2018	Confidence <u>votes nationwide</u> will be counted as cast in 2018
Very confident	18%	42%	22%
Somewhat confident	35%	40%	37%
Not too confident	22%	10%	18%
Not at all confident	12%	4%	10%
Don't know	12%	5%	13%

Source: June 2018 YouGov Omnibus

SOME CONCLUDING THOUGHTS

- + Machines
 - + Public opinion is fluid
 - + DREs getting less popular (but still popular among DRE users)
- + Cyber security in general
 - + A surprising number of people think immediately about the “back of the house” when they think of election cybersecurity
 - + Better-educated and -engaged people are more likely to think this way
- + Confidence in preparation
 - + Barely half of adults are confident that local officials will take adequate measures to protect against computer hacking this election.

CONCLUDING REQUEST

- + I have \$\$ for some more questions over the next couple of months.
 - + What would you like to know?

2017 VOTING MACHINE ATTITUDES

