

There is only one 'e' in Democracy

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Recent concern over dwindling voter-participation in UK elections has prompted some radical proposals to give the *demos* a fuller voice in the 21st century. (see Wakefield, 2006) Among their number is the suggestion that the UK overhauls established practice and introduces the widespread use of new technologies in the voting procedure. Employing a narrow definition of democracy as simple majority rule, it is argued that the introduction of e-voting – i.e. voting via the internet, interactive television, telephone and text messages - can improve democratic efficacy. (Electoral Comision, 2002) This essay is not concerned with the potential sub-optimality of 100% voter participation due to inadequately-informed voters, (in)voluntary misrepresentation of preferences by voters or the exposure given to extremist minority views. I also accept the assumption that the widespread use of interactive technology would increase voter turnout, but consider the benefits of quicker results-reporting to be negligible given the infrequency of elections. Working within this narrow framework, it is still necessary to question whether higher turnout through technology-driven voting would unequivocally improve representative democracy. Even if we accept the view that each extra vote cast is an unambiguous gain, there are new costs to be set off against these gains. These costs are born out of the significantly increased risk of vote-manipulation, both during voting itself and vote-counting. I argue that (i) the widespread use of e-voting would significantly increase the risk of result-manipulation; (ii) this risk cannot be eliminated since IT protection and contravention is a sequential game with no stable equilibrium; (iii) the benefits of votes received from those who had previously abstained must be outweighed by a significant increase in the risk of any and all votes being manipulated; (iv) there may be a case for the provision of e-voting to those who are involuntarily

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Rerum Causae

excluded (e.g. through military service abroad, infirmity, etc); (v) a democratic election is not a 'normal' market and turnout-maximisation should not be pursued at the expense of institutional integrity.

There has been a significant recent drop in voter turnout in the UK. During the period 1945-1992 there were fourteen general elections with mean voter turnout of 76.64% and median 76.55%. In three general elections since 1992, the mean is 64.05% and the median 61.36% . (see PSR Research) Clearly, this is an undesirable development if democracy is defined simply as representing the will of the people where each citizen has one (and only one) vote. It seems reasonable to assume, as technology proponents posit, that the introduction of e-voting at the next general election would markedly increase voter numbers. This increase would come from two distinct groups: those hitherto excluded from the democratic process and those who had previously enjoyed the chance to vote but simply decided not to exercise that chance. Assuming the latter group's choice not to vote was rational - i.e. that the costs of voting outweighed the expected benefits - and that their voting preferences are typically spread, technology would markedly reduce the time-costs of information-gathering and voting while leaving the key benefit, the likelihood of casting a decisive vote, unchanged. For those previously disenfranchised, such as elderly and disabled persons unable to get to a polling booth or attain the right to postal vote, the speed and simplicity of using a telephone would allow them to vote where previously it was not possible. More simply, voter turnout would significantly increase for the very reason that voters would no longer have to turn out and, under our narrow definition of democracy, we accept higher participation as an unequivocal and considerable potential benefit.

However, there is a noteworthy cost associated with the \use of technology-driven voting procedures which I believe precludes their widespread implementation. Briefly, this is that they significantly increase the risk of result-manipulation, and that the heightened risk of undetected corruption outweighs any benefits of increased voter turnout. The reasons for the increased opportunity for manipulation are quite straightforward. Under conventional UK voting procedure, the voter must attend a specific polling office with which they are registered. Having established their identity and associated right to vote, the voter enters a private booth and marks their selection. This paper is then placed anonymously into a box. At the end of voting these boxes are counted by a large group of independent individuals supervised by others. Individually and collectively all counters are subject to robust checks and balances. A result is then announced. This process has five distinct strengths: (a) it is established beyond reasonable doubt that the voter is casting her own vote and not

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fraudulently casting the votes of others; (b) it protects those under coercion to vote against their principles, for example a subjugated wife ordered to vote in accordance with her husband's preferences (and in opposition to her own) can defy him without fear of discovery; (c) her anonymity is protected from government databanks; (d) it is implausible that vote-counting teams could conspire to influence results on any large scale without detection; (e) recorded voter-preferences exist in hard copy should any enquiry into potential corruption require a re-count.

E-voting compares poorly in each of these respects: (a) voters would be identified via a unique identity number which, outside a supervised environment, can be harvested by the unscrupulous. The identity checks and logistics of travelling from polling station to polling station preclude individuals committing identity fraud to cast n votes ($n > 1$) at present but with technology precisely what is seen as a key advantage – the speed with which one can vote – facilitates abuse of the system by those wishing to cast n votes illegally; (b) privacy is no longer guaranteed, so the abused wife may now have to vote under her husband's supervision; (c) voting behaviour would be recorded and kept as a matter of government record. The private vote is a basic civil right requiring far greater secrecy-protection than information currently kept in government records, for example date of birth or penalty points on a driving license. Violation of this right cannot be warranted by tightening the Data Protection Act; (d) manipulation of e-voting systems would not require a people-heavy, time-consuming conspiracy: any small group with the skill to access the system would be able to change large amounts of numbers almost instantaneously; (e) there is no paper trail so no enquiry could perform a comprehensive recount of votes cast.

I see two main objections to my arguments. First, that computer systems are no more easily manipulated than humans or paper ballots. Certainly one individual might be secretly recruited, coerced or deceived. However, manipulating thousands of independent volunteers and anonymous pieces of paper would require an implausible conspiracy. Computer systems, as huge organisations from Citibank to the FBI can testify, are never invulnerable even to a single resourceful individual. Moreover, IT protection and contravention is a sequential game with no stable equilibrium. However high one builds walls around a digital fortress, somebody sufficiently skilled and determined will eventually scale them. Those responsible for election probity will then build new defences, but in time these too will be breached giving rise to third-generation defences and so on. The cautious technophile view that e-enabled elections are inevitable even though we are not yet 'ready' is therefore a fallacy. Fears over security issues are not based simply in recent empirical observation of technology failures and election fraud. They represent the identification of an

intrinsic, enduring flaw in off-site e-voting.

The second argument is in essence utilitarian, *viz.* that the gains in voter turnout outweigh the expected costs of vote-manipulation. How many extra votes will be cast (y) and how many votes (in total) will be manipulated (x)? The simplistic position would be that where $y > x$ then the number of accurate votes cast has risen and this is a gain. To oppose this view is uncomplicated: a manipulated vote is not a wasted vote but rather one working contrary to its intended goal. Consider a population (=100) voting on candidates A and B with 48% turnout and zero vote-manipulation. A new technology resulting in turnout 100% and vote-manipulation 51% would increase the number of accurate votes cast from 48 to 49. However, there is an increase in inaccurate votes from 0 to 51: so, if every citizen votes for candidate A, the new technology would declare B the winner and, clearly, this is absurd. The more nuanced position would be acceptance of some small level of vote-manipulation in return for large increases in voter numbers since this would represent a utility gain: if the new technology could increase turnout from 1% to 100% at the expense of 1% vote-manipulation, is this not a clear improvement in democratic efficacy? The answer must remain negative: if candidate A and candidate B receive 50 votes apiece then the direction of that single manipulation would dictate the result. With an electorate of millions this is unlikely but not impossible, and the potential disutility of an invalid election result cannot be discounted by increased utility through voter participation.

There can therefore be no argument in favour of technologies to encourage those who have previously declined to exercise their right to vote. E-enabled elections present a non-negligible increase in the risk of result manipulation and the potential cost of this risk outweighs the benefits of increasing voter participation. Those abstaining are expressing their will in one sense, even if it is not the sense many might hope. In the case of the disenfranchised minority, however, the argument differs in two ways. First, there is a far greater benefit in including those previously excluded than there is in incentivising the voluntarily inactive. In the UK the right to democratic participation is fundamental and great effort should be expended to ensure that all have the opportunity to participate. Second, it seems that the fears outlined above are less applicable. The disenfranchised group is sufficiently small that further checks and balances could be effectively implemented and the likelihood of corruption is lower. Even in the event of technology failure or suspected result corruption, it would not be expensive to simply re-run the election for this group. If it holds that e-voting may be used by the disenfranchised without increasing the risk of vote-manipulation then it should be employed on this limited scale.

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Finally, I would like to appeal to the conception that we ought to defend democracy from corruption at the expense of efficiency whereas we might not in other markets. The right to democratic participation, and therewith uncorrupted election processing, is a fundamental right in our society and as inviolable as equality before the law. This is not a market in which one simply sets a goal and seeks to maximise that goal without minimal standards protecting other aspects of the ideal. Of course, it is not impossible that innocent men be convicted and guilty men freed just as some small number might be able to manipulate votes cast in an election as the current system stands. But we would surely not accept a change in legal procedure which ensured a significant increase in criminal convictions if this came with a significant increase in the likelihood that any and all convictions were unreliable. If a new technology could increase participation with an associated but not decisive level of vote-manipulation this would not be desirable since there is symbolic value to the integrity of certain, foundational institutions. Irrespective of whether their vote is decisive, citizens have a right to a non-manipulated vote and e-enabled elections are incapable of serving this right.

It is therefore necessary to conclude that the widespread use of e-voting in UK general elections is an undesirable solution to low voter turnout. Moreover, this conclusion appears invulnerable to technological development since IT protection and contravention is a sequential game with no stable equilibrium. Increasing turnout is of course attractive since democracy derives its moral power from making the people sovereign, and the sovereign in the UK is currently ruling only at around 60% capacity. However, wholesale reliance upon interactive technology presents increased opportunity for result-manipulation and this raises insurmountable concerns. The intention of this response is not to dismiss the use of technology in democracy, which has come to play a valuable role in improving bi-lateral communication between politicians and voters through polls, funding requests and direct mail. However, except in the cases of those who are otherwise wholly excluded from the democratic process, there is a great deal more to lose than there is to be gained by using that technology in the conduct of elections themselves.

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