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Will new technology boost turnout?

Evaluating experiments in e-voting v. all-postal voting facilities in UK local elections.

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Synopsis: Proponents argue that using technology to modernize the process of casting a ballot, especially the implementation of remote electronic voting (*e-voting*), could boost electoral participation. E-voting is thought to be a particularly important reform designed to encourage turnout among younger people.

Evidence to evaluate this claim is available from experiments conducted by the UK Electoral Commission using pilot schemes available to over six million citizens in 59 different English local government districts during the 1st May 2003 local government elections. These contests are characteristically low-salience events where only a third of the electorate usually cast a ballot. The pilot schemes provide an exceptionally good test of the effects of modernizing electoral administration and voting facilities, as the public in each district cast legal votes in an official contest. The pilots experimented with alternative ways of facilitating remote electronic voting, including use of the Internet from home and public access sites, interactive digital television, SMS text messaging and touch-tone telephones. Pilots also used all-postal ballots, getting electronic information to voters, and extended voting periods. For comparison, in the remaining areas the public cast a traditional in-person vote by marking crosses on standard paper ballots in local polling stations.

The evidence from the aggregate results, and from the post-election survey, confirms that the use of all-postal voting facilities had a significant impact in strengthening turnout by about 15% on average, as well as improving public satisfaction with the electoral process. Yet claims that remote electronic voting can automatically resuscitate electoral participation should be regarded with considerable skepticism: pilots using remote e-voting combined with traditional polling stations, *but without all-postal ballots*, proved ineffective in improving overall turnout. The main reason is that all-postal ballots had their most significant impact upon improving voting participation among the older generation, who were already most motivated to vote. In this regard, the simple Victorian postage stamp beats the high-tech microchip hands down.

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As access to the new communication and information technologies have diffused throughout post-industrial societies, the idea of using electronic tools to modernize electoral administration has been widely debated, with potential benefits of greater efficiency, speed, and accuracy¹. Perhaps the most important and influential argument concerns the claim that remote electronic voting will make the process more convenient and thereby strengthen electoral turnout and civic engagement, especially for the wired younger generation². If citizens will not come to the polls, it is argued, why not bring the polls closer to citizens? In Britain, after all, like horse-hair wigs on the judiciary, and men-in-tights in the House of Lords, the traditional method of expressing voting preferences by writing crosses on ballots, depositing them in black boxes in local polling stations, then counting the piles of paper in public halls, essentially has not changed since the 1888 Secret Ballot Act.

Much speculation and industry-generated hype surround the virtues of remote electronic voting, yet until recently almost no systematic evidence derived from actual elections was available to evaluate this issue. Given the vital importance of maintaining public confidence in the legitimacy and fairness of the electoral process, and the potential for even small details to cause disruption (exemplified by Floridian hanging 'chads' and butterfly ballots), policymakers need careful, cautious, and critical evidence-based evaluations throwing light on the pros and cons of implementing remote e-voting.

Evidence to evaluate this question is drawn here from the results of a series of innovative experiments conducted by the UK Electoral Commission using 59 pilot voting schemes available to 6.4 million citizens (14% of the English electorate) in the 1st May 2003 English local elections. These contests are characteristically low-salience campaigns, determining control of local town halls up and down the land, but commonly stirring minimal interest among the media and the public. Turnout is usually fairly low; for example only one third of the electorate voted in the previous year's contests. The most recent range of pilot schemes used by the UK Election Commission provide an exceptionally good test of the effects of modernizing electoral administration and voting facilities. Implications can be drawn well beyond the particular context, as the electorate in each district cast legal votes with the outcome determining the election of local representatives and the partisan control of councils. These studies built upon the experience of the more limited pilot schemes tried in 2000 and 2002. In the May 2003 elections, 59 different English local districts tested alternative ways of facilitating electronic voting, including use of the Internet from home and public access sites, interactive digital television, SMS text messaging and touch-tone telephones. Pilots also used all-postal ballots, getting electronic information to voters, extended voting periods, and electronic counting.

The evidence from the election results, and from the survey conducted after the contest, confirms that use of all-postal voting facilities generated turnout of about 50%, compared with average turnout of about 35% in the same districts. All-postal voting also improved public satisfaction with the electoral process, as intended. Nevertheless there are good reasons to be skeptical about claims that electronic technologies can automatically resuscitate electoral participation. Remote e-voting, in particular, may expand citizen choice, but it proved far less effective in improving turnout than the implementation of old-fashioned snail-mail (all-postal ballots). The age profile of who used different voting mechanisms provides an important clue to their effects.

The UK Electoral Commission has evaluated the results of the trials and this analysis will contribute towards the government's proposed reforms of voting procedures in future UK elections. The July 2003 report issued by the UK Electoral Commission, *The Shape of Elections to Come*, recommended rolling out all-postal votes as standard practice for all local elections, with further evaluation before this practice is extended to other types of election³. With regard to electronic voting, the Commission reached far more cautious conclusions, suggesting these should continue to be tested, with the overall aim of using electronic voting as a way of providing citizens with more choice about how they cast their ballots, rather than of improving turnout.

To consider these issues, *Part I* summarizes what we know about the technological, social, and practical barriers to electronic voting. *Part II* sets out the context of the UK local elections and describes the pilot schemes. *Part III* considers the macro and micro-level evidence about the impact of modernizing voting facilities on electoral turnout, comparing all-postal ballots with the use of a variety of electronic technologies. The conclusion summarizes the results and considers their broader implications for the impact of new technologies on citizen participation and civic engagement.

I: The pros and cons of remote e-voting

The modernization of electoral administration is often regarded as a logical extension of technological developments widely used in communications, commerce and government. One of the most common forms of modernization concerns electronic voting, which can be sub-divided into two categories.

Remote electronic voting (or remote e-voting for short), is understood here as the transmission of a secure and secret official ballot to electoral officials via various electronic information and communication technologies at a site located away from the polling station, whether from home, the workplace, or a public access point. Remote e-voting is sometimes thought to refer only to Internet voting, but in this study we can compare many electronic devices which are capable of transmitting an electronic ballot, including computers, touch-tone terrestrial telephones, cell (mobile) phones, text messaging devices, and digital televisions.

By contrast, *on-site electronic voting* technologies are used to vote within the traditional physical location of a polling station, exemplified by touch-activated screens, dedicated computer terminals, or electronic counting devices, as debated after the Florida debacle.

Proponents suggest many advantages that may come from implementing remote e-voting.

- The most important is the added convenience for citizens. By using a telephone, computer, palmtop device, or digital television to cast a ballot from home or the workplace, citizens could reduce the time and effort traditionally required to participate in person at the polling station. This may help overcome problems of social exclusion, especially for those with limited mobility such as the elderly, caregivers confined to the home by dependent relatives, or employees and shift-workers with little flexibility in their work hours, as well as for those who are traveling away from home and for overseas residents. The implementation of remote e-voting can be regarded in many respects as an extension of the use of other familiar and well-tested voting facilities already widely available in many countries, including the use of postal, absentee, overseas, or advance ballots⁴. In the June 2001 UK general election, for example, 1.3 million postal votes were cast, representing 5.2% of all ballots⁵.
- Moreover both remote and on-site electronic voting could potentially reduce the information costs of participation, and allow citizens to match their preferences more accurately to their electoral decisions, by providing relevant information at the time that people are casting their ballot, for example by incorporating an optional web page display of photos and standardized biographies linked to each candidate, or by providing a briefing synopsis explaining each side of a referenda issue.
- For officials, well-designed and effective electronic technologies, either remote or on-site, could potentially improve and streamline the process of electoral administration, by increasing the efficiency, speed, and accuracy of recording and counting votes.⁶

For all these reasons, the idea of e-voting has been hailed by advocates, particularly those in the industry, as an automatic 'magic ballot' that could entice more people to vote, make citizens more informed, and improve vote-counting.

Against these arguments, skeptics counter that many contemporary limitations - technological, socioeconomic and practical - combine to create substantial barriers to the effective implementation of e-voting.

Technological barriers

Democratic electoral systems must meet certain stringent standards of security, data-protection, secrecy, reliability, accuracy, efficiency, integrity, and equality. Public confidence in the integrity of the electoral system must be maintained to ensure the legitimacy of the outcome. This makes the administrative challenges of e-voting more difficult than the implementation of many common forms of electronic government or commerce, even banking. If poorly implemented, citizens could be discouraged from voting via new technologies, for example the design could prove difficult for the disabled, those with low literacy skills, or the elderly. Electronic votes cast in a general election could be a high-profile target for malicious publicity-seeking hackers. The bursting of the dot.com bubble, combined with the recent spate of disruptive viruses and the inundation of e-mail spam, may have depressed public confidence in the security of the Internet. Critics claim that the technology required to authenticate voters, and to assure the accuracy and integrity of the election system, either does not exist at present, or is not sufficiently available, to prove equitable and effective. Task

forces reviewing the evidence, such as the US NSF and the UK Electoral Reform Society, have proved doubtful about the technological, security, and legal issue surrounding e-voting, suggesting that further exploratory pilot studies are required before adoption⁷.

When remote e-voting has been tried in small-scale pilot studies, so far the security and technological issues involved in casting hundreds of votes electronically have often proved problematic. In October 2001, for example, the residents of the Dutch towns of Leidschendam and Voorburg were given the chance to vote via the Internet on the choices for the merged towns' new name. The vote was abandoned when it became obvious that more votes had been cast than there were electors⁸. The Arizona Democratic primary election, which also experienced many technical glitches, has been widely quoted, although it remains difficult to assess how far we can generalize from the particular circumstances surrounding this unique contest⁹. Government schemes for remote e-voting in official elections have been developed in the Swiss cantons of Geneva, Zurich, and Neuchatel, and first implemented officially in a Geneva referendum in January 2003¹⁰. Internet voting has also been employed as an option for shareholder elections by companies such as Chevron, Lucent Technologies and Xerox, as well as in student elections¹¹.

It remains unclear whether the purely *administrative* problems revolving at present around the practical issues of security, secrecy and integrity might eventually be resolved in future by suitable technological and scientific innovations. Potential problems of voter fraud might be overcome by advances in biometric voice, retina scanning and fingerprint recognition, for example, or by the widespread use of 'smart cards' as identifiers with a computer chip and unique digital certificates.

Social barriers

Setting aside these important technical and security matters for the moment, another fundamental issue concerns the potential problems that could arise if remote e-voting serves to exacerbate existing structural inequalities in electoral participation. In democracies the electoral process has to be equally available to every citizen, without discriminating against any particular group. This important principle is widely recognized in locating traditional polling stations throughout local communities, or in translating the instructions for registration and voting into the languages spoken by minority populations. Critics charge that implementation of remote e-voting from home or work could violate the equitable principle, given the widespread existence of the familiar 'digital divide' in Internet access. Making remote voting easier for those with access to electronic technologies could further skew who participates, and therefore political influence, towards more affluent and wired socioeconomic groups. While not actively harming poorer neighborhoods, remote e-voting could still potentially privilege some social sectors.

This argument holds less force when it comes to remote voting through special dedicated public terminals located in the community, such as any voting facilities established in libraries, schools, or even supermarkets, where similar principles would apply to those determining the location of traditional polling stations. But the argument becomes relevant if remote e-voting is available from any home or workplace computer terminal, which is the most radical and exciting application of this principle.

Official estimates suggest that by spring 2003 about half of the British population (54%) had used the Internet in the previous three months, and 60% had used the Internet at some time¹². About 40% of households had an Internet connection, a higher proportion than the European average (see Table 1). Other common communication technologies remain far more widespread, however, including the availability of mobile phones, found in 65% of households. Other technologies are also widely available throughout Britain, including digital TVs (in 35% of households), VCRs, Teletext TV, Satellite TV, and fax machines.

[Table 1 about here]

Many have expressed concern about the 'digital divide', the substantial differential in Internet access between the information haves and have-nots, including among rich and poor, as well as between graduates and those with minimal educational qualifications, between the younger and older generations, as well as among countries¹³. The European digital divide in the mid-1990s presents a similar picture to that found in the United States; in 1996, access was concentrated among the younger generations, more affluent households, university graduates, managers and white collar workers (as well as students), and, to a lesser extent, among men (see Table 2). By spring 2000 the social profile in Europe has not changed that much as the strongest rise in access has been among the most affluent households, the well educated, and among managerial professionals, although use has spread rapidly among the early-middle aged, as well as the youngest age group. Multivariate analysis in Table 3 confirms that by 2000 the digital divide remains significant by age,

gender, education, income and class, as well as showing the marked contrasts in access among the countries of Northern and Southern Europe. The age effects turn out to be very important for turnout, as discussed later.

[Tables 2 and 3 about here]

This familiar pattern suggests that if remote e-voting, via computer terminals in the home or workplace, were introduced into UK elections within the next few years¹⁴, then the digital divide will probably reinforce, or even widen, many of the familiar socioeconomic disparities in electoral participation that already exist, including those of social class, education, gender, and income¹⁵. Yet there is one important qualification to this conclusion, as remote electronic voting could encourage younger people to take advantage of this opportunity.

Of course this argument does not apply to other forms of remote e-voting, such as via public kiosks at traditional polling stations, or in public access locations such as libraries, town halls, schools, and community centers. On the other hand, the real advantages of using electronic voting are reduced through these channels, because people would still have to travel to a public location, while the disadvantages of electronic over paper-ballots for administrative security remain.

Practical barriers

But for the purposes of exploring the arguments further let us assume for the moment that the familiar digital divide in society is in the process of shrinking, as access to the wide range of new communication and information technologies, including text-messaging mobile phones, teletext digital television and the Internet, gradually diffuse throughout affluent societies. If the issues of technological security and of socioeconomic equality are resolved, the key question then arises whether the introduction of remote e-voting would actually facilitate participation.

There are many reasons to remain skeptical about this claim. The theory that we can use to understand electoral participation, developed more fully elsewhere, suggests that the incentives motivating citizens to cast a ballot represent a product of three factors (see Figure 1):¹⁶

- *Electoral costs* involved in registering to vote, sorting out relevant information, deciding how to vote, and then actually casting a ballot;
- *Electoral choices*, determined largely by the range of parties, candidates and issues listed on the ballot paper; and,
- *Electoral decisiveness*, influenced by how far votes cast for each party, candidate or issue are thought to determine the outcome.

[Figure 1 about here]

Electoral Costs

The theory assumes that rational citizens will be less likely to vote if they face major electoral costs of participating. This includes registering as electors, becoming informed about the issues, parties and candidates, and finally casting a ballot to express their voting choice. Standard rational choice theories suggest that, all other things being equal, the deterrent of higher costs reduces electoral participation.

Holding elections on a weekend or holiday, or over a series of days, rather than on a workday can reduce costs. Registration procedures are often believed to be an important hurdle. In many countries, including Britain, Sweden and Canada, registration is the responsibility of the government, conducted via a door-to-door canvas or annual census, so most eligible citizens are automatically enrolled to vote. In others including the United States, France and Brazil citizens have to apply to register, often well ahead of the election, and complicated, time-consuming or restrictive practices can depress participation levels¹⁷.

In this regard, the use of remote e-voting can be seen as essentially similar in principle to other remote voting facilities in common use for casting a ballot, exemplified by the widespread availability of special arrangements for mobile populations, including the use of mail, proxy, absentee, or overseas votes, as well as polling facilities for the elderly and disabled in nursing homes and hospitals¹⁸. But casting the ballot is only the last step in electoral decision-making process, and not necessarily the most significant one if people lack the sense that they have electoral choices matching their preferences, and that voting counts towards the outcome.

Electoral Choices

Electoral choices are determined by broader characteristics of the political system including the options available on the ballot, notably the range of parties and candidates contesting elected offices, and the policy alternatives listed for referenda issues. In turn, these options can be related to the type of electoral system, the party system, and other basic political institutions such as parliamentary or presidential executives.

Rational voter theories suggest that in general, all other things being equal, the greater the range of choices available on the ballot, the more the public will find an option (a party, candidate or referenda issue) that reflects their own viewpoint, preferences, and interests, and therefore the stronger the incentive to vote. Remote e-voting is unlikely to have an impact on any of these factors.

Electoral Decisiveness

Electoral decisiveness is also important, meaning the political benefits anticipated from casting a ballot in determining the composition of parliament, government, and the public policy agenda. In elections that are anticipated to be close (on the basis of past results, opinion polls, or media commentary), citizens are likely to feel a greater incentive to get to the polls than in those where the outcome appears to be a foregone conclusion. Of course the actual benefits of casting a single vote may, on purely rational grounds, be illusory, because one vote is unlikely to decide the outcome of an election, but this is not to deny the psychological belief that in close elections, each vote is believed to count for more than in safe contests. Hence for example British studies have found that the closer the difference in the national shares of the vote between the two major parties, the higher the level of electoral participation during the postwar era¹⁹. The marginality of British constituencies has also commonly been found to be one of the best predictors of turnout in each seat²⁰.

There are trade-offs between electoral choices and electoral decisiveness. Widening the range of choices on the ballot paper may allow citizens to find a closer match to their interests. But if the party system becomes too fragmented with multiple choices, then the outcome of casting a vote for smaller parties will be even less likely to influence the outcome, whether for parliament, government, and the policy agenda. Moreover a wider range of choices also simultaneously increased the costs of becoming informed about alternative candidates, parties and issues.

Given this understanding, this study hypothesizes that the introduction of remote e-voting from the home or workplace would probably marginally reduce the costs of casting a ballot at a polling station (see Figure 1). But e-voting would be unlikely to affect other important costs, such as the significant cognitive demands required to sort out the relevant information in deciding how to vote, nor would it influence electoral choices and electoral decisiveness. As such the Internet cannot be regarded as a magic panacea for all the ills of electoral participation, which are the result of many deep-seated forces, particularly how far citizens feel that they have a genuine choice that matches their prior preferences, and that casting a ballot influences the outcome.

II: Evidence for evaluating remote e-voting

What evidence would allow us to evaluate these issues? Here we can turn to the British case, which has gone further than any other country in testing the impact of a wide variety of remote e-voting technologies using official ballots cast during actual elections.

Concern about electoral participation has risen in Britain. During postwar general elections, UK turnout (measured as the proportion of the voting age population casting a valid vote) has seen a broad picture of trendless fluctuations (see Figure 2). But the 2001 UK general election saw turnout plummet, from 71.5% to 59.4% of the electorate, the lowest level since the 'khaki' election of 1918. Moreover this followed a series of local elections from 1998 to 2000 that witnessed historically low levels of turnout, reaching the nadir of one quarter (27%) of the electorate bothering to vote in 2000 (see Figure 3). If unchecked, this pattern is worrying for democracy as the legitimacy of the electoral process, and the mandate of the government, might eventually be undermined.

[Figures 2 and 3 about here]

The Labour Government has proposed modernizing electoral administration in the attempt to reengage the electorate. Recent changes enabled by the *Representation of the People Acts 2000* and 2001 include universal postal voting (available on request without needing a reason), an extension of the traditional polling hours, and more modern methods of how citizens can cast their ballots, including the possible use of telephone and Internet based voting.

The UK Electoral Commission is the official agency charged with implementing the process of modernization and advising the Deputy Prime Minister about the most effective options in electoral administration. Innovations in polling places, polling hours, and all-postal ballots were tested in 38 pilot schemes used among 3.5 million eligible electors in the May 2000 local elections. All-postal ballots remove the need for citizens to apply for a mail ballot; instead local authorities provide all citizens on the electoral register in an area with the automatic ability to cast a mail ballot during an extended period of about two weeks prior to Election Day. These initiatives were followed in the May 2002 local elections by 30 more pilots tried among 2.5 million eligible electors with a greater range of innovations directed at improving turnout, counting, and the provision of information. The Commission concluded that these generated interesting preliminary results, with significant increases in voting turnout (particularly from all-postal voting schemes), no significant technical problems of implementation or electoral management, and no evidence of fraud. Following evaluation, the government signaled its desire to use electronic voting by the next general election after 2006²¹, and the Spending Review allocated substantial resources to fund further pilot studies conducted at local government level. Nevertheless many significant questions remained concerning variations in turnout among wards, the best methods of avoiding electoral fraud, and issues of scalability across whole councils. The Commission concluded that the initial lessons needed to be tested more extensively, especially facilities for remote e-voting using multiple technologies²².

The May 2003 Pilot Schemes

Accordingly a further series of 59 pilot schemes were conducted in the May 2003 local elections, the focus of this paper. In total 17 of the 2003 pilot schemes explored innovative ways of remote electronic voting using a range of technologies including mobile phone text message services, touch telephones, local digital television, on-line Internet voting using home computers, terminals in local libraries, and council-run information kiosks. For comparison the Electoral Commission also continued to examine the use of all-postal ballots in over half the pilot schemes²³. Appendix A1 illustrates the location of the pilot local authority areas, selected from across all of England. Examples of the May 2003 initiatives included the following:

- Chorley offered electors all-postal ballots, Internet and telephone voting throughout their area, and used electronic counting.
- Ipswich offered citizens Internet, telephone, and SNS text messaging ballots.
- Shrewsbury and Atcham used all-postal voting, Internet, telephone, and Digital TV voting, as well as electronic counting.
- Sheffield used voting via public kiosks, Internet, telephone, and mobile phone text messaging.
- Medway, and Windsor and Maidenhead, extended traditional voting hours.

Other pilots used electronic counting, mobile polling stations, and extended polling hours. Timing is believed to be important: most countries hold their elections on a single day, usually at the weekend that makes it easier for employed people to visit a polling station. In a few countries, however, elections are spread over more than one day. Franklin compared average turnout 1960-95 in parliamentary elections in 29 countries and found that compulsory voting, Sunday voting, and postal voting facilities all proved important predictors, along with the proportionality of the electoral system, although not the number of days that polls were open²⁴.

The political context of the May 2003 local elections

The political context of the UK local elections in May 2003 concerned a mid-term contest with elections to the Scottish Parliament and the Welsh Assembly, as well as local government elections in Scotland and England (outside of Greater London). The last time the English councils came up for election, in 1999, the Conservatives gained 1300 seats, many from Labour, despite these results failing to translate into any substantial progress for the Conservative party in the 2001 general election. In May 2003, in a low-key campaign, it was widely expected that Labour would experience some electoral damage, after being in power for six years and during a period of public disquiet about the perceived lack-luster delivery of public services, as well as massive opposition to Blair's support for the Iraqi war. The question before the election was which opposition party would benefit most from Labour's mid-term blues in terms of gains in the share of votes, seats, and councils.

On election night, the Conservative won 35% of the local council vote, a modest (+1%) rise from 2002. Nevertheless they enjoyed net gains of 566 seats, winning control of an additional 31 councils. The Liberal Democrats also had a successful night, with an estimated 27% of the vote, making net gains of 193 seats and 5

councils²⁵. The far right anti-immigration British National Party achieved a controversial local triumph by fielding a record 221 candidates (many in the North-East and North-West), gaining 11 seats, becoming the second largest party in Burnley. Labour were the main losers in the English council elections, with 30% of the vote (down 3% from 2002), suffering a net loss of 883 seats and 28 councils. This was a substantial loss, although not outstanding historically for a mid-term period. At the same time Labour retained a working majority in the Welsh Assembly, and they were returned again as the biggest party in the Scottish Parliament.

Two sources of evidence are available to analyze the patterns of turnout. First we can examine the change in the macro levels of turnout in the local authority districts using the pilot schemes in May 2003 compared against the level of turnout in the last benchmark election in these same areas²⁶.

Moreover, to understand the micro-level behavior of voters, and the reasons behind patterns of electoral participation, we can analyze the post-election survey conducted by MORI on behalf of the Electoral Commission in these districts. MORI interviewed a representative sample of approximately 200 adults aged 18+ in 29 of the 59 authorities which were piloting new voting arrangements at the May 2003 elections. A total of 6,185 interviews were conducted. Quotas were set by age, gender and work status with c.100 voters and 100 non-voters were interviewed in each authority. Data are weighted by age, sex, working status to the known profile (using 2001 Census data), and by turnout on 1 May 2003. Aggregate data are also weighted by the population size of each pilot authority. Fieldwork took place between 2 May-12 May, 2003.²⁷

III: The impact of e-voting

There were many reasons, both long-term and short-term, to expect that electoral participation would fall further in these contests. In Britain power has gradually drained away from town halls, as more and more attempts have been made by both Conservative and Labour administrations to curtail local fiscal autonomy and control the standards of public service delivery in local areas. People may also be suffering increasingly from voter fatigue and 'election overload': compared with previous decades, there are now a regular series of European elections, Mayoral elections, and Scottish/Welsh regional elections, and occasional referenda, as well as general elections and local elections. As with other new assemblies, the first elections to the Scottish Parliament and Welsh Assembly could also be expected to attract higher than average turnout through a 'honeymoon' effect, and participation would be likely to fall in subsequent contests.

The particular May 2003 election was also a low-key affair. Since they came to power in 1997, Labour had enjoyed a continuous lead over the Conservatives in the national monthly opinion polls (with one minor blip). Usually in British elections, the safer the government's lead, the lower the turnout.²⁸ In addition, since Labour moved back into the center of the political spectrum in the mid-1990s, British party competition has moderated. Voters today perceive few major contrasts between the main parties on most issues, with Labour under the leadership of Tony Blair bang in the center of the political spectrum, the Liberal Democrats under Charles Kennedy close by to the center-left, and the Conservatives flailing away under Iain Duncan Smith somewhere towards the right²⁹. The local election campaign also had fairly fuzzy issues: there was little conflict over the issues of taxes and spending, education and health, and nothing like the way that the issue of the Conservative Poll Tax mobilized voters during the early 1990. The public and the news media had paid even less attention than usual to the local campaign in the run up to polling day, with events in Iraq dominating the headlines. In the run up to the election, most of the editorial speculation about domestic politics had surrounded who might replace the Conservative leader, Iain Duncan Smith, in the event of a poor result for Tory Central Office, and whether the nationalists would do well in Scotland.

Given this context, not surprisingly the overall level of turnout in May 2003 was 49% in Scotland (down 9% from 1999, the inaugural election for the Scottish Parliament), and 38.2% in Wales (down 8%). In England, however, despite expectations, local government turnout was 37%, a rise of 5% from 1999 and a rise of 3% from 2002. How far was the increase in the English local elections due to the pilot initiatives?

Table 4 shows the districts where all-postal voting was used, the most comparable previous election, the turnout in May 2003, and the change in turnout. The results illustrate the outstanding success of all-postal ballots: on average turnout increased from one third (34%) to almost half (49.3%) of the electorate in these districts. The increase was even more remarkable in some of the Northern areas that had been lowest in turnout, almost doubling voting participation in Blyth Valley, for example, as well as Rotherham, Sunderland and Blackpool. By contrast, there were more modest increases registered in most councils, and only three cases with any slight fall. The fact that a 15% increase in turnout was also found in the 2002 all-postal pilots confirms the consistency and robustness of these results. The Electoral Commission also found very limited evidence

that the use of all-postal ballots led to any increase in fraud or electoral offences. Of course part of the rise in turnout there could be due to a one-off 'Hawthorne effect', if local authorities mounting these initiatives publicize the opportunities to vote by mail more actively than usual, and if voters are respond to the publicity and to the novelty-value. On the other hand, the fact that the rise in turnout was fairly substantial and reasonably consistent across many different types of urban and rural areas, as well as parts of England, suggests that at least some of the benefits of postal voting are likely to persist if used more widely in future local elections.

[Table 4 about here]

By contrast the districts using electronic voting showed a far more mixed picture of turnout, as illustrated in Table 5 and Figure 4. Overall only about 9% of the electorate in these districts used the electronic technologies to cast a ballot, with most of the public opting for traditional methods of voting. Three districts using electronic voting (South Salisbury, Shrewsbury and Atcham, and Vale Royal) did experience a rise in turnout of 9-12%, but two of these also used all-postal voting as well. Overall, two-thirds of the areas experimenting with electronic voting registered a modest fall in turnout, not any rise, disappointing the hopes of the reformers.

[Table 5 and Figure 4 about here]

Both all-postal voting and remote electronic voting share certain important features, both offering voters additional convenience over traditional in-person visits to the polling station. So why should areas using these facilities generate such different patterns of macro-level turnout? Here we need to turn to the micro-level survey data to understand more fully how the public responded to these opportunities, and which social groups used the all-postal and electronic voting facilities. In particular, even if the electronic facilities generated no positive effects in aggregate turnout that were evident at district level, there could still be differential patterns in which certain social groups took greatest advantage of the new voting facilities. In particular it is important to monitor whether younger people -- who are both the most wired generation and also the group least likely to turnout using conventional methods -- might prove more likely than average to use the electronic voting facilities. Figure 5 shows the familiar curvilinear pattern of reported voting by age (in years): as a multitude of studies have found, younger people are persistently less likely to participate, with voting rising to a peak in late middle-age, until there is a fall among the over 70s, who often have difficulty in getting out to the polls.

The sample is not large enough to be able to monitor reliably each of the specific technologies used, such as text messaging or the Internet, but respondents in the MORI survey can be divided into three major categories according to whether the type of pilot scheme used in their district was either combined, any electronic pilot, or all-postal pilot. Table 6 shows the breakdown of reported voting by the type of pilot areas and by major age groups.

[Table 6 and Figures 5 and 6 about here]

The combined pilot areas allowed people to vote automatically by a postal ballot, or alternatively by some form of electronic technologies (whether by telephone, internet, text messaging or digital TV). In these areas there were enormous disparities in reported voting participation by age group: 84% of young people said that they did not vote, compared with only one quarter of the over-sixties. Just fewer than one in ten in each of the age groups used the electronic channels of voting, and this pattern was fairly similar among young and old. But postal voting proved by far the most popular among the older group, who often have limited mobility.

The all-postal ballot pilots generated similar age differentials to the combined pilot areas: only one fifth of the younger group reported voting compared with almost three-quarters of the elderly.

The last category of pilot schemes allowed people to cast a ballot either electronically or by traditional in-person polling stations. In these areas, electors could also opt for postal vote by application, but this process was not automatic. This category saw an intriguing pattern: as we have seen aggregate levels of turnout actually fell in some of these areas, and overall across all these pilot schemes turnout did not increase. One of the main reasons uncovered by this analysis is that without all-postal voting (where the local authority *automatically* sends everyone the option to cast a mail ballot) the elderly are less likely to vote either in person at polling stations or electronically through new technologies. And in these areas, while younger people do use the new electronic voting channels, nevertheless they remain less likely to vote than the older generation. Figure 6 confirms this pattern, where age (in years) is regressed on reported turnout in each category of pilot schemes. Compared with other pilots, the strength of the age regression coefficient is reduced in the electronic pilot schemes, but this effect occurs mainly by depressing the participation of the elderly, rather than by boosting the participation of the young.

Multivariate analysis, introducing controls for gender, race and class into logistic regression models of voting participation in each category of pilot schemes, confirmed that the effect of age remained consistently significant even after applying controls, and that the age effect diminished most under the electronic pilot schemes (see Table 7). This suggests that the use of electronic voting technologies combined with in-person voting in traditional polling stations alone, *if they are not supplemented by the simultaneously employment of automatic postal ballots*, would not bolster turnout. Quite simply, the elderly generation remain the least comfortable using new technologies, having not grown up in the world of micro-chips, mobiles, and text messaging that is now ubiquitous among the younger generation. And the older generation is the social sector with the strongest habits of voting, and yet the least physical mobility, who are therefore most motivated to take advantage of opportunities to cast a ballot by mail. The theory developed earlier suggests that reducing the costs of voting helps, but in order to participate citizens also need the sense that they have genuine electoral choices, and that casting a ballot will have an important impact through electoral decisiveness. Convenience in casting a ballot therefore only facilitates action if citizens are motivated through broader political considerations.

IV: Conclusions and Discussion

Modern lifestyles mean that younger generations have become increasingly comfortable with the security of online banking, shopping, and stock market trading, so advocates of e-voting hope that this process could generate similar levels of trust and confidence. The use of electronic technologies in elections can be regarded as building upon other increasingly-common electoral and political uses of Internet for information and communications, such as the use of websites and email by parties, candidates, and interest groups, the publication of election results online, the provision of voter registration facilities, and the use of the Internet for the submission, collection, and disclosure of campaign finance.

Nevertheless the evidence presented in this study suggests that at present, even if the technical and social equality issues could be overcome, there are few grounds to believe that adopting remote e-voting from home or work on a wide-scale basis would radically improve turnout. The introduction of remote e-voting would probably have a modest impact upon the younger generation, if judged by the available evidence from the British pilot studies. And automatic postal ballots are far more effective in improving participation among the older generation, as well as being cheaper and more efficient to administer. Remote e-voting is therefore unlikely to prove a 'magic ballot'. Technological quick fixes, while superficially attractive, cannot solve long-term and deep-rooted civic ills. Yet this does not mean that we should abandon all hope of modernizing elections; the impact of all-postal voting proved positive and highly significant. For the simple price of a postage stamp, snail-mail proved very effective at boosting turnout, and the MORI survey of attitudes showed that postal voting also generated high levels of trust, satisfaction, and a sense of security among citizens³⁰.

This is not to argue that the Internet fails to serve many other important functions during election campaigns, including for civic engagement. Content analysis of party websites suggests that the Internet provides a more level playing field for party competition, serving information and communication functions that are particularly important for minor and fringe parties³¹. American surveys show that online communities can serve both 'bridging' and 'bonding' functions strengthening social capital³². Experimental evidence demonstrates that party websites on the Internet do indeed promote civic learning, and in this regard information on the Internet is analogous to campaign information from newspapers or television news³³. Nevertheless survey evidence from those Americans who use the Internet during campaigns in the United States strongly suggests that e-voting would be used most heavily primarily by people who are already most likely to participate, thereby still failing to reach the apathetic and disengaged³⁴.

Perhaps the primary impact of the Internet on democratic life concerns its ability to strengthen the public sphere by expanding the information resources, channels of electronic communication, and the networking capacity for many organized interest groups, social movements, NGOs, transnational policy networks, and political parties and candidates (such as Howard Dean's run for the Presidency) with the technical know-how and organizational flexibility to adapt to the new medium³⁵. The impact of new technologies on intermediary organizations is evident from the way that they facilitate networks of activists concerned to challenge the decision-making processes in global governance, as well as most recently generating the 'flash mob' phenomenon in popular culture. As such the debate about remote e-voting may well fail to identify the primary political impact of new information and communication technologies on democracy. How political leaders respond to these new demands, and thereby use the potential of new technologies to widen and deepen the democratic processes, remains one of the key challenges of governance for the 21st Century.

Table 1: Trends in Household Access to Communication Technologies, UK, 1970-2002

	Tele- phone	Mobile phone	Video recorder	Satellite Receiver ¹	Home computer	Internet connec- tion
1970	35	--	--	--	--	--
1975	52	--	--	--	--	--
1980	72	--	--	--	--	--
1985	81	--	30	--	13	--
1990	87	--	61	--	17	--
1994-95	91	--	76	--	--	--
1995-96	92	--	79	--	--	--
1996-97	93	16	82	19	27	--
1997-98	94	20	84	26	29	--
1998-99	95	26	86	27	32	9
1998-99*	95	27	85	28	33	10
1999-2000*	95	44	86	32	38	19
2000-01*	93	47	87	40	44	32
2001-02*	94	65	90	43	49	40

Note: Percentage of UK households with durable goods 1970 to 2001-02. ¹ Includes digital and cable receivers.

Sources: *UK Expenditure and Food Survey* www.statistics.gov.uk/StatBase

Table 2: Social Profile of Online Community, EU-15 1996-2000

	% Online Spring 1996	% Online Spring 2000	Change 1996-2000
AGE			
15-25	9	28	+19
26-44	7	28	+21
45-64	5	21	+16
65+	1	6	+5
HH INCOME CATEGORY			
--	4	12	+8
-	3	15	+12
+	5	24	+19
++	10	44	+34
AGE FINISHED EDUC			
Up to 15	1	7	+6
16-19 years	4	19	+15
20+	9	38	+29
GENDER			
Men	6	25	+19
Women	4	21	+17
OCCUPATIONAL STATUS			
Managers	14	44	+30
Other White Collar	8	29	+21
Manual Worker	3	15	+12
Home worker	2	8	+6
Unemployed	3	10	+7
Student	13	44	+31
ALL EU-15			
<i>All</i>	5	22	+17

Sources: Eurobarometer 44.2 spring 1996; 53.0 spring 2000

Table 3: Models predicting use of the Internet, EU-15 1996 and 2000

	1996			2000		
	B	S.E.	Sig.	B	S.E.	Sig.
DEMOGRAPHICS						
Age	-.035	.002	.000	-.025	.002	.000
Gender	.588	.052	.000	.230	.048	.000
Education	.783	.040	.000	.627	.038	.000
Income	.303	.020	.000	.252	.019	.000
Class	.827	.066	.000	.919	.062	.000
NATION						
Sweden	1.01	.188	.000	1.10	.112	.000
UK	.966	.186	.000	.003	.131	.984
Finland	.784	.189	.849	-.121	.118	.391
Netherlands	.578	.190	.012	.966	.107	.000
Denmark	.573	.190	.003	.727	.110	.000
Ireland	.359	.221	.104	-.620	.120	.000
Austria	.020	.210	.923	-.602	.120	.000
Germany	-.035	.187	.012	-.832	.106	.000
Italy	-.507	.201	.002	-.534	.120	.000
Portugal	-.563	.224	.000	-1.42	.166	.000
Belgium	-.628	.254	.013	-.584	.117	.000
France	-.774	.202	.000	-1.04	.132	.000
Spain	-1.02	.217	.000	-1.33	.146	.000
Greece	-1.43	.257	.000	-2.11	.179	.000
Constant	-5.3			-2.968		
N.	65178			16078		
% With Internet access	5.0			22.4		
Cox-Snell R ²	.073			.187		
Nagelkerke R ²	.209			.293		
% Correct	94.5			81.0		

Notes: The table reports the beta coefficients predicting use of the Internet based on logistic regression models. Use of the Internet and use of party websites are each measured as a dichotomy where 1=yes, 0=no. Luxembourg as closest to the overall mean was excluded from the national list in both surveys.

Age: Years

Education: Age finished FT education

Income: Harmonized HH income scale

Class: Manual (0)/Non-manual HoH

Gender: Male (1) Female (0)

Source: EuroBarometer 44.2bis Spring 1996, EuroBarometer 53.0 Spring 2000.

Table 4: Impact of all-postal voting in the 1st May 2003 UK local election pilot schemes

Name of Authority	Year of last comparable election	% Turnout at last comp. election	Type of election this time (Full/ 3rd)	Start of Polling Date	% Total turnout May 2003	Change in % turnout since last comp. election
Blyth Valley BC	1999	27	Whole	15-Apr	52.00	25
Rotherham MBC	2002	27	Thirds	17-Apr	51.30	24
Sunderland City C	2002	22	Thirds	17-Apr	46.46	24
Herefordshire CC	1999	38	Whole	15/17-Apr	61.00	23
Blackpool BC	2000	29	Whole	17-Apr	50.43	22
St Helens MBC	2002	26	Thirds	17-Apr	48.00	22
Stockton-on-Tees BC	1999	31	Whole	13-Apr	52.00	22
Derwentside, Chester-le-Street & Wear Valley	1999	31	Whole	17-Apr	52.40	21
Lincoln City C	2002	26	Thirds	17-Apr	47.33	21
Telford & Wrekin	1999	28	Whole	10-Apr	48.65	21
DarlingtonBC	1999	34	Whole	14-Apr	51.54	18
Doncaster C	2002	29	Thirds	16-Apr	47.00	18
Newcastle City C	2002	32	Thirds	17-Apr	49.83	18
North Lincolnshire	1999	33	Whole	15/16-Apr	51.28	18
Wansbeck DC	1999	32	Whole	17-Apr	50.20	18
Chesterfield BC	1999	35	Whole	18-Apr	51.69	17
Copeland BC	1999	39	Whole	14-Apr	55.70	17
Guildford BC	1999	37	Whole	11-Apr	54.00	17
Hyndburn BC	2002	36	Thirds	17-Apr	51.47	16
Salford City C	2002	25	Thirds	14-Apr	41.00	16
Redcar & Cleveland BC	1999	37	Whole	17/21-Apr	51.50	15
Rushcliffe BC	1999	40	Whole	19/22-Apr	54.00	15
Sedgefield BC	1999	30	Whole	14-Apr	44.15	14
Corby BC	1999	31	Whole	12/14 Apr	43.00	12
East Staffordshire BC	1999	34	Whole	10/11-Apr	44.97	11
Kings Lynn & West Norfolk BC	1999	36	Whole	15-Apr	47.66	11
North Shropshire DC	1999	33	Whole	17-Apr	43.80	11
Bolton MBC	2002	32	Thirds	15-Apr	42.00	10
Brighton & Hove City C	1999	38	Whole	15-Apr	45.96	8
St Edmundsbury BC	1999	38	Whole	19/22-Apr	38.50	1
Stevenage BC	2002	53	Thirds	16-Apr	52.20	-1
Trafford MBC	2002	53	Thirds	14-Apr	52.39	-1
Gateshead MBC	2002	57	Thirds	17-Apr	54.65	-2
Average		34			49.34	15

Note: Turnout is based on the number of votes cast as a proportion of the eligible electorate. The most comparable election depends upon whether whole (1999) or one-third (2002) elections are used in each district. BC=Borough Council. MBC=Metropolitan Borough Council. DC=District Council. C=Council.

Source: The UK Electoral Commission

Table 5: Impact of remote electronic voting in the 1st May 2003 UK local election pilot schemes

Name of Authority	Year of last comparable election	% Turnout at last comp. election	Type of election this time (Full/3rd)	Total number of votes cast	% Total turnout in May 2003	Change in % turnout from last comp. election	Number of votes cast using e-channels	% Of electorate using e-channels	% Of turnout using e-channels	Notes
Vale Royal	1999	30.8	Whole	40,904	43.6	12.8	9,752	10	23.8	
Shrewsbury & Atcham	2002	43.2	Thirds	22,039	54.5	11.3	4,090	10	19.0	(i)
South Somerset	1999	38.0	Whole	53,311	46.9	8.9	8,428	7	15.8	(i)
St Albans	2002	38.1	Thirds		43.4	5.3				
Basingstoke & Deane	2002	29.0	Thirds	28,317	30.9	1.9				
Norwich	2002	35.3	Thirds	33,866	35.8	0.5	3,442	4	10.7	
Sheffield	2002	29.7	Thirds	110,988	29.5	-0.2	20,845	12	37.0	
Swindon	2002	31.2	Thirds	40,812	29.8	-1.4	10,189	7	25.0	
Chester	2002	35.5	Thirds	22,482	34.0	-1.5	6,699	10	29.1	
Epping Forest	2000	30.0	Thirds	15,431	28.4	-1.6	14,683	27	95.0	
Rushmoor	2002	34.7	Thirds	18,345	31.0	-3.7	2,760	6	15.0	
Kerrier	1999	32.2	Whole	17,662	28.3	-3.9	3,374	5	15.0	
Stroud	2002	42.6	Thirds	20,441	36.7	-5.9	4,176	8	20.4	
Ipswich	2002	39.0	Thirds	28,516	31.9	-7.1	6,183	9	21.7	
South Tyneside	2002	54.7	Thirds	52,368	46.1	-8.6	6,008	5	11.5	(i)
Stratford-on-Avon	2002	44.6	Thirds	21,669	35.6	-9.0	4,176	7	19.0	
Chorley	2002	61.5	Thirds	32,900	49.9	-11.6	3,072	6	9.0	(i)
Average		38.2			37.4	-0.8	22,270	8.8	24.5	

Notes: Turnout is based on the number of votes cast as a proportion of the eligible electorate. (i) Includes all-postal ballots.

Source: The UK Electoral Commission

Table 6: Reported voting participation by age group

Type of pilot	Age group	Did not vote	Reported voting			
			Voted at a polling station	Voted electronically	Voted by post	
Combined pilots	Younger	84	N/a	8	8	100%
	Middle aged	61	N/a	9	30	100%
	Older	25	N/a	7	68	100%
<hr/>						
All-postal pilots	Younger	81	N/a	N/a	19	100%
	Middle aged	58	N/a	N/a	42	100%
	Older	29	N/a	N/a	71	100%
<hr/>						
Electronic pilots	Younger	84	10	5	1	100%
	Middle aged	70	20	8	3	100%
	Older	47	38	8	8	100%

Note: Younger (18-29 years old), Middle aged (30-59), Older (60+ years old). N/a not applicable in pilot area.

Source: MORI post-election survey of 6,185 electors 2 May-12 May 2003 in 29 local authorities piloting new voting arrangement. The survey results were weighted by wfinal. For further details see: <http://www.mori.com/polls/2003/electoralcommission.shtml>

Table 7: Regression models predicting turnout in UK local elections

Type of pilot scheme in area		B	S.E.	Sig.
Combined postal + electronic pilots	Gender (Male=1)	-0.88	0.18	0.000
	Ethnicity (White=1)	0.64	0.82	0.434
	Logged age (Years)	6.65	0.65	0.000
	Class (4-cat)	0.09	0.08	0.257
	Constant	9.89		
	Nagelkerke R ²	0.31		
	% Correctly predicted	72.80		
	N. of cases	1125		
Electronic pilots	Gender (Male=1)	0.30	0.10	0.002
	Ethnicity (White=1)	0.17	0.29	0.554
	Logged age (Years)	4.59	0.33	0.000
	Class (4-cat)	0.17	0.04	0.000
	Constant	7.87		
	Nagelkerke R ²	0.15		
	% Correctly predicted	70.00		
	N. of cases	2416		
Postal pilots	Gender (Male=1)	-0.45	0.08	0.000
	Ethnicity (White=1)	0.12	0.20	0.552
	Logged age (Years)	5.35	0.26	0.000
	Class (4-cat)	0.09	0.04	0.012
	Constant	8.35		
	Nagelkerke R ²	0.21		
	% Correctly predicted	68.70		
	N. cases	2444		

Note: Binary logistic models predicting reported turnout in the UK local elections, May 2003.

Source: MORI post-election survey of 6,185 electors 2 May-12 May 2003 in 29 local authorities piloting new voting arrangement. The survey results were weighted by wtfinal. For further details see:

<http://www.mori.com/polls/2003/electoralcommission.shtml>

Figure 1: Model of Voting Participation

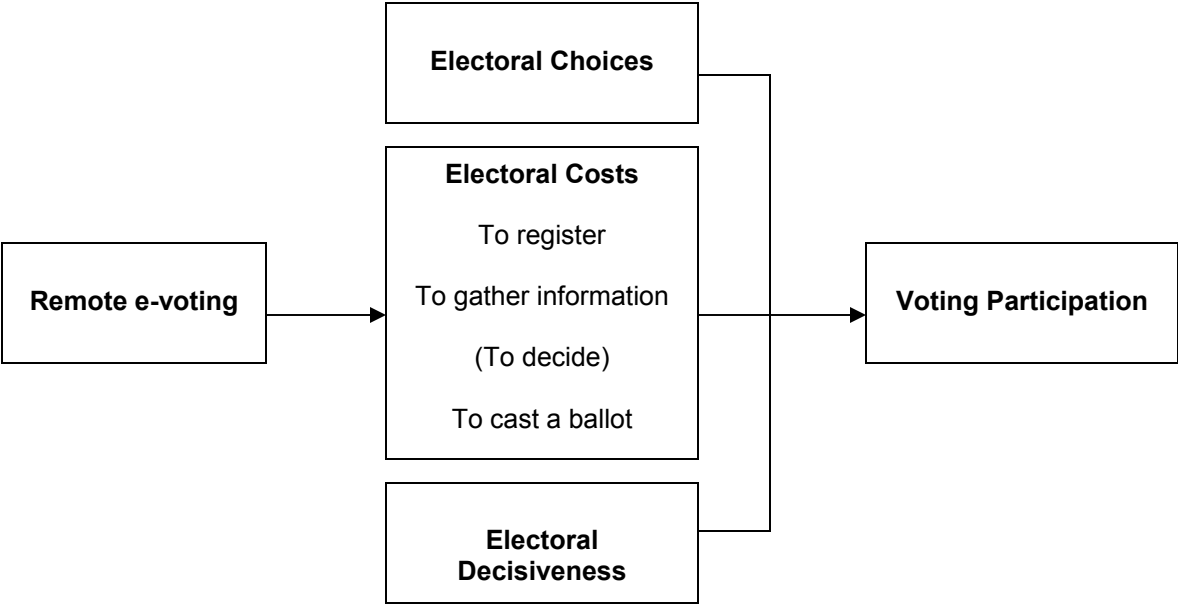
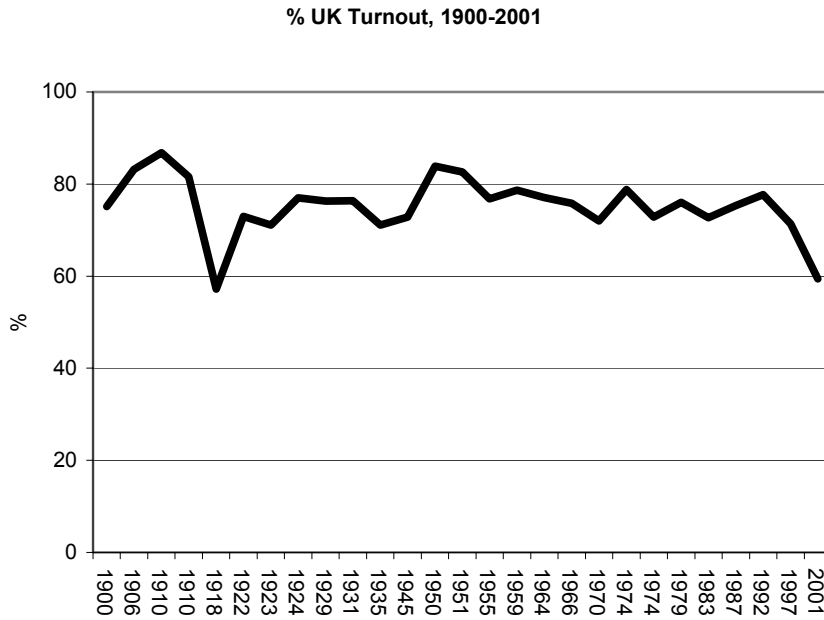


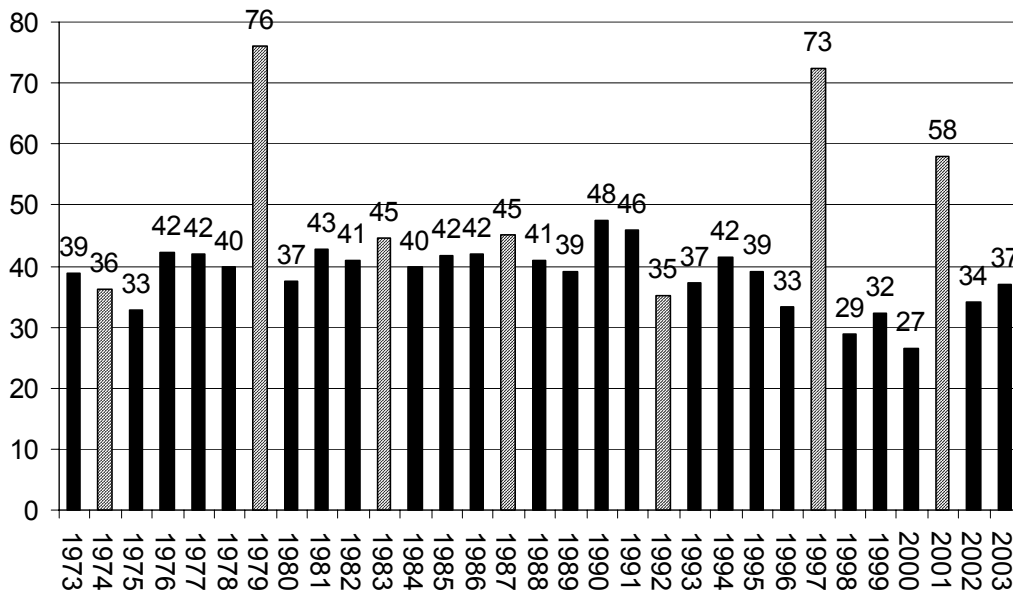
Figure 2



Note: UK Turnout is based on the number of votes cast as a proportion of the eligible electorate.

Sources: Colin Rallings and Michael Thrasher. 2000. *British Electoral Facts 1832-1999* (Aldershot: Ashgate); Pippa Norris. *The British Parliamentary Constituency Database, 1992-2001*.

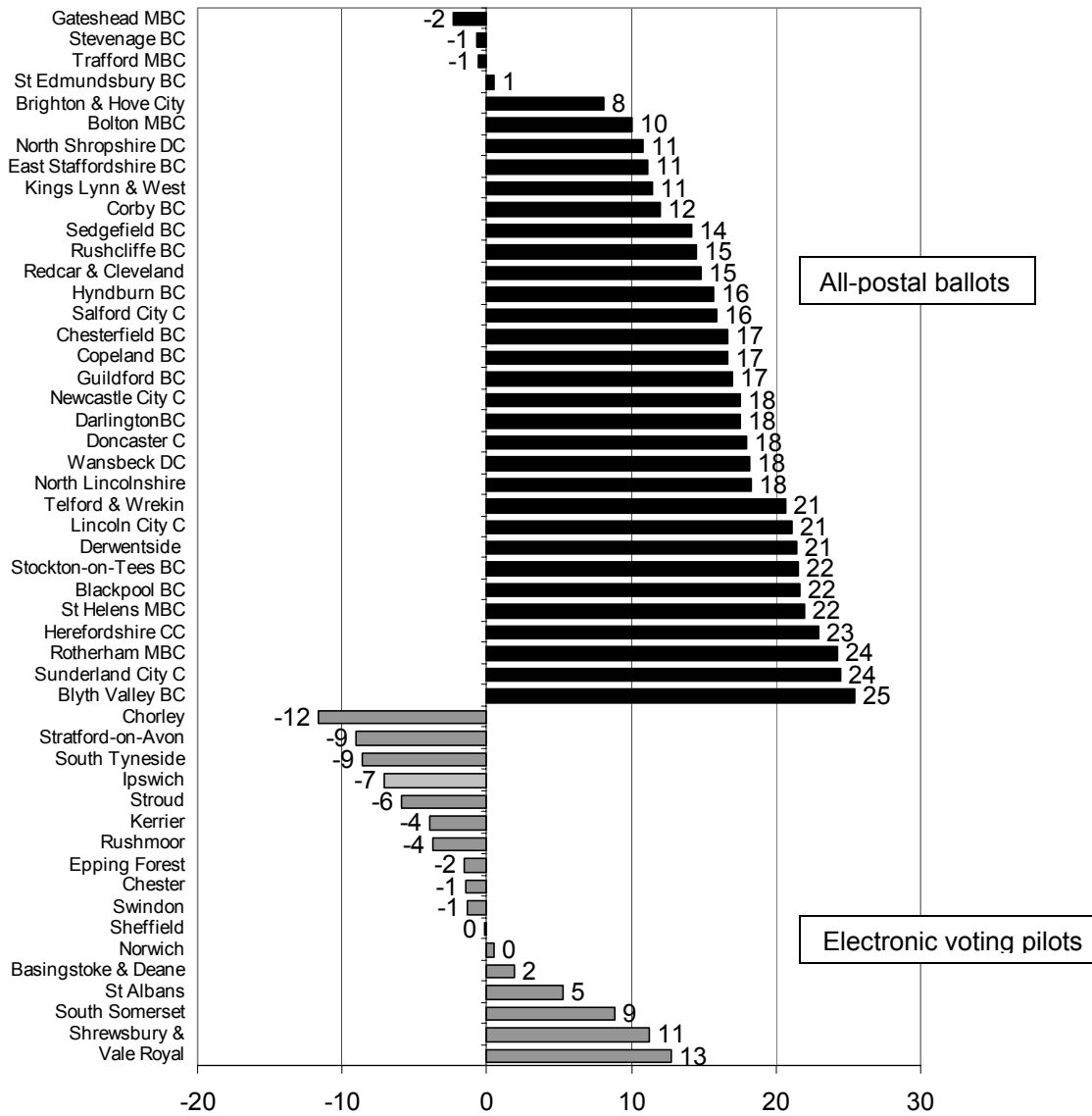
Figure 3: Turnout in UK local elections, 1973-2003



Note: Turnout is defined here as valid votes cast as a percentage of the eligible electorate. The highlighted (striped) columns are general election years. When both contests are held simultaneously, local election turnout rises sharply. When held separately, turnout is closer to the local election average.

Source: Colin Rallings and Michael Thrasher. 2000. *British Electoral Facts 1832-1999* (Aldershot: Ashgate);

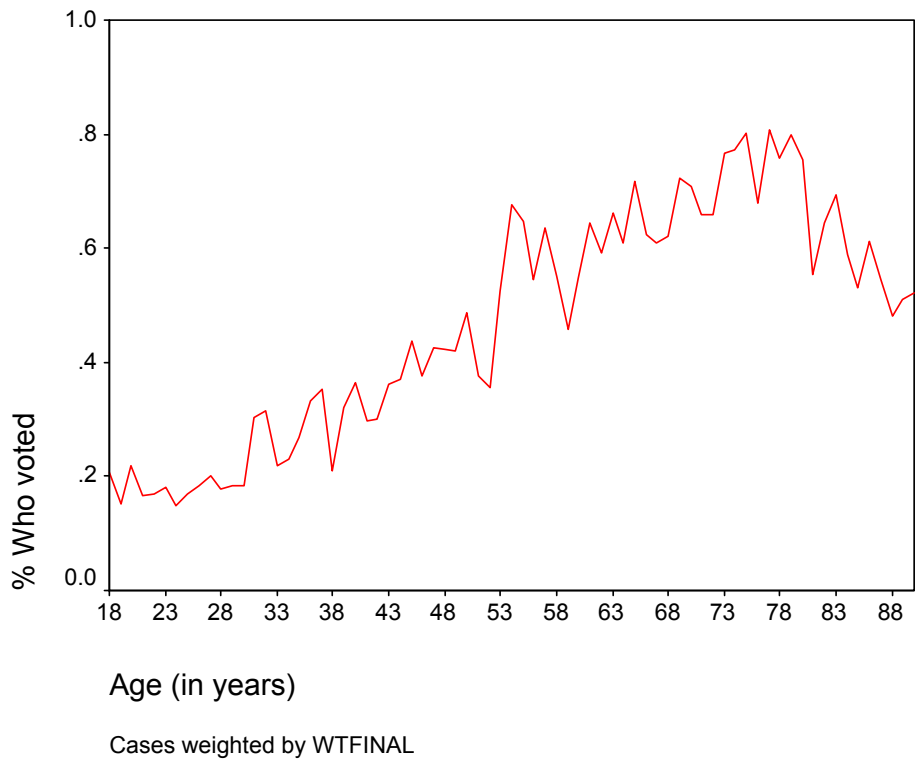
Figure 4: Percentage change in turnout in the May 2003 UK local election pilot schemes



Notes: Turnout is defined here as valid votes cast as a percentage of the eligible electorate. For details, including the date of the previous election used for calculating the % change in turnout in each district, see Table 4 and 5.

Source: The UK Electoral Commission

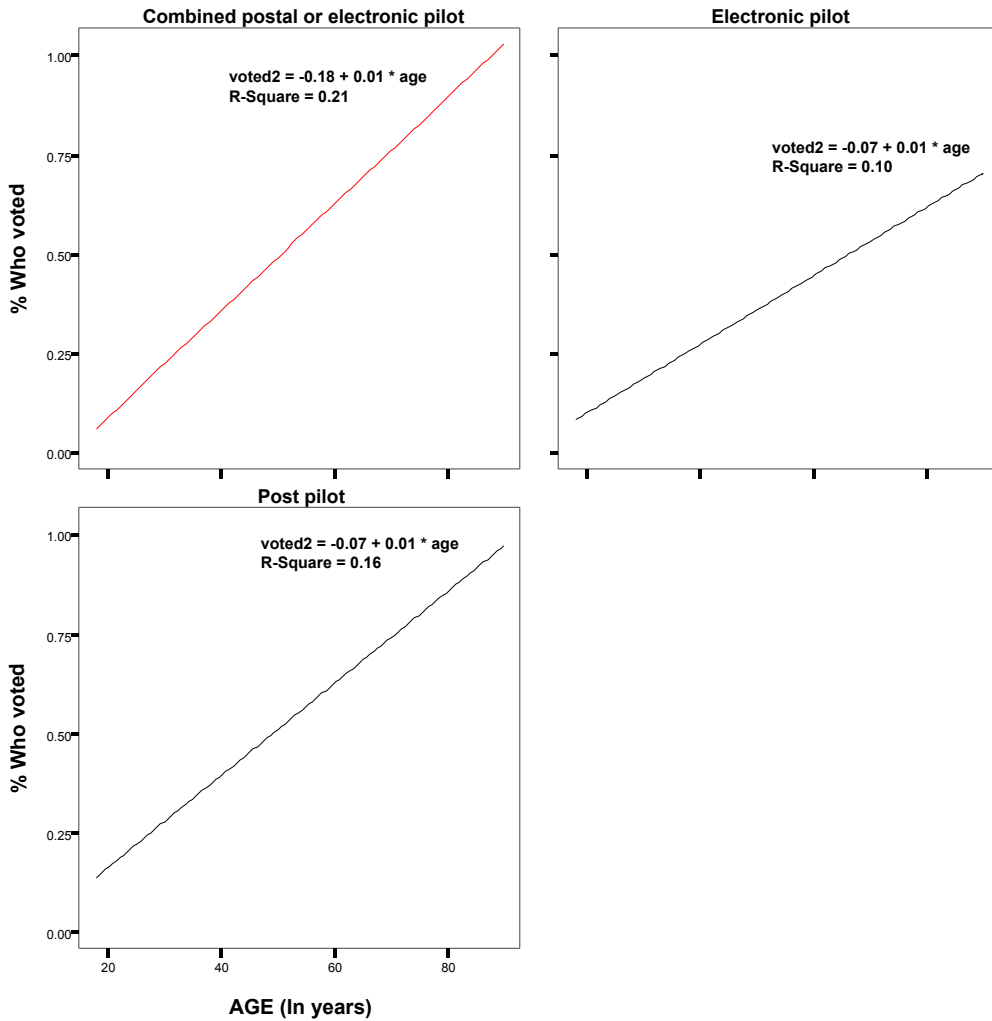
Figure 5: The age profile of voters in UK local authority elections pilot areas



Note: Reported voting by age (in years) in all UK local authority pilot areas.

Source: MORI post-election survey of 6,185 electors 2 May-12 May 2003 in 29 UK local authorities piloting new voting arrangement. The survey results were weighted by wtfinal. For more details see: <http://www.mori.com/polls/2003/electoralcommission.shtml>

Figure 6: The age profile of voters in UK local authority elections by type of pilot scheme



Note: The lines represent the linear regression of age (in years) by reported voting.

Source: MORI post-election survey of 6,185 electors 2 May-12 May 2003 in 29 UK local authorities piloting new voting arrangement. The survey results were weighted by wfinal. For more details see: <http://www.mori.com/polls/2003/electoralcommission.shtml>

Appendix Figure A1: Location of English local authorities holding pilot schemes in May 2003



Note: Key (see over)

Key to map:

E-pilot

- 1 Basingstoke & Deane
- 2 Chester
- 3 Chorley
- 4 Epping Forest
- 5 Ipswich
- 6 Kerrier
- 7 Norwich
- 8 Rushmoor
- 9 Sheffield
- 10 Shrewsbury & Atcham
- 11 South Somerset
- 12 South Tyneside
- 13 St Albans
- 14 Stratford on Avon
- 15 Stroud
- 16 Swindon
- 17 Vale Royal

Administrative innovations

- 18 Broxbourne
- 19 Charnwood
- 20 East Northamptonshire
- 21 Manchester
- 22 Medway
- 23 North East (Chester-le-Street, Derwentside and Wear Valley)
- 24 North Kesteven
- 25 North West Leicestershire
- 26 South Oxfordshire
- 27 Windsor & Maidenhead

All-postal

- 28 Blackpool
- 29 Blyth Valley
- 30 Bolton
- 31 Brighton & Hove
- 32 Chesterfield
- 33 Copeland
- 34 Corby
- 35 Darlington
- 36 Doncaster
- 37 East Staffordshire
- 38 Gateshead
- 39 Guildford
- 40 Herefordshire
- 41 Hyndburn
- 42 King's Lynn & West Norfolk
- 43 Lincoln
- 44 Newcastle
- 45 North Lincolnshire
- 46 North Shropshire
- 47 Redcar & Cleveland
- 48 Rotherham
- 49 Rushcliffe
- 50 Salford
- 51 Sedgefield
- 52 St Edmundsbury
- 53 St Helens
- 54 Stevenage
- 55 Stockton-on-Tees
- 56 Sunderland
- 57 Telford & Wrekin
- 58 Trafford Borough
- 59 Wansbeck District

Note: Many thanks are due to the UK Electoral Commission, especially Ben Marshall, Kate Sullivan, and David Maher, for generous help in providing the MORI data and for background briefing papers, as well as to the BBC Political Research Department, particular Giles Edwards, who also provided invaluable research papers. A previous version of this paper was presented at the Annual Meeting of the American Political Science Association, August 2003. An edited version will be published by International IDEA in *Voter Turnout Since 1945* (Stockholm: International IDEA).

¹ Further details analyzing these issues can be found in Pippa Norris. 2001. *Digital Divide* NY: Cambridge University Press; Pippa Norris. 2002. *Democratic Phoenix: Political Activism Worldwide*. NY: Cambridge University Press; Pippa Norris. 2004. *Electoral Engineering: Electoral Rules and Voting Choices*. NY: Cambridge University Press (forthcoming spring 2004). Details are available at www.pippanorris.com.

² J.S. Stratford and J. Stratford. 2001. 'Computerized and networked government information.' *Journal of Government Information* 28 (3): 297-301; T. Borgers. 'Is Internet voting a good thing?' *Journal of Institutional and Theoretical Economics*. 156 (4): 531-547.

³ UK Electoral Commission. 31 July 2003. *The Shape of Elections to Come*. London: UK Electoral Commission. www.electoralcommission.org.uk

⁴ For details of the availability of these facilities see www.ACEproject.org

⁵ House of Commons Library Research Paper. July 2003. *UK Elections Statistics 1945-2003*. 03-59. P.17.

⁶ See, for example, Christopher F. Arterton. 1987. *Teledemocracy*. Newbury Park, CA: Sage; Edward Schwartz. 1996. *Netactivism: How Citizens Use the Internet*. Sebastapol, CA: Songline Studios; Ian Budge. 1996. *The New Challenge of Direct Democracy*. Oxford: Polity Press; Wayne Rash, Jr. 1997. *Politics on the Net: Wiring the Political Process*. New York: W.H. Freeman; Howard Rheingold. 1993. *The Virtual Community: Homesteading on the Electronic Frontier*. Reading, MA: Addison Wesley; Benjamin R. Barber. 1998. 'Three scenarios for the future of technology and strong democracy.' *Political Science Quarterly*. 113(4): 573-590.

⁷ *Report of the National Workshop on Internet Voting*. March 2001. Internet Policy Institute for the National Science Foundation. http://www.internetpolicy.org/research/e_voting_report.pdf; The Independent Commission on Alternative Voting Methods. *Elections in the 21st Century: From Paper-Ballot to e-voting*. Electoral Reform Society. January 2002. <http://www.electoral-reform.org.uk/sep/publications/books/exec.pdf>

⁸ http://news.bbc.co.uk/1/hi/english/in_depth/sci_tech/2000/dot_life/newsid_1746000/1746902.stm

⁹ Rachel Gibson. 2002. 'Elections online: Assessing Internet voting in light of the Arizona democratic primary.' *Political Science Quarterly*. 116 (4): 561-583; F.I. Solop. 2001. 'Digital democracy comes of age: Internet voting and the 2000 Arizona Democratic primary election.' *PS-Political Science & Politics* 34 (2): 289-293.

¹⁰ Andreas Auer and Alexander H. Trechsel. 2001. *Voter par Internet? Le projet e-voting dans le canton de Geneve dans une perspective socio-politique et juridique*. www.helbing.ch See also the Geneva system described at <http://www.geneve.ch/chancellerie/E-Government/e-voting.html>

¹¹ Derek Dictson and Dan Ray. 2000. *The Modern Democratic Revolution: An Objective Survey of Internet-Based Elections*. www.Securepoll.com

¹² National Statistics Omnibus Survey. 'Individuals accessing the Internet' *Access to Internet from Home – Expenditure and Food Survey* (January to March 2003).

¹³ Pippa Norris. 2001. *Digital Divide* NY: Cambridge University Press

¹⁴ Of course none of this provides any evidence concerning the potential use of voting electronically via text messaging, using conventional or mobile telephones, since this is not measured in the Eurobarometer surveys under comparison. The widespread access of telephones in European societies could mitigate some of the social inequalities of Internet voting, although of course this does not necessarily overcome, and may even exacerbate, the concerns about security.

¹⁵ For an analysis of the social disparities in turnout see Pippa Norris. 2002. *Democratic Phoenix: Political Activism Worldwide*. NY: Cambridge University Press. Chapter 5.

¹⁶ See Pippa Norris. 2002. *Democratic Phoenix: Political Activism Worldwide*. NY: Cambridge University Press; Pippa Norris. 2004. *Electoral Engineering*. NY: Cambridge University Press.

¹⁷ Richard Katz. 1997. *Democracy and Elections*. New York: Oxford. Table 13.2. It should be noted that under other less democratic regimes, citizens face far more serious barriers, such as in the recent presidential election in Zimbabwe where electors stood in line at polling stations despite delays of up to 50 hours and the serious threat of intimidation, violence and coercion.

¹⁸ The best discussion of the administrative arrangements for registration and balloting found around the world can be found at www.ACE.org developed by International IDEA and IFES. For further details see Michael Maley. 2000. 'Absentee Voting.' In *The International Encyclopedia of Elections*. Ed. Richard Rose. Washington DC: CQ Press. See also entries by Andre Blais and Louis Massicotte. 'Day of Election'. See also Ivor Crewe. 'Electoral Participation.' In *Democracy at the Polls*, edited by Austin Ranney and David Butler. Washington, DC: AEI Press; G. Bingham Powell, Jr. 1986. 'American Voter Turnout in Comparative Perspective.' *American Political Science Review*. 80(1): 17-43; Robert W. Jackman. 1987. 'Political institutions and voter turnout in industrialized democracies.' *American Political Science Review*. 81: 405-423; Robert W. Jackman and Ross A. Miller. 1995. 'Voter turnout in industrial democracies during the 1980s.' *Comparative Political Studies*. 27: 467-492. Andre Blais and A. Dobrzynska. 1998. 'Turnout in electoral democracies.' *European Journal of Political Research*. 33(2): 239-261; Arend Lijphart. 1997. 'Unequal Participation: Democracy's Unresolved Dilemma.' *American Political Science Review*. 91: 1-14.

¹⁹ See the discussion in Anthony Heath and Bridget Taylor. 1999. 'New sources of abstention?' In *Critical Elections: British Parties and Voters in Long-term Perspective*. Eds. Geoffrey Evans and Pippa Norris. London: Sage.

²⁰ See, for example, Paul Whiteley. 2001. 'Turnout'. In *Britain Votes 2001*. Ed. Pippa Norris. Oxford University Press.

²¹ Office of the e-Envoy. July 2002. *In the Service of Democracy*. www.edemocracy.gov.uk

²² The Electoral Commission. 2002. *Modernising Elections: A strategic evaluation of the 2002 electoral pilot schemes*. London: The Electoral Commission. www.electoralcommission.org.uk

²³ One evaluation of the experience all-postal ballots in Oregon found that this had a modest effect on electoral turnout, particularly in low-salience contests. But the main impact was to increase voter participation among the groups already most likely to vote, thereby increasing socioeconomic inequalities in turnout. See Jeffrey A. Karp and Susan Banducci. 2000. 'Going Postal: How All-Mail Elections Influence Turnout.' *Political Behavior* 22 (3): 223-239.

²⁴ Mark Franklin. 2002. 'Electoral Participation.' In *Comparing Democracies 2: Elections and Voting in Global Perspective*. Eds. Lawrence LeDuc, Richard G. Niemi and Pippa Norris. London: Sage.

²⁵ These estimates are derived from the House of Commons Library Research Paper. July 2003. *UK Elections Statistics 1945-2003*. 03-59. It should be noted that the BBC estimates suggested that the Liberal Democrat share of the vote was slightly higher (30%).

²⁶ It should be noted that the particular benchmark year varies by the type of authority, with some councils elected in whole and others by thirds.

²⁷ It should be noted that there were serious limitations in what could be analyzed using the MORI survey data because of a number of design flaws. In particular there was no 'control' sample of voters in non-pilot districts. There were none of the standard attitudinal measures used for analyzing turnout, such as political efficacy and partisanship. Many of the questions were filtered so that they were only asked of sub-samples in different pilot areas, preventing comparison across areas. Moreover the way of classifying 'pensioners' into the DE class skewed the age profile in this category, making class analysis unreliable. There were also too few ethnic minorities to allow reliable analysis by racial group.

²⁸ Anthony Heath and Bridget Taylor. 1999. 'New sources of abstention?' In *Critical Elections: British Parties and Voters in Long-term Perspective*. Eds. Geoffrey Evans and Pippa Norris. London: Sage.

²⁹ Pippa Norris and Joni Lovenduski. 2004. 'Why parties fail to learn: Electoral defeat, selective perception and British party politics.' *Party Politics* 10(1).

³⁰ For further details about public attitudes monitored in the MORI survey, not discussed here, see UK Electoral Commission. 31 July 2003. *The Shape of Elections to Come*. London: UK Electoral Commission. www.electoralcommission.org.uk See also MORI polls. 1 August 2003. 'New ways to vote.' <http://www.mori.com/polls/2003/electoralcommission.shtml>

³¹ Pippa Norris. 2002. 'Preaching to the Converted? Pluralism, Participation and Party Websites.' *Party Politics*.

³² Pippa Norris. 2002. 'The Bridging and Bonding Role of Online Communities.' *The Harvard International Journal of Press-Politics*. 7(3): 3-8.

³³ Pippa Norris and David Sanders. 2004. 'Medium or Message? Campaign learning during the 2001 British general election.' *Political Communications* (forthcoming).

³⁴ Pippa Norris. 2001. 'Who Surfs? New Technology, Old Voters and Virtual Democracy in US Elections 1992-2000.' Revised edition. *democracy.com* Ed. Elaine Kamarck. Washington, DC: Brookings Institute.

³⁵ For further details of this argument, see Pippa Norris. 2001. *Digital Divide: Civic Engagement, Information Poverty and the Internet Worldwide*. New York: Cambridge University Press.