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CAN MORE EFFICIENT PURGING BOOST TURNOUT?

Raymond E. Wolfinger and Benjamin Highton
University of California, Berkeley

March 1995

A report prepared for the Ford Foundation

Abstract

The National Voter Registration Act (NVRA) of 1993 gives states the option of using the Postal Service's National Change of Address (NCOA) datafile to update their voter registration lists, provided that they reregister intracounty movers at their new addresses. This provision has the potential to enhance turnout because movers are as politically concerned as the rest of the population. We assess the effectiveness of NCOA both as a purge method and as a mechanism to increase turnout. This analysis is possible because prior to passage of the NVRA many counties in California were already using NCOA. We conclude that NCOA effectively cleans registration lists and updates movers' registration and should be employed for these purposes as close as possible before general elections.

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Executive Summary

A third of all Americans have lived at their current address for no more than two years. The need to reregister at their new address and the generally low priority given to this task combine to produce low turnout among these people. They belong on any short list of social types who are most disadvantaged by the American system of voter registration and are a worthy target for even-handed attempts to boost turnout. Movers are a particularly promising target because, unlike other low turnout groups (such as young people or those with little education), they are as politically concerned as the rest of the population.

Most people notify the post office when they move in order to have their mail forwarded to their new address. Some California counties use the computerized file containing this information to strike movers' names from the registration rolls at their old address and reregister at their new address everyone who moves inside the same county. We hypothesized that by maintaining the registration of intracounty movers this method of purging would enhance turnout.

This is a question with national application. The National Voter Registration Act (NVRA) of 1993 has created a strong incentive for other states to emulate California's new purge method. The only alternative allowed under NVRA is a procedure complicated by elaborate safeguards, a more expensive option than purging with the National Change of Address (NCOA) data.

NCOA appears to be better than the alternative purging method in California at keeping movers registered and voting, although our analysis is not conclusive on this point. Notwithstanding this inconclusive result, we have three clear findings.

1. Interviews with dozens of county election officials elicited endorsements of NCOA as a faster and cheaper technique for cleaning registration lists than the alternative.

2. Our data analysis confirms a previous report that when Latinos and blacks change residences they are more likely than whites to move to another home in the same county. Asians, too, are more likely than whites to make intracounty moves. Therefore these minorities have a greater potential to benefit from any procedure to update movers' registrations that is limited to intracounty movers.

3. Most moves occur during the summer, just a few months before election day. Seventy-four percent of Californians who had moved within a year of election day did so within the previous six months. Therefore the case seems irresistible for this policy recommendation: Address corrections of registration lists, whether for the purpose of purging those no longer eligible to vote or maintaining movers' eligibility to vote, should be done as close as possible to election day. NCOA is a cost-effective way to do this.

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Virtually alone among the world's democracies, the United States requires its citizens to bear the responsibility of proving that they are eligible to vote. Each time they move, Americans once again must register, usually well before election day. Having a low priority for most people, this step often is put off and consequently recent movers may miss voting for an election or two. This affects a substantial fraction of the electorate: one American in six moves each year. The intersection of the need to reregister and the fact of high mobility significantly depresses voting rates. The most numerous and obvious victims of our system of election administration, movers are almost unnoticed in either objective or polemic writings about turnout.

Unlike other categories of light-voting Americans, people who move have transactions with government agencies that can be exploited to keep them registered to vote. Moreover, the same bureaucratic encounters that might keep moving Americans eligible to vote can also lead to striking their names from the registration rolls at their old address. This helps candidates communicate efficiently, cuts down on the cost of elections, and reduces opportunities for vote fraud.

Most people notify the post office when they move in order to have their mail forwarded to their new address. Such notices are now entered in a computer file and kept for three years. Election administrators in several states have begun to use this dataset to identify registrants who have moved. California counties using this method for purging must automatically reregister at their new address everyone who moves inside the same county.

We are interested in whether this new purging method might also enhance turnout by maintaining the registrations of intracounty movers. This is a question with national application. The National Voter Registration Act (NVRA) of 1993 has created a strong incentive for other states to emulate California's new purge method. The only alternative allowed under the NVRA is a purge procedure complicated by elaborate safeguards, a far more expensive option than purging with postal data.

Who Does Not Vote?

Analyses of variations in voter turnout among individual Americans often emphasize socioeconomic status: the higher one's status, the greater the probability of voting. In point of fact, of the three characteristics usually used to define SES, only education is powerfully and consistently related to turnout. Variations in income have a significant effect only up to the poverty line and occupational differences are relatively unimportant (Wolfinger & Rosenstone, 1980, chap. 2; Leighley &

Nagler, 1992). Irrespective of the causes, however, there is no question that poor people are relatively light voters.¹ A considerable literature attributes much of the blame for this to the American system of voter registration: "Procedural barriers . . . work differentially against the lower classes" (Burnham, 1982, p. 154).

Social class is not determined by age, another individual characteristic that has a strong effect on turnout with all other variables controlled (Leighley & Nagler, 1992; Rosenstone & Hansen, 1993, pp. 130-41; Wolfinger & Rosenstone, 1980, pp. 23-26, 58-60). Americans are fairly light voters in their first years of electoral eligibility and become more likely to vote as they grow older.² The relationship between age and turnout is not a simple linear one. At first fairly steep, the upward trend line does not quite level off until the approach of old age. Citizens in their sixties were the heaviest voters in 1992; people in their seventies were about as likely to vote as those aged 50 to 59.³

Restrictive registration laws impede the young almost as

¹Poor people are likely to be uneducated and young, two circumstances that explain more of their turnout than does income.

²The relationship between age and turnout is strongest for the least educated and weakens as years of schooling increase, which suggests that "life experience is a substitute for school" (Wolfinger & Rosenstone, 1980, p. 60).

³Unless otherwise indicated, all findings relating demographic variables to turnout are based on our analysis of the 1992 Voter Supplement of the Current Population Survey, which is described in Appendix A.

much as they do the lower classes (Wolfinger & Rosenstone, 1980, pp. 83-84). Back in the days of the peace movement, the draft, and the McGovern campaign, young people were fairly fashionable victims. Fashions have changed, however, perhaps because of Ronald Reagan's popularity among new voters. Whatever the reason, young people have lost the ideological cachet they enjoyed a quarter-century ago and neither their low turnout nor their vulnerability to onerous registration laws now elicits much outrage.

The same is true of another category of notably light voters, people who have recently changed residence. Americans have always been considered footloose; even so, the extent of their residential mobility is striking. In 1993 one in six Americans had moved within the past year. This rate was 20.4 percent in the West and 10.7 percent in the Northeast. The most footloose state was Nevada, 27 percent of whose residents had moved within the year, in contrast to a mere 8 percent of people in New Jersey.⁴ Only New Zealanders and Australians move as frequently as Americans; in all other countries for which data have been reported the one-year rate is under 10 percent (Long, 1991). Mobility in this country actually has declined a bit since the 1950s and early 1960s, when about one person in five had been at his or her current home for no more than one

⁴These figures are based on our analysis of the March 1993 Current Population Survey. They exclude students shuttling between home and college, second-home weekenders, people who alternate between winter and summer residences, itinerant workers, and the homeless (Gober, 1993, p. 3).

year (Gober, 1993, p. 6).⁵ This trend was briefly interrupted by an upward spike in the mid-1980s that almost reached the postwar high, before falling back to the current 17 percent level.⁶

Residents of most other democracies are required by law to report changes of address to a government agency. The registry maintained in this way also serves for electoral purposes, hence these countries are said to have "automatic registration." In Great Britain the government canvasses all households annually in order to compile an up-to-date electoral register. Canadian governments fund such a canvass immediately before each national election. One source of low turnout in the United States is the combination of very high residential mobility and no government action to maintain the registration status of those who move.

In 1980 Americans who had lived at their current address for more than two years--whom we will call "stayers"--turned out at a rate eighteen percentage points higher than the "movers"--the approximately one-third of the sample who had moved more recently. Controlling for all other demographic variables did

⁵Note that the modern peak of voter turnout coincided with comparatively high rates of moving, exacerbated by residency requirements of at least one year in thirty-eight states. For all practical purposes residency requirements were limited to thirty days in 1972 by the Supreme Court's decision in Dunn v. Blumstein.

⁶Evidently victimized by inaccurate National Election Studies data, Teixeira (1987, pp. 17-24, 57-58, 74) reported a substantial increase in mobility from 1960 to 1980. His analysis showed that this putative trend contributed to the turnout decline in the period. He acknowledged the error in 1992 (p. 38n).

not appreciably narrow this gap. The depressive effect of a recent move was greater on the less educated and less interested, who were the slowest to reregister (Squire et al., 1987). The authors of this study attributed the movers' lower turnout to their need to reregister and the low priority that this bureaucratic step would have for people getting settled in a new home and faced with more pressing tasks. The effect was thought to be all the greater because most moves occur in the summer (Heiden, 1981), which in most places would allow only a few weeks before the registration deadline for the fall election. If there were no election, of course, there would also be no strong stimulus to register.

Discussions of residential mobility in the turnout literature are notable chiefly for their brevity. The topic was ignored by Walter Dean Burnham (1982) and received less than a page of attention from such similarly-inclined authors as Michael J. Avey (1989, p. 29) and Frances Fox Piven and Richard A. Cloward (1988, pp. 115n, 179-80), all of whom claim to explain nonvoting in the United States. Less ideological students of turnout likewise give the residentially mobile short shrift. Conway (1991) for example, although acknowledging the need to reregister (p. 114), felt that after the Supreme Court imposed strict limits on residency requirements

It is, rather, the social consequences of mobility that are now important. Those who have not lived in a community

for very long usually have fewer social and organizational ties, less information about local issues, and fewer political contacts, and they are less interested in and involved in the local community (p. 19).

In his more recent book Teixeira (1992) agreed that the turnout-depressing effect of moving had more to do with disrupted social connections than a need to reregister because "I find it quite difficult to believe that the problems of re-registering continue to plague individuals for as long as ten years after they move" (p. 119n). Teixeira's argument, in part, was based on Squire, Glass and Wolfinger's finding that the depressing effects of mobility were almost as severe in the few states where registration either is not required or can be done on election day (Squire et al., 1987, pp. 53-54).

This finding is troublesome for the argument that mobility affects turnout chiefly through the need to reregister. But it turns out that Squire, Glass, and Wolfinger erred in specifying the model used in their analysis. Highton (1994) reanalyzed their data with a model that specified separate effects of residential mobility in states with no registration or election day registration and found mobility effects in those states to be roughly half the size of those found in other states.

Residential Mobility in the 1990s

Almost any move requires reregistering at one's new address, but most moves do not even cross county lines. Although the

location of the previous residence was not ascertained in the 1992 Voter Supplement, this information was obtained in the Current Population Survey's March 1993 supplement, known as the Annual Demographic File.⁷ Table 1 shows the proportion of adults who had moved within the past year, by the length of the move, for the entire country and for California, the state of interest in this study. Seventeen percent of all residents of the United States and 19 percent of Californians reported living at a different place from the previous year. Just over three out of five moves did not cross county lines. This is the most restrictive possible definition of a local move, a change that seems unlikely to sever local "roots;" terminate friendships, church memberships, and workplace relationships; and transform the mover's media exposure to local public affairs.

(Table 1 about here)

Moving from one county to another presumably brings the sorts of changes in social and informational contexts that are said to leave some movers so adrift that they are less likely to vote in a presidential election. We believe, however, that many intercounty moves do not fit this description. The most obvious case is New York, one city comprising five counties. Although a move from Brooklyn to Queens would cross county lines, we doubt it would necessarily strip away one's Brooklyn social ties. It

⁷The Annual Demographic File, however, lacks information on citizenship status, a further demonstration that the world is not perfect.

probably would not produce a change in newspaper readership and it surely would not alter the local news carried on the radio and television stations available in Queens. This is an extreme--but not trivial--example of the broader generalization that many moves even across county lines leave the mover in the same media market and, if our own experiences are typical, with many of the same friends.

Moreover, in common with almost all other students of turnout, we are analyzing national elections; the candidates and parties do not differ from county to county or state to state. And whatever allowances one wants to make about tailoring the presidential campaign to local audiences, the media whose coverage is responsible for most citizens' perceptions of the candidates and issues are largely national. Moreover, few cities schedule local elections at the same time as the presidential contest. Familiarity with local issues and candidates therefore seems relatively unimportant for explaining participation in a presidential election.

The proposition that the need to reregister at one's new address is the primary explanation for the low turnout of movers receives support from Table 2, which uses the 1992 Voter Supplement of the Current Population Survey to compare the proportions of movers and stayers in certain demographic categories, including those generally associated with turnout. In most respects movers and stayers are remarkably similar. The most striking difference is the predominant youth of the movers,

62 percent of whom had not celebrated their thirty-fifth birthday; just 26 percent of the stayers were as young. By the same token, more than three times as many movers were renters rather than homeowners. Differences in income and educational attainment, all rather modest, are predictable in view of the movers' youth. They are slightly better educated and somewhat more likely to have incomes under \$12,500.⁸ The slightly greater proportion of minorities among movers leads to an important further point, which we will consider eventually. Fifty-seven percent of the movers and 75 percent of the stayers reported voting in 1992.⁹

(Table 2 about here)

We believe that mobility reduces the probability of voting in large measure because registration or reregistration is not very high on most citizens' lists of things to do when they are settling in a new home. As time goes by, voting rates go up because more and more people get around to registering at their present address. This argument does not mean, however, that movers, notwithstanding their lower turnout, are proportionately less motivated to vote. Rather, many movers' motivation is insufficient to the bureaucratic challenge of registering at

⁸In 1991 the poverty line was \$10,860 for a family of three and \$13,924 for a four-person family. In the same year the average size of a family was 3.18 persons (Bureau of the Census 1993, pp. 441, 55).

⁹For a discussion of the biases in different estimates of turnout, see Wolfinger & Rosenstone, 1980, pp. 115-18.

their first opportunity to do so. They will probably do it, but not right away. If this argument is correct, we would expect to find that movers and stayers manifest similar levels of motivation to vote. We cannot test this proposition with the Current Population Survey. Its huge sample is balanced by an absence of questions about such political perspectives. Another data source, the National Election Study, provides a variety of information about individual outlooks on the political world. The 1992 NES sample has almost the same proportion of movers as does the CPS, 32 as opposed to 31 percent. The turnout disparity between movers and stayers is 13 percent in the NES and 17 percent in the larger Census sample.

Table 3 shows these comparisons from the NES. It also contrasts movers and stayers with respect to caring about the outcome of the 1992 election, interest in the campaign, attention to the campaign in both print and electronic media, interest in politics outside the election season, and campaign activism other than voting. Movers and stayers are similar on these measures, with stayers marginally ahead of movers in all but one instance. Concern for sampling error alone argues against investing these disparities with much substantive meaning; differences exceed two percentage points in only one of the six comparisons. The movers' comparable levels of motivation argue that they are a promising target for efforts to maintain their voter registration. Movers and stayers were equally inclined toward the Democratic party and differed in their 1992 candidate choices

primarily in the movers' slightly greater support for H. Ross Perot.

(Table 3 about here)

Movers are both numerous and less likely to vote. They belong on any short list of social types who are most disadvantaged by the American system of voter registration and are an important target population for even-handed attempts to boost turnout. One further way to make this point is to examine the demographic characteristics of citizens who did not vote in the 1992 election. This analysis is summarized in Table 4, which shows that movers were a substantially larger share of nonvoters than any of the usual suspects: racial minorities; and people under thirty, without a high school diploma, or with poverty-level incomes. Only by combining all minorities and all poor people could we find in the ranks of nonvoters a demographic category as numerous as movers. This finding casts doubt on Burnham's (1982, p. 237) statement that "Evidence is overwhelming that nonvoting is concentrated in the lower half of the American socioeconomic structure."

(Table 4 about here)

Remedies

We have seen two important differences between the United States and most other democracies: 1) Americans are much more likely to move. 2) They are not obligated to report their moves

to a government agency that then might register them to vote at their new address. Whenever such a step has been proposed in the United States, the reaction has been swift and hostile:

A federal advisory commission proposed today that the Government establish a computerized registry of the names and Social Security numbers of all citizens and aliens authorized to work in the United States, so that employers could check the immigration status of job applicants (Pear, 1994, p. A1).

The proposal drew immediate criticism from a wide range of immigration and civil rights groups, who said the registry could violate the rights of those who are living in the United States legally (Freedberg, 1994, p. A1).

Although a formal registry that records de jure every resident's moves could well meet so much opposition as to be infeasible, two government agencies de facto now come pretty close to this goal: the Postal Service, to which the vast majority of Americans report their changes of address; and state departments of motor vehicles, which generally require drivers license holders and automobile owners to report their moves. Neither sort of transaction is universal nor effectively compulsory. We have no way of knowing how many people do not want their mail to follow them.¹⁰ It must be a relatively small

¹⁰Jerome Koenig has relayed an estimate from a Postal Service official that about 92 percent of all movers file a change-of-address notice. Doubtless many of those who fail to do

fraction of all movers, however, in view of the forty million permanent change-of-address notices that are filed each year. By the same token, drivers licenses are not required by law. Some people who hold them, like some car owners, doubtless are slow about reporting their moves. Nevertheless, exploiting these automotive bureaucratic encounters to keep voter registrations current is the most important of the "motor voter" provisions that have given this nickname to the National Voter Registration Act of 1993.

We are interested here in how postal transactions might be exploited to keep movers registered. In the fall of 1983 Wolfinger proposed that the Postal Service's change-of-address notice be modified slightly and produced with an attached carbonized second copy that would be forwarded to county election offices. If the mover already was registered and was moving within the state, this second copy would be used to transfer his or her registration to the new address, with no action required from the mover (Glass, Squire, and Wolfinger, 1984).

Legislation to require the Postal Service to do this in any state that adopted appropriate implementing legislation was introduced in March 1985 by Representative Mel Levine (D-CA), with both Democratic and Republican initial cosponsors. The Levine Bill was unanimously reported by the Subcommittee on Postal Operations and Services of the Committee on Post Office and Civil Service. It died in the full committee at the end of

so are motivated by a desire to avoid creditors.

the following year and met the same fate in the next Congress. Eventually the Levine bill had 90 cosponsors and endorsements by eleven secretaries of state and the National Association of County Recorders and Clerks. It was opposed by the Postal Service and viewed with minimal enthusiasm by civil rights groups.

By 1987 the Postal Service argued that the Levine Bill, which proposed a paper-and-pencil approach to information transfer, was not only a technologically retrograde step but also unnecessary, because it was now computerizing all address change information. This dataset could be used to keep registration addresses current without requiring the slightest extra effort by postal employees. Election officials were initially cool to this approach because at that time machine-readable data could not provide a signature to authenticate information provided by the Postal Service.

Even before the Levine Bill was introduced on Capitol Hill, the same idea was pursued in Sacramento. By the summer of 1985 the California legislature had adopted Democratic Assemblyman Byron Sher's resolution calling on Congress to pass the Levine Bill. The legislature also deliberated Sher's measure to implement the Levine Bill in California. This passed the Assembly on close to a party-line vote. When similar partisanship in the Senate portended a veto by Republican Governor George Deukmejian, Wolfinger asked Sher to withdraw his bill, believing that a veto might jeopardize the prevailing

bipartisan spirit in Washington.

Sher's measure brought the idea of exploiting postal connections to the attention of California election administrators and was endorsed by the Secretary of State and the California County Clerks Association. The latter group had first been opposed and then changed its position after negotiations with Ernest Hawkins, the Sacramento County Registrar and chairman of the Association's Legislation Committee.¹¹

Exploiting postal transactions for electoral purposes was first proposed to keep movers registered, to ease the burden of the onerous American registration system. The postal link first became public policy, however, as a method of removing from registration rolls the names of people who were no longer entitled to vote at an address that they had forsaken. It was adopted, in other words, for purposes often considered antithetical to the interests of organizations trying to ease the burden of the onerous American registration system. And yet that purpose was to correct an administrative problem of our registration system that reflected the same inherent problem we have been discussing: keeping track of people who move.

Purging

Whatever priority registering to vote has for people adjusting to a new home, cancelling their registration at the old

¹¹Hawkins chaired the same committee of the National Association of County Recorders and Clerks and was, we believe, instrumental in securing that organization's endorsement of the Levine Bill.

address doubtless ranks much further down on the list of things to do. The names of the departed remaining on registration records are known in the trade as "deadwood." Considering that about a third of all Americans have moved within two years and that almost half have been settled for less than five years, the growth potential for deadwood is truly formidable.

Deadwood increases the costs of administering elections: maintaining lists of names, distributing those lists to voting precincts, mailing sample ballots and voter handbooks to every registrant, and so on. In equal measure, deadwood makes campaigning more expensive and less efficient as candidates and parties waste money trying to reach absent registrants. More rarely, but more importantly, deadwood provides the raw material for vote fraud.

Lacking a government-mandated system of civic registration that also updates voter records, election officials in forty states deal with the deadwood problem by deduction: if registrants keep failing to vote, the reason must be that they have moved.¹² In many states the period of nonvoting is as short as two years; others are more patient, allowing up to ten years of nonvoting before taking any action. In five states that action is summary removal of the nonvoters' names without notification. More common is a nonforwardable notice saying that

¹²There was a time when many states required periodic registration, in some cases at intervals as short as one year. Now almost all states assume that registration is permanent, absent any sign that the registrant has moved.

the addressee's name will be deleted unless assurance is received that he or she is still at the voting address.

Election administrators usually call these procedures "list cleaning" or "address verification." To everyone else they are "purging for nonvoting." This is less euphemistic, but also less accurate. People are not purged as punishment for failing to vote, but because that failure leads to a presumption that they have moved. In an ideal world, that presumption could easily be rebutted. In fact most states do send a confirmation notice to registrants tapped as habitual nonvoters. But this is not an ideal world. A solution to a real problem, all too often purging has been used to deny some people access to the ballot.

Selective and arbitrary purges of blacks were one white southern response to the civil rights movement (Reitman and Davidson, 1972, pp. 32-33; Barber et al., 1988, pp. 487-91). These attempts to limit black access to the ballot were foiled by the Voting Rights Act and its amendments. More recently Republican activists in several states sent nonforwardable mass mailings to registrants in largely black neighborhoods. Letters returned as undeliverable were then turned over to local election officials as evidence that the addressees were ineligible to vote (Tolchin, 1986). A federal court decision severely limited further applications of this "Ballot Integrity Program" (Weinraub, 1987).

Even nonselective color-blind purging is unpopular with civil rights organizations rooted in courageous efforts to

register southern blacks. Registration drives are no longer dangerous, but they remain "an emotionally charged and even revered component of southern black politics" (Vedlitz, 1985, p. 644). It should not be surprising that leaders dedicated to putting names on registration records are cool to methods of taking names off those rolls. Their view of purging goes well beyond mere indifference, however. They argue that minorities are more vulnerable to purging because they vote less frequently and move more often. Written requests for confirmation sent to nonvoters do not safeguard minority registrants from undeserved purging because mail service is less reliable in their neighborhoods. Minority registrants who do receive a query about their place of residence might be less likely to understand it. If they do understand, they would be less likely to have the bureaucratic prowess required to explain their situation to election officials.¹³

We do not need come to conclusions about the importance of vote fraud--which is not really a problem in California--to understand that blacks' experiences with purging make it a civil rights issue. Some black organizations' sensitivity about purging kept the first serious "motor voter" bill off the House floor for seven months in 1989 and 1990 (Gans, 1991). (The

¹³Civil rights leaders seem largely indifferent to the possibility of vote fraud, which they consider an "outmoded" threat (Cunningham, 1991, p. 397) and now primarily an issue to use against efforts to mobilize their constituents. Their suspicion is supported by a former Republican congressman's report that his ex-colleagues' expressions of concern about fraud were largely hypocritical (Buchanan, 1990).

arguments in the previous paragraph about minorities' greater vulnerability to purging were taken from a memorandum written by civil rights lawyers in the course of that controversy.) Political reality alone leads to the emphasis on racial variables in our data analysis.

Purging in California

In 1983 the state of California adopted a purging method that responded to concerns about differential vulnerability to purging. The previous system had been a "positive purge": nonvoters were sent a nonforwardable double postcard that asked them to return the other half of the card if they were still living where they were registered. Absent this confirmation, nonvoters were purged. California Democrats, fearing that their presumed constituents (young, poor, minorities) were less likely to vote or to pay proper attention to notices in the mail, enacted a "negative purge": purging would occur if the card were returned with the information that the registrant had moved. In other words, people who moved would be purged if the card were delivered to their previous address and the current resident took the trouble to fill it out and put it in the mail.

This method was called the "Residency Confirmation and Outreach Program;" RCOP for short. Nonforwardable RCOP postcards were mailed to nonvoters after the November general elections and, in January of even-numbered years, to all registrants who had not participated in any election within the past six months, i.e., people who had stayed home during a low-turnout local

election held in the previous November.

The RCOP method was not quite as toothless as depicted in occasional newspaper stories. A substantial proportion of notices went to departed registrants who had filed postal change-of-address notices. Barring mistakes, these were intercepted at the local post office and returned to the county registrar with a "yellow sticker" that either gave the new address or, in a not inconsiderable number of cases, indicated that the addressee had moved without leaving a forwarding address. The majority of movers, who had relocated in the same county, were automatically reregistered at their new addresses and so informed. Intercounty movers in California were told they needed to reregister and, depending on the county, might also receive a mail registration form. In the event the move was temporary, this would give registrants a chance to maintain their eligibility to vote. Few RCOP notices that got past the post office were returned with the mover's new address. As one official told us, "people don't bother."

Whatever its defects, then, RCOP was unlikely to remove names from the rolls by mistakes of any sort (which we will call "false positives"), much less the sort that would impose a disproportionate burden on poor, uneducated, easily discouraged, or inarticulate people. RCOP could remove a name from the rolls either because of a change-of-address notice filed by the registrant or, in the absence of such a notice, in the unlikely event that the registrant had moved and the current residents at

the address completed and returned the nonforwardable notice.

RCOP would seem a fairly good way to keep movers registered, one that would make the Levine Bill unnecessary, but for this problem: the procedure takes place ten months before the election in a state where one resident in five moves in the course of a year and where (as elsewhere) most moves occur in the summer.

The NCOA Option

People who have recently moved are an important and promising target for efforts to increase turnout because: 1) Amounting to one-third of the electorate, they are the largest group of nonvoters. 2) They are no less motivated than the other two-thirds. 3) The vast majority of movers have transactions with government agencies that can update their registration. Any way of exploiting these transactions to increase turnout inescapably would deal also with the deadwood problem because bureaucratic encounters that might update movers' registration provide an opportunity for purging. Unlike "purging for nonvoting," which assumes that failure to vote reflects a likely change of address, these methods identify movers directly and without waiting while one or more elections pass.

Thus the Levine Bill was appealing not just for its anticipated effect on turnout but because it offered a way to remove movers' names from registration records in a timely fashion. No longer would deadwood accumulate for several election cycles before repeated failures to vote started the

purging process. Even the grossly inflated cost estimates produced by the Postal Service in its campaign against the Levine Bill looked like bargains to budget-stressed election officials.

The idea of linking postal change-of-address procedures directly to election administration did not die with the Levine Bill. Making the connection became much easier with the advent of the Postal Service's new computer file of address change information, known as the National Change of Address (NCOA) program. Maintained at the Postal Service's National Customer Support Center in Memphis, this file is updated nightly. Twenty-four licensed vendors pay an annual fee for the right to distribute NCOA information, which has a variety of commercial uses, and receive file updates every two weeks. By 1992 the NCOA file contained 91 million records, with each record kept for three years (Mullins, 1992, p. 2). By 1994 about forty million notices of a permanent change of address and two to three million temporary change notices were filed each year.¹⁴

NCOA's first use for electoral purposes was in Kentucky. Before adoption of a statewide computerized system, voter registration in that state had been done at the county level. There was no way to identify deaths or intrastate moves and "as a result, there were many voters on the rolls who were not in fact eligible to be on those rolls. In fact, in numerous cases voters were shown as active registrants in more than one county"

¹⁴Unattributed information about NCOA was obtained in telephone interviews with Mike Selnick in the Washington office of the Postal Service and an official at the Memphis center.

(Mullins, 1992, p. 4). In 1988 the Kentucky legislature adopted a four-year purge provision but failed to appropriate enough money to do the job properly with the old method. This led to statewide purging with NCOA, which seemed likely to be cheaper. Election administrators gave a copy of their computerized registration file to an NCOA vendor. Matching the two files produced a list of "hits": registrants who had filed notices indicating a move from their recorded voting address. The Louisiana story is similar: ". . . the state was required, in 1990, to determine the continued eligibility of each registered voter annually" (Mullins, 1992, p. 5; emphasis added). NCOA was the solution.

Both states, which used NCOA only to purge movers, found that it did the job quickly and for a fraction of the cost of their previous method (Mullins, 1992, p. 1). The disadvantages, clearly outweighed by the virtues, were these: 1) Because the method required an exact match of names and addresses on the two files, failures to detect moves--"false negatives"--resulted from even the most trivial variation.¹⁵ 2) False positives resulted from "patron error." A departing individual would check the box indicating that the entire household was moving or a temporary mover would check the "permanent" box. (A copy of the form is Figure 1.) The result would be to strike from the voter rolls

¹⁵ Some vendors had a so-called "NIXIE" file of possible matches based on similarities in names. Sacramento County's test of 100 NIXIE matches found that every one was inaccurate (National Clearinghouse on Election Administration, 1994, p. 5-20).

the names of people who had not stopped living at their voting address or, in the case of mislabeled temporary movers, had done so for only a short time.

(Figure 1 about here)

In other words, the NCOA method could, like "purging for nonvoting," strike the names of people who had not moved. This danger might be mitigated because the purging would be preceded by an obtrusive and timely warning signal: the stoppage of mail. If a student going back to college carelessly checked the "entire family" box, her family remaining at home would soon enough notice that they no longer were receiving any mail. The cessation of mail would be like a silent canary in a coalmine; an end of activity would stimulate action. Everyone gets mail. Mail carriers and local postal clerks are among the most accessible and approachable officials anyone encounters. Even the most stereotypically inarticulate, bureaucratically-challenged, impoverished Americans have experience complaining about mail service. On the other hand, people rectifying a postal mistake might not know that the error had purged them. The extent of the likely damage from what the Postal Service calls "patron error" is best discussed in the context of individual state and local procedures. We will return to this topic when describing how NCOA worked in California.

NCOA in California

In 1987 a pilot study directed by Sacramento County

Registrar Ernest Hawkins assessed the NCOA's potential. The following year Bruce Bolinger, registrar of a fast-growing foothill and mountain county, used NCOA in midsummer to supplement the regular RCOP purge. He found it adequately reliable and far cheaper. In 1989 the Democratic legislature passed with broad bipartisan support and the Republican Governor George Deukmejian signed into law a bill sponsored by Democratic Senator Milton Marks to give counties the option of cleaning their voter lists with NCOA, provided that intracounty movers were automatically reregistered at their new addresses and so notified.¹⁶ Although the Marks bill was conceived and promoted essentially as an approach to list-cleaning, its authors were familiar with research on mobility and turnout and with proposals to use the postal link to keep movers registered.

By the beginning of the 1992 election cycle only Los Angeles among California's major metropolitan counties had declined to take the NCOA option. In fact, only nine of the state's thirty largest counties had stuck with RCOP. This paper reports research designed to learn how much influence updating registrations with NCOA had on the voting levels of what kinds of people. We also hoped to see how variations in the time of using NCOA affected turnout. This intention was frustrated, as we will explain. We believe, however, that the key to NCOA's most

¹⁶ By this time the California Republican Party was using NCOA to maintain its own mailing lists (Bell, 1989). This practice was mentioned by one of the bill's advocates when lobbying for Governor Deukmejian's signature.

efficient use, whether for turnout enhancement or purging, is its capacity for quick implementation relatively close to election day. This conclusion is important not only for assessing California law but for thinking about the 1993 NVRA provision that gives states the option of list-cleaning through NCOA as an alternative to observing the complex guidelines otherwise prescribed in the NVRA.

Data Gathering

We ascertained the purging method used in each county in the 1992 CPS Voter Supplement sample through telephone interviews with county registrars or their deputies.¹⁷ In each call, having learned the basic facts, we began a somewhat unstructured conversation, usually by asking why the RCOP counties were not using NCOA; if they were, we asked about problems with the new method. In a few cases we knew or were known to our informants. In others, the conversation took on an informal tone from the start, as in one county where we began by saying we wanted to inquire about "list cleaning" and the registrar jovially responded, "We call it 'aggressively pruning the deadwood'."

False positives were one reason for not using NCOA:

We tried NCOA in 1990. It was an awful mess. The mayor and eight of his children were cancelled when one of his kids went away to college and checked the "entire

¹⁷We had determined the feasibility of the project by means of ten such interviews at the end of 1992.

family" box on the postal form.

To some extent, at least, such problems might be mitigated by the material mailed to registrants, but election officials believe that their notices are often disregarded. In any event, confirmations are sent to the new address. Hypothetical intracounty movers are told that their registration has been updated. Intercounty movers are told that they need to reregister and, depending on the county, may also be sent the form to do it by mail. A student accidentally purging her whole family would receive at her college address either notices that they were all now registered there or that they needed to reregister there.¹⁸ This early warning might have no effect, however. The errant student might throw such information away or send it home, to be discarded there. Some counties go the extra mile by sending to the old address, addressed to "occupant," a blank mail application. This might be ignored by the occupants, who actually never have moved, in the belief that they are already registered.

Some victims of NCOA are alerted by the nonarrival of the sample ballot that informs them where to vote and is accompanied by a hefty "voter's handbook" containing arguments for and against the numerous propositions that appear on California ballots. Even if these false positives remain uncorrected until

¹⁸Careless college students were everyone's favorite culprits. One registrar added that "We get a lot of that when the (wealthy town) residents move to Palm Springs for the winter."

election day, however, the victims are not disenfranchised. The names of the purged go on a supplementary or inactive roster and they can vote after signing an "oath of continuous residence." Our jolly informant made the same point: "We don't nuke them off the planet." In the final analysis, then, the only damage is not receiving information about the location of the polling place, which usually remains the same from election to election and is hardly a secret.¹⁹

Some of our conversations with officials were revealing of their attitudes toward making registration more accessible. One registrar expressed an outlook that could have been scripted by a radical critic of the American electoral system:

We should put back on the people the responsibility of taking care of themselves instead of us taking care of them like little babies. The best purge system is if you don't vote, you're out.

On the other hand, a number of registrars clearly were concerned about making voting accessible and sensitive to citizen complaints. After describing how she made a practice of accomodating residents with a common problem, one registrar said, "You don't have to do it, but you do it anyway. If you don't, people come in and complain." Many officials saw themselves as professional administrators of a process that they wanted to make

¹⁹We eschew comment on the importance of missing direct mail campaign material or the voter's handbook.

as accessible and efficient as possible, given their need to justify their budgets to county boards of supervisors. They were aware of the state's high levels of residential mobility. One volunteered that in his county, "ten to fifteen percent of our registered voters move in a six-month period." Another thought that a quarter of the people in her county moved annually.

We used these interviews to classify the vast majority of the Current Population Survey respondents as subject either to NCOA or RCOP. Explaining why we could not so describe the entire sample prefaces a more general discussion of the available sources of individual-level data.

We would have preferred one large individual-level data file with all of these variables:

1. a complete battery of demographic items, including citizenship status;
2. voting and registration;
3. length of time at the current address;
4. county of residence;
5. location of previous residence--same county, different county, different state.

The 1992 Voter Supplement California subsample fully satisfies the first three of these criteria and will be our primary source of data. The respondent's previous location, alas, is available only in another dataset, which we will describe in the next section. A second difficulty results from limitations on our ability to identify respondents' counties.

The problem is that the Current Population Survey explicitly identifies localities by Metropolitan Statistical Area rather than county. For the most part we overcame this difficulty by the method described in Appendix A and ascertained the purging method to which most respondents were subject. Forty-five percent of our citizen cases lived in NCOA counties, 43 percent were in RCOP counties, and the remaining 12 percent could not be classified by purging method. Although we identified the purging method applicable to the vast majority of Voter Supplement cases, as luck would have it we could not do so for the only two populous counties that used NCOA most effectively by cleaning their lists with it in the summer as well as in January.

Pursuant to state law, all the NCOA counties used it at the turn of the year, typically with the NCOA data file dated near the beginning of January. Just two sizable counties, San Bernardino and San Mateo, matched their voter lists against NCOA again in the month after the June primary.²⁰ Considering that 14 percent of the sample reported in November, when Voter Supplement interviewing was conducted, that they had moved within the past six months, this timing is far superior both for purging and for keeping movers registered. In fact, 74 percent of people reporting in November that they had lived less than a year at their present address had moved in the past six months. Unfortunately, we cannot identify residents of either county in

²⁰The same budgetary considerations that make NCOA so attractive also militate against employing it twice in the same year.

the CPS. San Mateo is one of three counties in the San Francisco MSA and San Bernardino is paired with Riverside County. As a result of this misfortune we cannot measure the effect on turnout of what appears to be a far more timely use of NCOA.

Different Kinds of Moves and Movers

NCOA updates the registrations only of people who move within a county, hence the ideal dataset to identify its effect on turnout would make it possible to identify intracounty movers. Absent this capacity in the Voter Supplement, we were concerned to see if movers of any sort in NCOA and RCOP counties were equally likely to move inside county lines. We made this comparison with the 1993 Annual Demographic File, which asks where respondents lived one year earlier.²¹ This analysis gave us a nasty shock: just 70 percent of all adult movers in NCOA counties had lived in the same county the year before, compared to 81 percent of those in RCOP counties. In other words, NCOA counties had a considerably smaller proportion of movers who could benefit from NCOA's hypothetically greater capacity to transfer their registration from one address to another.

Most of this difference is produced by Los Angeles County, which accounts for fully 85 percent of respondents subject to RCOP in 1992. The county's population is considerably less white

²¹As mentioned earlier, the Annual Demographic File lacks a question on citizenship status, hence these findings are for all adult residents.

than that of the entire state. In 1992 just 60 percent of the adult citizens in Los Angeles County were white, compared to 74 percent of all adult citizen Californians. This difference is reflected in the ethnic composition of all RCOP counties, in which whites were 63 percent of all adult citizens, compared to 78 percent of those in NCOA counties.

The racial disparity might explain differences in types of move; in the country as a whole, minorities who move are more likely than whites to do so inside the same county (U.S. Bureau of the Census, 1987). The Current Population Survey subsample lacked enough cases to permit confident analysis of this question just for California, but there is another source that does let us proceed: the Census Bureau's Public Use Micro Sample. Commonly known as "PUMS," this is based on a questionnaire completed by five percent of everyone enumerated in the decennial census. We analyzed responses from the 889,061 voting-age citizens in the California PUMS subsample, weighted to represent the entirety of this population in the state.

The residential mobility data from PUMS are responses to a question about where one lived five years ago. Fifty-two percent of California's adult citizens in 1990 had lived at a different address five years earlier.²² In 57 percent of these cases the previous address was in the same county. In other words, fully 29 percent of all adult citizens in the state had been

²²Of course, many of the people we classify as movers by this measure changed residences more than once in the previous five years. Such moves may have been of various types.

intracounty movers from 1985 to 1990. As Table 5 shows, just under half of each of the four ethnic groups were in the same home that they had occupied five years ago. The really interesting differences are in the types of moves by each group. Only 54 percent of whites who moved were living in the same county five years earlier, compared to 61 percent of the blacks, 68 percent of the Latinos, and 59 percent of the Asians. These findings demonstrate that substantially more minorities could benefit from procedures to maintain the registration status of intracounty movers simply because their moves are more likely to be within county lines.

(Table 5 about here)

The different racial compositions of NCOA and RCOP counties do not, however, explain the different proportions of intracounty moves in the two groups of counties. Group by group, fewer moves were inside county lines in NCOA as opposed to RCOP counties, as Table 6 shows. For example, 52 percent of white movers in NCOA counties had remained in the same county, compared to 64 percent in RCOP counties. Doubtless this reflects Los Angeles County's immense (over 8.8 million) population and geographic expanse. We believe that residents of such jurisdictions are less likely to cross county lines when they move.

(Table 6 about here)

Data Analysis

The smaller proportion of intracounty movers in NCOA

counties complicates our research task, which is to assess NCOA as a method of keeping movers registered. In the California context, the control group--those not subject to NCOA--is residents of RCOP counties. RCOP also updates intracounty movers' registrations in the course of verifying nonvoters' addresses. It is more expensive, slower, and less efficient as a purging method. The present question, however, is its capacity to keep movers registered. We see reasons for thinking that it would be less effective than NCOA. But the Voter Supplement data, which provide information about every other variable of interest, do not permit us to differentiate intracounty movers from longer-range movers, whose registrations would not be updated by NCOA or RCOP.

However, our knowledge of the proportion of intracounty moves in each type of county permits us to state this proposition: If both methods are equally efficient at keeping movers registered, then the Voter Supplement data should reveal higher turnout in RCOP counties. This follows directly from the observation that a greater proportion of moves in RCOP counties are intracounty, providing RCOP with more people whose registrations would be updated in the purge process. A simple example makes the point. Assume that both RCOP and NCOA work perfectly but that all moves in RCOP counties are intracounty while all moves in NCOA counties are from another county. RCOP will pick up all the movers and reregister them at their new addresses. NCOA, although equally efficient, will reregister no

one because all moves were out of the county. As a result, a CPS sample of such populations would reveal higher turnout in RCOP counties despite the identical effectiveness of the two methods.

The reality of the situation in California is not as severe as the example, but there is a significant disparity in intracounty moves between the two groups of counties. With this context in mind we now turn to the data.

Table 7 displays turnout in California by purge method and residential mobility. In three of the four mobility categories turnout is up to four percentage points higher among individuals living in NCOA counties. Among the most mobile, turnout is eight percentage points higher in NCOA counties. Although differences are not as great among more settled citizens, turnout was consistently higher in counties that used NCOA to clean their voting lists.

(Table 7 about here)

Before leaping to the conclusion that this gap reflects NCOA's superiority for maintaining movers' registrations, we need to consider other differences between the two groups of counties that might explain the higher turnout in the NCOA counties. As might be expected in view of the immense contribution of Los Angeles County, residents of the RCOP counties differ in ways that might suffice to explain their lower turnout. As Table 8 shows, greater proportions of citizens in these counties lack high school educations, have poverty-level incomes, are young,

and are nonwhite. Multivariate analysis is necessary to isolate the independent effect, if any, of purge method on turnout.

(Table 8 about here)

We have estimated two equations in order to test for the possibility that turnout rates in RCOP and NCOA counties reflect purge method rather than other intercounty differences. Both models include a variety of demographic variables. The first equation represents an unconstrained model that includes residential mobility, a dummy variable that indicates purge method, and a set of interaction terms that permit residential mobility to have different effects in the two county types or similarly, purge method to have different effects at different levels of residential mobility. The model is called unconstrained because it makes no assumptions about the effect of purge method on turnout, allowing overall differences between the counties and differences within levels of mobility. The constrained model excludes the purge dummy and the interactions, imposing the assumption of no purge effects.

If there are purge effects on turnout, then the unconstrained model ought to fit the data better than the constrained model. On the other hand, if there are no differences between the methods, then the inclusion of the purge dummy and the interactions will not improve the fit of the model

to the data.²³

The statistical method for testing the null hypothesis that the unconstrained model does not improve the fit of the model to the data is simple. Both equations are estimated and then the likelihoods are compared. (The estimated equations are in Appendix B.) Comparing the statistical fit of the data under each model produces a chi-square value of 1.53 with 4 degrees of freedom. The probability of observing a value this large by chance is greater than .70, well above the generally accepted level of .05. As a result, we are not confident that there are turnout differences between individuals living in RCOP and NCOA counties. Because the unconstrained model does not significantly improve the fit of the model to the data, we reject it, accepting instead the constrained model.²⁴

²³It is worth mentioning why we do not merely test for the statistical significance of the coefficients of the purge dummy and the interactions separately. The hypothesis that we want to test is that our sample contains individuals from two separate populations, distinguished by the effectiveness of the purge method employed. If the hypothesis is true, then we would expect to find both overall turnout differences and differences within levels of residential mobility. We are interested in the joint significance of the set of variables that specify these effects. In other words, we would like to test the hypothesis that the purge dummy and all the interactions are zero. Testing each coefficient separately is therefore inappropriate unless they are uncorrelated (Hanushek and Jackson, 1977, p. 125), which they are not. As a result we need a test that assesses the estimated effects together, rather than separately.

²⁴Even if we believe the estimates from the unconstrained model, the effects are quite small, with slightly higher turnout among individuals living in NCOA counties. The overall effect on turnout of living in an NCOA as opposed to a RCOP county is less than a single percentage point. The largest effect is only two percentage points. As a result, our conclusions would not be altered significantly if we ignored the statistical tests of

How do we interpret this finding substantively? The best model of the data is one in which the two purge methods do not differ in their effect on turnout. But this result should be evaluated in light of the considerably smaller proportion of moves in NCOA counties that do not cross county lines, 53 percent as opposed to 69 percent in RCOP counties, and to our finding that the depressive effects of any address change were similar in the two groups of counties. The two methods seemed to have about the same remedial effects despite the smaller proportion of potential beneficiaries for NCOA. We consider this finding an indication that NCOA is superior to RCOP for keeping movers registered. Given the data limitations, we can neither quantify the effect nor provide any estimates about how different groups of citizens might benefit from NCOA.

Conclusions and Recommendations

Two unforeseen conditions impeded our assessment of NCOA's effect on turnout. The first and most grievous was the considerably smaller proportion of intracounty movers in counties that used NCOA. Because information on the type of move--within or between counties--was not available in the dataset with turnout information, we were unable to differentiate intracounty and intercounty movers in our principal data analysis. Nevertheless, we are encouraged by our finding that the effect of mobility on turnout was similar in the two groups of counties.

significance, focussing only on the estimated coefficients themselves.

Our second unpleasant surprise was the combination of circumstances that prevented identification of residents in the two sizable counties that used NCOA again in midsummer, in contrast to the practice elsewhere in California of conducting an election in November with voter lists that had been cleaned at the beginning of the year.

Notwithstanding these inconclusive results, our research leads to several clear findings:

1. Our interviews with dozens of county election officials provide further endorsements of NCOA as an economical and effective technique for cleaning registration lists, considerably faster and cheaper than the alternative. This testimony from a variety of California counties amplifies similar judgments from two smaller and far less diverse states whose experience had provided the only published evaluations of NCOA (Mullins, 1992).

2. By the same token, our data analysis confirms a previous report that when Latinos and blacks change residences they are more likely than whites to move to another home in the same county (Bureau of the Census, 1987). Therefore these minorities have a greater potential to benefit from any procedure to update movers' registrations that is limited to intracounty movers. Actually realizing this potential would depend on the extent to which minorities and whites file change-of-address notices. A lesser propensity to do so would reduce minorities' advantage. The discount rate would have to be substantial, however, in view of the considerably greater proportion of local movers among

minorities.

3. Evidence (as opposed to casual observation and common sense) that most moves occur during the summer, hitherto provided by a moving industry trade journal (Heiden, 1981), is now available from surveys: 74 percent of Californians who had moved within a year of election day did so within the past six months. Therefore the case seems irresistible for this policy recommendation: Address corrections of registration lists, whether for the purpose of purging those no longer eligible to vote or maintaining movers' eligibility to vote, should be done as close as possible to election day. NCOA is a cost-effective way to do this that appears to have no disparate racial impact.²⁵ Unfortunately, the National Voter Registration Act "does not permit a State to conduct a systematic procedure to confirm voting lists within 90 days before a Federal election" (National Clearinghouse on Election Administration, 1994, p. D-6). A search of the House and Senate committee reports on the NVRA does not reveal the rationale for this 90-day limit. We believe that an explanation--if not a good reason--can be found.

NCOA is by no means the only method the NVRA provides for keeping movers registered and, therefore, cleaning deadwood from registration lists.²⁶ This goal is accomplished by two

²⁵The Senate committee report of the National Voter Registration Act specifies that address verification procedures may not have a "disparate impact on minority communities" (U.S. Senate, 1993, p. 18).

²⁶We remind readers that any procedure to register movers at their new addresses will purge them at their old addresses.

transactions mentioned in the motor voter title: renewing drivers licenses and reporting address changes to state departments of motor vehicles,²⁷ and also by reporting address changes to appropriate public agencies as well as by mail registrations. These procedures apply to all movers, not just those who remain in the same county. None of these methods is subject to a 90-day pre-election blackout period. States must accept motor voter and public agency notices up until five days past the state closing date for voter registration and the Federal Election Commission suggests a similar deadline for mail applications (National Clearinghouse on Election Administration, 1994, p. 5-4). Why the striking difference between these methods and NCOA?

Unlike all these other procedures, NCOA is initiated by the state rather than the individual.²⁸ Perhaps more significantly, it is categorized in the NVRA not as a method of updating registrations but as a "program the purpose of which is to systematically remove the names of ineligible voters from the official lists of eligible voters" (Public Law 103-31; 107 Stat. 84). No one familiar with the politics of the NVRA can doubt

²⁷These provisions doubtless will have much greater effect than the more publicized requirement that applications for voter registration be incorporated in the license application process. In most states the minimum driving age comes before age eighteen. Therefore this provision will affect voter registration primarily for people who need a new license because they have moved into a new state.

²⁸To be sure, the basic information comes from individual initiative, but as we have seen, it is subject to more error than is likely in any of the other methods of identifying movers.

that purging is, to borrow and bend a term from civil rights law, a suspect category. The House and Senate committee reports are replete with references to the possibility that purging, whether by intent or effect, has been and could be unfair to minority communities. The sole list-cleaning alternative to NCOA authorized in the law is intended, in all its tortuous complexity, to avoid any possibility of continuing such injustice. This provision reflects the concerns of civil rights organizations that kept the first motor voter bill from reaching the House floor for seven months in 1989 (Gans, 1991) and became even more influential once House Democrats decided in 1991 to abandon their previous attempts to draft a bipartisan measure. We believe that the NVRA's 90-day limit reflects a desire to avoid address corrections that might be too close to election day for improperly purged citizens to seek reinstatement.

This precaution seems unnecessary in view of the elaborate provisions in the law for "fail-safe" voting. In a nutshell, states are directed to allow voting, at either their old or notional new precincts, by people who have stayed put but who are recorded as having moved or who have not responded to attempts to confirm their whereabouts. These provisions would seem to make the 90-day limit unnecessary.²⁹ We are told, by a knowledgeable but not directly involved election official, that the 90-day

²⁹Although fail-safe allows such people to vote, it does not guarantee that they will receive the mailings that brief registrants on all the contests and tell them where their polling place is located.

restriction remained in the bill by oversight after the fail-safe provisions were settled. This surely seems plausible, in view of the redundancy of the two provisions. In any event, it is difficult to see any merit in the 90-day limit.

As the effective date of the 1993 National Voter Registration Act nears, states are approaching an inescapable decision about choosing NCOA or the alternative purging procedure spelled out at great length in the Act.³⁰ We assume that many will find merit in the NCOA option. It will surely reduce the cost of election administration for any state that computerizes its voter registration records, a step that seems inevitable in any event to implement the motor voter provisions of the NVRA. Furthermore, machine-readable records also reduce opportunities for fraud.

The availability of other methods to maintain movers' eligibility does not make NCOA redundant. For one thing, some registrants who file change-of-address notices lack drivers licenses and are not welfare clients. More important, citizens who do report address changes to motor vehicle departments doubtless are not all motivated to do so in a timely fashion.³¹

³⁰States that can implement the NVRA without amending their constitutions must do so by January 1, 1995. Where constitutional changes are required, "the effective date is extended to either January 1, 1996 or else to 120 days after the date by which a constitutional amendment would have been legally possible without having to hold a special election (whichever of these two dates is the later)" (National Clearinghouse on Election Administration, 1994, p. 1-2).

³¹This is not the case with people anxious to avoid any interruption in their receipt of benefits.

The incentives to file change-of-address notices at the time of moving are obvious.

We conclude by reiterating that methods of identifying movers, whether to purge them or to reregister them, should be applied as close as possible to election day. Taking either step ten months before the election misses almost a whole year's crop of movers, easily one-sixth of the California electorate. A country that can conduct credit checks overnight, verify bank balances in minutes, and produce credit card invoices in seconds does not need months to disseminate simple name-and-address data files to polling places. This is also, of course, an argument that the information superhighway should bring closing dates far closer to election day than the four weeks that seem to be the norm in almost all populous states.

Table 1
Rates & Types of Residential Mobility in 1993*

	<u>United States</u>	<u>California</u>
Percent who moved in the past year	17	19
Moved within the same county		
percent of population	10	14
percent of movers	61	73
Moved from another county in the state		
percent of population	3	3
percent of movers	19	16
Moved from another state		
percent of population	2.7	1.4
percent of movers	17	7
Moved from another country		
percent of population	.5	.8
percent of movers	3	4

*Includes everyone at least eighteen years old, irrespective of citizenship.

Source: Current Population Survey, 1993 Annual Demographic File.

Table 2

Demographic Characteristics of Movers & Stayers, 1992*

	<u>Percent of movers**</u>	<u>Percent of stayers**</u>
Did not graduate from high school	15	19
Graduated from college	23	20
Family income under \$12,500	24	17
Under age 35	62	26
Renters	58	16
Non-Latino whites	79	83
Blacks	13	11
Latinos	6	4
Asian-Americans	1.5	1.6
Reported voting in 1992	57	75
Percent of Voter Supplement sample	31	69

* Limited to voting-age citizens for whom information on registration and voting was gathered (see Appendix A).

** Movers had lived at their current address for no more than two years. Stayers are all others.

Source: Current Population Survey, 1992 Voter Supplement.

Table 3

Political Characteristics of Movers & Stayers, 1992

	<u>Percent of movers*</u>	<u>Percent of stayers*</u>
Care who wins the election	78	76
Very interested in the campaign	38	40
Follow the campaign on television at least "quite a bit"	47	49
Follow the campaign in newspapers at least "quite a bit"	21	25
Follow politics at least "some of the time"	67	69
Campaign activity other than voting**	16	17
Identified self as a Democrat***	49	49
Reported voting in 1992	68	81
Voted for Clinton	46	48
Voted for Bush	32	35
Voted for Perot	22	18
Percent of NES sample	32	68

* Movers had lived at their current address for no more than two years. Stayers are all others.

** Any one or more of these activities: going to a meeting, working for a party or candidate, or displaying a button or bumper sticker.

***Both outright and "leaning" Democrats.

Source: National Election Study.

Table 4

Demographic Characteristics of 1992 Nonvoters

	<u>U.S.</u> (%)	<u>California</u> (%)
Two years or less at current address	43	50
18 to 29 years old	34	37
Did not graduate from high school	31	24
Family income under \$12,500	30	24
Minorities (including Latinos)	22	39
Poor or minorities	43	52

Source: Current Population Survey, 1992 Voter Supplement.

Table 5
Race and Mobility in California, 1985-1990*

Residence in 1990 relative to <u>Residence in 1985</u>	<u>Whites</u>	<u>Blacks</u>	<u>Latinos</u>	<u>Asians</u>	<u>Total</u>
Same home	49%	47%	48%	49%	48%
Another home in the same county					
percent of population	27	33	35	30	29
percent of movers	54	62	68	59	57
Another county in California					
percent of population	13	11	11	12	13
percent of movers	26	20	21	24	25
Another state					
percent of population	10	9	4	6	8
percent of movers	19	17	8	12	16
Another country					
percent of population	.7	1.0	2.2	2.7	1.1
percent of movers	1.4	1.8	4.2	5.3	2.1
Percent of the state's adult citizen population	71	8	14	6	

*Includes all citizens over the age of 17 except the 1.2 percent of California citizens not in one of these four ethnic categories and about the same number of people, almost all white, whose former residence was not ascertained.

Source: 1990 PUMS.

Table 6

Intracounty Moves in California
by Race and Purging Method, 1985-1990*

Percent of all moves within the same county:

	<u>RCOP Counties</u>	<u>NCOA Counties</u>	<u>Total</u>
Whites	64	52	54
Blacks	77	51	62
Latinos	80	60	68
Asians	70	54	59
All residents	69	53	57

*Includes all citizens over the age of 17 except the 1.2 percent of Californians not in one of these four ethnic categories, about an equal number whose former residence was not ascertained, and about 7 percent of the population living in counties that were not identified.

Source: 1990 PUMS.

Table 7
 Turnout by Purge Method and Residential Mobility,
 California, 1992

	<u>RCOP</u>	<u>NCOA</u>	<u>Total</u>
<u>Residential Mobility</u>			
< 1 year	54	62	59
1-2 years	65	67	66
3-4 years	74	78	76
5+ years	80	81	81
Total	73	75	74

Source: Current Population Survey, 1992 Voter Supplement.

Table 8
 Characteristics of Adult Citizens Living
 in RCOP and NCOA Counties

	Percent of Individuals Living in Counties that Employ	
	<u>RCOP</u>	<u>NCOA</u>
Did not graduate high school	16	12
Graduated from college	25	25
Family income under \$12,500	18	13
Family income over \$75,000	16	16
Renter	37	34
Under age 29	24	22
Black	11	6
Latino	19	11
Asian	7	5
Minority	37	22
Reported Voting in 1992	73	75

Source: Current Population Survey, 1992 Voter Supplement.

Figure 1

U.S. Postal Service Change of Address Form

U.S. Postal Service CHANGE OF ADDRESS ORDER		Instructions: Complete Items 1 thru 10. You must SIGN Item 9. Please PRINT all other items including address on face of card.			OFFICIAL USE ONLY Zone/Route ID No.	
1. Change of Address for: (Check one) <input type="checkbox"/> Individual <input type="checkbox"/> Entire Family <input type="checkbox"/> Business		2. Start Date:		Month	Day	Year
3. Is This Move Temporary? (Check one) <input type="checkbox"/> Yes <input type="checkbox"/> No		4. If TEMPORARY move, print date to discontinue forwarding:		Month	Day	Year
5. <u>Print</u> Last Name (include Jr., Sr., etc.) or Name of Business (If more than one, use separate form for each).						Date Entered on Form 3882 M M D D Y Y
6. <u>Print</u> First Name (or Initial) and Middle Name (or Initial). Leave blank if for a business.						Expiration Date M M D D Y Y
7a. If OLD mailing address is located in Puerto Rico, print urbanization name, if appropriate.						Clerk/Carrier Endorsement
7b. <u>Print</u> OLD mailing address: House/Building Number and Street Name (include St., Ave., Rd., Ct., etc.).						
Apt./Suite No.		or PO Box No.		or <input type="checkbox"/> RR/ <input type="checkbox"/> HCR (Check one)		RR/HCR Box No.
City		State		ZIP Code		ZIP+4
8a. If NEW mailing address is located in Puerto Rico, print urbanization name, if appropriate.						
8b. <u>Print</u> NEW mailing address: House/Building Number and Street Name (include St., Ave., Rd., Ct., etc.).						
Apt./Suite No.		or PO Box No.		or <input type="checkbox"/> RR/ <input type="checkbox"/> HCR (Check one)		RR/HCR Box No.
City		State		ZIP Code		ZIP+4
9. Signature: (See conditions on reverse)		10. Date Signed:		Month	Day	Year
						OFFICIAL USE ONLY Verification Endorsement

APPENDIX A

The Current Population Survey

Conducted monthly by the Census Bureau, primarily to obtain data used to estimate unemployment, the Current Population Survey has a wide range of demographic items and a changing "supplement" on a particular topic--child care, smoking, and so on. Every other November the Voter Supplement inquires about citizen status, registration, and voting. Although the only political questions are on registration and turnout, the CPS is an exceptionally valuable dataset for studies of turnout because of its enormous sample size. For example, the 1992 Voter Supplement includes 8,176 cases in California, compared to 268 California respondents in the 1992 National Election Study.

The Voter Supplement is the source of the reports on turnout published by the Census Bureau in the spring following each national election. Most of the percentages presented in these reports are computed on a base that includes noncitizens. This practice, which moderately underestimates turnout at the national level, would have more serious consequences in a state where 22 percent of the adults in the CPS sample are noncitizens. What is more, Latinos account for a quarter of the state's adults, and just 43 percent of them are citizens. The Census Bureau further underestimates turnout by coding as nonvoters all cases where information about voting or registration was not obtained. We think it sounder to treat these cases (about 9 percent of the citizen cases) as missing data. Excluding 1,936 noncitizens and 552 instances of missing data gives us 5,688 cases to analyze.

Fully 97 percent live in the twenty-one Metropolitan Statistical Areas (MSA), which the CPS uses to describe localities. Our analysis required us to identify each individual's county of residence. Most MSAs consisted of a single county and hence posed no problem about identifying the purging method used. Three MSAs were comprised of two counties each and each pair was consistent. A fourth two-county MSA (Yuba City) had one county using RCOP and the other NCOA. We deleted its residents from analyses using this variable. The four counties in the Sacramento MSA also used both methods. We excluded all of its residents except those in the city of Sacramento, identified through the "central city" code in the CPS. We used the same method for the San Francisco MSA because one of its two suburban counties used RCOP. All told, we were about to identify the county of residence of 88 percent of our 5,688 cases.

APPENDIX B

Multivariate Estimation

Table B1. Unconstrained Logit Estimates for Turnout in California, 1992.

<u>Variable*</u>	<u>Coefficient</u>	<u>Standard Error</u>
age	.0452	.0118
age squared / 100	-.0204	.0122
education	.5619	.0386
family income	.0717	.0123
own/rent	.2113	.0924
black	-.0404	.1408
asian	-1.2494	.1496
latino	-.4786	.1023
mobility/purge		
< 1 year	-.6424	.1730
< 1 year * ncoa	.2231	.2006
1-2 years	-.5209	.1809
1-2 years * ncoa	.0657	.2173
3-4 years	-.2482	.2027
3-4 years * ncoa	.0947	.2453
ncoa	-.1181	.1172
5+ years	-----	-----
constant	-2.6002	.2948

n=4,668

correctly predicted: 77%

-2 log likelihood: 4377.698

Source: Current Population Survey
 *coding for variables is in Appendix C

Table B2. Constrained Logit Estimates for Turnout
in California, 1992.

<u>Variable*</u>	<u>Coefficient</u>	<u>Standard Error</u>
age	.0451	.0118
age squared / 100	-.0203	.0122
education	.5420	.0386
family income	.0719	.0122
own/rent	.2103	.0922
black	-.0262	.1396
asian	-1.2455	.1487
latino	-.4701	.1015
mobility/purge		
< 1 year	-.5008	.1118
< 1 year * ncoa		
1-2 years	-.4850	.1117
1-2 years * ncoa		
3-4 years	-.1930	.1187
3-4 years * ncoa		
ncoa		
5+ years	-----	-----
constant	-2.6740	.2868

n=4,668

correctly predicted: 78%

-2 log likelihood: 4379.226

Source: Current Population Survey
*coding for variables is in Appendix C

APPENDIX C

Coding of Variables Used in Study

age: respondents' age in single years

education: 0-8 years=1; 9-11 years=2; 12 years=3; some college=4; college degree=5; advanced degree=6.

income: less than \$5,000=0; \$5,000-7,499=1; \$7,500-9,999=2; \$10,000-12,499=3; \$12,500-14,999=4; \$15,000-19,999=5; \$20,000-24,999=6; \$25,000-29,999=7; \$30,000-34,999=8; \$35,000-39,999=9; \$40,000-49,999=10; \$50,000-59,999=11; \$60,000-74,999=12; \$75,000+=13.

own/rent: rent=0; own=1.

black: nonblack=0; black=1.

asian: nonasian=0; asian=1.

latino: nonlatino=0; latino=1

ncoa: rcop=0; ncoa=1.

< 1 year: lived at current address < 1 year=1; other=0.

1-2 years: lived at current address 1-2 years=1; other=0.

3-4 years: lived at current address 3-4 years=1; other=0.

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