

# **Estimating Cross-Over Voting in the 2005 Jackson, Miss. Democratic Mayoral Primary via Ecological Inference**

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## Abstract

The adoption of open and “blanket” primary laws, particularly in the American South, in the wake of the civil rights movement has generally led to more equitable rates of voting and greater representation for blacks and other ethnic minorities. However, open primary laws have been criticized by political parties and their core supporters as unwarranted interference in the internal affairs of parties; these critics are concerned about “cross-over voting” by traditional supporters of the other party to either choose more centrist party nominees or to help nominate candidates who will be less competitive in the general election. In states with open primaries, however, there is only limited evidence of these cross-over effects.

The 2005 Democratic mayoral primary in the City of Jackson, at first glance, would appear to provide strong evidence of cross-over effects determining the outcome of a primary election; Democratic primary challenger Frank Melton was heavily favored by white, predominantly Republican, voters in opinion polls, while incumbent mayor Harvey Johnson had strong support from elements of the local Democratic Party organization and liberal whites, with lukewarm support in the black community. Ultimately, Melton won the primary with 62% of the vote in May 2005, and trounced Republican candidate Rick Whitlow in the general election in June.

The key questions this paper seeks to answer are: did cross-over voting, in fact, lead to Melton’s victory in the primary? And, did voters who engaged in cross-over voting “cross back” to the Republican nominee in the general election, potentially violating the state election code?

I consider these questions using ecological inference, a statistical approach designed to recover estimates of individual behavior from aggregate data, which has been widely used in the study of racial bloc voting (for example, in Voting Rights Act cases) but also has application to answering both of these questions. The results indicate that Johnson would have done better in—and might have won—a closed primary; it also appears that Melton did better in the general election among Johnson supporters in the primary than among his own supporters, although (due to the lopsidedness of the contest) this had no effect on the outcome of the race.

## 1 The Context of the Election

Jackson’s 2005 mayoral contest was characterized by a heated contest between the two presumed front-runners, incumbent mayor Harvey Johnson and former Mississippi Bureau of Narcotics head Frank Melton. Much of the contest’s heat was generated by conflicts between Melton and Johnson’s supporters in the municipal party establishment and local press, most notably the *Jackson Free Press* indepen-

dent newsweekly, which is generally seen as the voice of the city's moderate-sized contingent of white liberals; smaller conflicts also arose between Johnson and the local black press, where Johnson's record of eight years in office as the city's first African-American mayor was seen as something of a disappointment.

Johnson largely ran his campaign on a platform of "more of the same"; he argued that he had built a successful record of economic development and reducing crime. Melton, on the other hand, argued that his law enforcement experience would be more valuable in reducing crime further, as crime rates were still well above those of comparable cities despite recent improvements, and that Johnson's economic development projects had essentially fizzled. There was some truth to both sides' claims; Johnson's largest accomplishment, the passage of a local tourism tax to fund construction of a convention center, would not result in an actual convention center for several years, and the downtown area was still punctuated by the burned-out hulk of the King Edward Hotel, which had been subject to off-and-on redevelopment plans for years that had gone nowhere under Johnson's watch. On the other hand, other Johnson initiatives, such as improvements to the roadways between downtown Jackson and Jackson State University, downtown beautification efforts, and the revitalization of commercial property in the largely-white Fondren area, had born fruit.

The campaign reached new depths when the *Free Press* recirculated claims made in New York's *Newsday* in 1994 by youth incarcerated in the state's juvenile justice system that Melton was involved in the sexual abuse of minors, claims that were never independently verified. Although the local mainstream media refused to go near the story, the claims enraged Melton. Melton was also embarrassed in the media over conflicting claims about his residency status—he was believed

to have a household in Texas, for which he claimed a homestead exemption, in addition to a Jackson address—and over comments that he only planned to run in the Democratic primary election because it was the easiest road to the mayor’s office.

Melton and Johnson faced off in a three-way Democratic primary election on May 3, 2005; the other candidate, Annell Vaughn-Smith, was a political neophyte given no prospects to win by any local media. As the Republican primary the same day was uncontested, and Mississippi has open primary elections, it was expected that Melton would receive a great deal of support from Republicans in the city, who are predominantly white. Rumors circulated prior to election day that a relatively unknown provision of state law might be used to disqualify cross-over voters,<sup>1</sup> but such challenges failed to materialize. In the end, Melton triumphed easily in the race with 62 percent of the vote, against Johnson’s 37 percent share, and went on to win the June 7 general election, trouncing (with nearly 89 percent of the vote) former television broadcaster Rick Whitlow, who ran as the Republican nominee. Incidentally, all four mayoral candidates were African-American.

The lopsided nature of Melton’s primary and general election victories would seem to have dispelled complaints that he only won due to cross-over voting. However, these allegations were an important aspect of the campaign and should not be dismissed out of hand. Statistical analysis might shed some useful light on the actual incidence of cross-over voting in the contest, and help determine whether or not some voters did, in fact, violate the law by crossing over to the Democratic primary.

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<sup>1</sup>Mississippi Code section 23-15-575 states, “No person shall be eligible to participate in any primary election unless he intends to support the nominations made in the primary in which he participates.” (State of Mississippi 2005) It is exceedingly unclear how one might prove a violation of this statute, absent an admission of intent by the voter, but voters could theoretically be challenged on this basis (under section 23-15-571).

## 2 Data and Methods

The data used for this analysis were provided by the Hinds County (Miss.) Election Commission; the precinct-level results of three elections were used: the November 2004 statewide general election for presidential electors, the May 2005 Democratic Party municipal primary election, and the June 2005 municipal election.

As Mississippi uses an open primary system,<sup>2</sup> voters do not register by party, making it difficult to determine the percentage of voters in a particular precinct who are Democrats. While statistics are kept on turnout by precinct for each primary election, with each party counted separately, this turnout necessarily varies by the competitiveness of the races in a given year (and, of course, would also include cross-over voters), making it a rather unreliable indicator of the partisan split of the precinct. Given the high correlation between party identification and vote choice in presidential elections, I elected to use the share of the vote in the precinct cast for the Democratic slate of presidential electors in the 2004 presidential election as a proxy for the share of party identifiers in the precinct.

Since we are unable to directly observe how many ballots were cast by adherents of particular parties, we must use statistical techniques to make inferences about individual behavior from precinct-level data. Methods that attempt to make these inferences are known as *ecological inference*, as they attempt to solve the problem of the “ecological fallacy”—inferring that individuals within a given group behave the same way given aggregate outcomes.

A number of solutions to the ecological inference problem have been proposed over the years; advances in computer memory and speed have led to re-

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<sup>2</sup>Registered voters may select which primary ballot they wish to cast in the first primary election; however, if a run-off election is necessary due to no candidate receiving an outright majority in the primary, voters who cast ballots in the first primary may only vote in that party’s runoff.

newed interest in providing solutions to the problem, as has the increasing practical value of a solution to the courts and other policymaking bodies in adjudicating disputes over redistricting plans arising under the Voting Rights Act of 1965 (King 1997). A promising recent approach (Imai and Lu 2004) uses Markov chain Monte Carlo to fit parametric and nonparametric ecological inference models; in simulations and “real world” data, the nonparametric method appears to be the least biased of existing methods while also reducing error.

Accordingly, the data were analyzed in the *R* statistical computing environment (R Development Core Team 2004) by using the *ecoNP* procedure in the *eco* package (Imai and Lu 2005), which fits the Imai and Lu nonparametric ecological inference model.<sup>3</sup>

### 3 Results

The nonparametric ecological inference model indicates that approximately 49.8% of Democratic voters supported Johnson in the primary, while Johnson’s support among non-Democrats was approximately 2.1% (see Table 1). As the 95% confidence interval for Democratic support includes 50% support, we cannot conclude that Johnson would have lost the election if only Democrats had taken part—indeed, any of three scenarios would have been quite plausible: an outright victory by Johnson, a run-off election between Johnson and Melton, or an outright victory by Melton.

This conclusion, however, presupposes that all voters for the Kerry-Edwards ticket would have registered as Democrats, and all supporters of other presidential

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<sup>3</sup>The models were fitted using 6000 draws (with the first 1000 discarded and the remainder of the chain thinned by a factor of 5, leaving a total of 1000 samples) from a Gibbs sampler.

campaigns would not be registered Democrats. Given the level of ticket-splitting in contemporary campaigns (see, e.g., Smith et al. 1999; Burden and Kimball 1998) this seems rather unlikely, especially considering the Democratic party's dominance in municipal and county politics. More than likely, many voters predisposed to vote Republican in statewide and national elections would have chosen to register as Democrats to retain influence in local elections, where—as in the days of the “white primary”—the outcome of the general election would essentially be decided by the Democratic primary contest.

Moreover, Melton—contrary to the expectations of his opponents in the local Democratic establishment—seemed to command the support of Democrats in the general election. As shown in Table 2, the ecological inference estimates suggest that Melton received nearly 93 percent support among Democrats, a higher proportion of the vote than he received among non-Democrats (around 78%). Some of the support differential may simply be attributable to Melton having the Democratic party label adjacent to his name on the ballot, but the overwhelming support of Democratic identifiers seems to indicate that the party in the electorate was satisfied with his nomination in the primary.

The results do, however, reinforce potential concerns about the role of cross-over voting. Table 3 indicates that Johnson supporters in the primary were *more likely* to support Melton in the general election than supporters of either Melton or also-ran contender Annell Vaughn-Smith.<sup>4</sup> While Melton received virtually unanimous support among Johnson voters, according to the analysis only about 83 percent of Melton (or Vaughn-Smith) primary voters supported him in the general election as well. However, there are two essential caveats to the analysis. First, we

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<sup>4</sup>These results were replicated using the Melton/others dichotomy as well; econP does not currently support contingency tables larger than 2x2.

have no way of knowing whether differential turnout in the primary affected this outcome—it is possible (and perhaps even likely) that many Republican voters, who tended to live in precincts that Melton was particularly popular in, stayed away from the primary, which might give the appearance of cross-over between the primary and general election that did not actually take place.<sup>5</sup> Second, we have no way of knowing that—even if cross-over voting took place—it was by voters who had no intention of voting for Melton (or Johnson or Vaughn-Smith) if he won the primary; i.e., they may have changed their minds about Melton after the primary contest was over.

## 4 Conclusions

The results of this analysis are important in two respects. First, they lend some credence to Johnson’s supporters complaints that cross-over voters did influence the outcome of the primary election; a closed primary would certainly have been less lopsided and, perhaps, have led to a Johnson victory either in the first primary or a potential run-off election. Second, they indicate that cross-over voters may have strategically voted for Melton in the Democratic primary and Whitlow (a Republican) in the general election, which may indicate that they violated Mississippi law.

There are two possible prescriptions for this, related, issues. One obvious prescription is to allow or require closed primary elections, or eliminate the use of primary elections entirely, to return control of the party nomination process to the

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<sup>5</sup>A simple spatial model of voting would lend some credence to this explanation. If we presume we can order the candidates, from left to right, as Johnson–Melton–Whitlow, and voters tend to be segregated ideologically (but not necessarily by party), we would expect a lot more votes in right-leaning precincts for Melton than for Johnson, even among voters who are not Republican loyalists. Thus Melton could easily win the primary in these precincts, even without the help of Republican cross-over voters.

parties (or at least their declared voters) themselves. While, as noted earlier, the effect of closed primaries would probably not be as dramatic as Johnson's supporters contend—as many Jackson voters with general sympathies toward Republicans, minor parties, and political independence would likely register as Democrats to retain influence at the ballot box in local politics—it would have at least indicated Melton's support came from Democrats. If municipal primaries were eliminated altogether, of course, Johnson probably would have been renominated and, in all likelihood, would have been reelected.

A second alternative would be the conversion of Jackson municipal elections to a non-partisan basis. However, the increasing use of non-partisan elections—although favored by reformist figures for over a century—has been criticized by political scientists and others as reducing the already limited information available to voters in low-salience contests, reducing turnout, and fostering personalistic, rather than programmatic, campaigns. In all likelihood, Melton would have won a non-partisan contest involving all four candidates, as it is difficult to see Johnson commanding the necessary resources to counter the Melton campaign without official party help—the situation that Johnson was faced with in the primary election anyway, despite his tacit support from most local Democratic party activists.

At this point, this paper does not consider the effect of race on vote choice in the election. While we would expect a high correlation between race and party identification, the relationship in Jackson is not perfect—there is a substantial white liberal population in the inner city area, as mentioned above, concentrated in the Belhaven and Fondren neighborhoods near Belhaven and Millsaps colleges and the University of Mississippi Medical Center. The *Jackson Free Press's* endorsement of Harvey Johnson suggests that white liberals may have been more loyal to

Johnson than black voters, although it is possible that the *JFP* was out of step with the broader white liberal community in this case.

Finally, this analysis is subject to the limitations of the ecological inference algorithms used. With more information about political contests at the precinct level, and the further development of EI models in the coming years, it will surely be possible to further improve our understanding of the dynamics of local elections.

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Party ID of Voter	Estimated Proportion ( $p$ )	Standard Deviation ( $\sigma_p$ )	95% Bounds	
Democratic	0.498	0.0037	0.489	0.503
Non-Democratic	0.021	0.0094	0.008	0.045

Table 1: Model of the 2005 Jackson mayoral primary: support for Johnson

Party ID of Voter	Estimated Proportion ( $p$ )	Standard Deviation ( $\sigma_p$ )	95% Bounds	
Democratic	0.929	0.0043	0.920	0.937
Non-Democratic	0.784	0.0111	0.763	0.806

Table 2: Model of the 2005 Jackson general election: party support for Melton

Primary Vote	Estimated Proportion ( $p$ )	Standard Deviation ( $\sigma_p$ )	95% Bounds	
Johnson	0.987	0.0056	0.974	0.996
Melton/Vaughn-Smith	0.832	0.0032	0.827	0.839

Table 3: Model of the 2005 Jackson general election: primary voters' support for Melton