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Primary Politics: Race, Gender, and Age in the 2008 Democratic Primary

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ABSTRACT *Despite Barack Obama's momentum in the early phase of the Democratic nomination, the process of selecting a nominee took longer than usual. Obama's momentum, it seems, got stuck, and the 2008 Democratic presidential nomination was an unusually drawn out affair. Even when it appeared Barack Obama would win the nomination, many Clinton supporters said they would support John McCain in the general election. Why were some Democrats unwilling to join the Obama bandwagon once he emerged as a viable front-runner – and ultimately the Democratic nominee? In this paper we bring a unique set of panel data from the 2008 Cooperative Campaign Analysis Project (CCAP) to bear on questions about primary vote choice, examining the evolution of preferences over the unusually long and intense 2008 Democratic presidential nomination campaign. Attitudes about race predict vote choice in partisan contests; here we show that (conditional on the presence of a black candidate) these attitudes help explain the dynamics of candidate support over the prolonged intra-party contest for the 2008 Democratic presidential nomination.*

> Through the din of horse race coverage, the hoopla of rallies, and the frantic chasing after "Big Mo", the enduring political identities of candidates and citizens gradually shape the perceptions and evaluations on which primary votes are based. (Bartels, 1988: 83)

The day after Hillary Clinton lost the North Carolina primary to Barack Obama by 14 points, she vowed to "continue her quest" for the Democratic nomination. During media interviews that day (7 May 2008), Clinton said that she appealed to a wider coalition of general election voters than Obama, specifically because she had greater appeal among white voters. "Senator Obama's support among working, hard-working Americans, white Americans, is weakening again", Clinton said. She pointed out that "whites who had not completed college" were supporting her over Obama. Clinton cited the fact that she had just won 60% of the white vote in the Indiana and North Carolina primaries according to the exit polls (Kiely & Lawrence, 2008).

Clinton's comments came at a particularly important stage of the race. Although she was out of money, had already lent her campaign $6.4 million, some of her elite

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supporters were abandoning her for Obama, and she was behind in the pledged delegate count, Obama was yet to lock up the nomination. Clinton claimed that the pattern was changing and she would ultimately be the party nominee. There were only six primaries left.

In asserting that Obama's support was "weakening again" – at least among white voters – Clinton was talking about "momentum". In particular, Clinton was suggesting that Obama's momentum was fading and that hers would carry her to the nomination. Like Bartels (1988), we define momentum as the phenomenon in which success (especially unexpected success) in early primaries or caucuses helps generate future success through increased media attention, additional campaign contributions, and higher levels of popular support. Obama exceeded expectations by winning in the Iowa caucuses with an impressive margin (nine points over Hillary Clinton and eight points over John Edwards). He then came within three points of Hillary Clinton in the New Hampshire primary, which amounted to a tie in terms of pledged delegates. From this point on, we believe that Obama's campaign had momentum. Obama raised unprecedented amounts of money from a dizzying number of individual donors; he received mainly favorable media coverage, and racked up some large victories in subsequent primaries. At various points between January and May, Obama won South Carolina and Virginia by 28 points; Alabama and Wisconsin by roughly 15; Vermont, Wyoming, and Mississippi by 20; Alaska by 50; Colorado, Georgia, Nebraska, Washington, and Minnesota by 35; Kansas by 48; North Dakota and Maryland by 24; and Idaho by 63. In contrast, Clinton had only two large victories and only late in the process: West Virginia by 41 points on 13 May and Kentucky by 36 on 20 May.

Despite the fact that Obama parlayed his early performances into later victories, Clinton remained viable and competitive by winning in self-proclaimed "must-win" places like Texas and Ohio – and then in Pennsylvania. As if she was unfamiliar with the received wisdom about momentum, Clinton did not drop out and refused to concede even after Obama accumulated enough pledged delegates to secure the nomination.[1] When Clinton finally conceded (four days after Obama secured the nomination on 3 June), many of her supporters pledged that they would defect in the general election and vote for John McCain, the Republican nominee.

In sum, the 2008 Democratic presidential nominating campaign is far and away the most interesting and prolonged intra-party contest in American politics in recent decades. Our investigation focuses on the dynamics of support for Democratic candidates, with particular attention to why Obama could not do what previous candidates with momentum were able to do: unite the party and focus on winning the general election. Why did voters in West Virginia and Kentucky hand Hillary Clinton her largest victories 16 weeks into the process after Obama had won dozens of contests in a row? Why did many of Clinton's supporters react so negatively to an Obama nomination, declaring their intention to support McCain in the general election if it came to an Obama vs. McCain contest? Ultimately, we want to know

if Clinton was right. Were "hard-working, white Americans" denying Obama his "Big Mo"?

A Racialized Primary and "Slow-Mo"

What we know about the fluidity of preferences in party nominating contests comes from decades of research on the importance of things like name recognition, popularity, viability, electability, expectations, momentum, information, issue positions, campaign contact, the structure of the process, and candidate traits and attributes.[2] Because the party cue is of little help in a party nominating contest, most of the factors that we deem important to vote choice in primaries are judgments about candidates that can take shape over time and with new information. Whether one thinks of the process as merely an information cascade unraveling over several weeks, or a process that is driven by the ethereal concept of momentum, scholars rarely report that intra-party choices came down to political fundamentals – those are supposed to wash out as people separate themselves into the political parties. In 2008, however, we suspect the Democratic nomination turned on attributes of voters and candidates as fundamental as any – race, age, and gender. But we also suspect that the way these characteristics affect the vote is tied to the behavior of candidates in the campaigns, and the changing fortunes of the contenders over time.

To understand the choices voters made in this primary, we marry the rich literature in American politics on attitudes about race to the literature on primary decision making. We ask a very specific question: Are there limits to the momentum that a black candidate can build if he is running against a white opponent? In other words, does "Big Mo" become "Slow Mo" for a black candidate as attitudes about race prevent voters with high levels of racial animus from joining the bandwagon – even in a Democratic primary?

Attitudes about race affect many dimensions of mass politics, from choices within elections (e.g. Sears et al., 2000; Mendelberg, 2001; Hurwitz & Peffley, 2008; Jackman & Vavreck, 2009b; Tesler & Sears, 2010) to attitudes about welfare and other issues (e.g. Gilens, 2000; Valentino et al., 2004; Federico, 2004). Nonetheless, investigations of the role of racial attitudes on intra-party contests are rare, at least at the national level (although see Sears et al., 1987). The prolonged Obama/Clinton contest gives us the opportunity to examine the way a cue like a candidate's race affects voters by priming attitudes about race while the candidates' likelihoods of winning the nomination change.

The literature on how racial attitudes come to influence important political choices suggests this is possible through a process called racialization (Mendelberg, 2001; Valentino et al., 2004). When something becomes racialized, attitudes about race are brought more heavily to bear on people's choices than they were before the choice was racialized. For example, Tesler and Sears (2010) demonstrate that opinions about John McCain became racialized as Obama became his main opponent – and subsequently that attitudes about health care became racialized when Obama took on the issue after his election. We believe that racialization can halt a

black candidate's momentum as the candidate becomes more clearly identified as the nominee or as attitudes about race are primed during the campaign.

Specifically, we argue that racialization slows momentum by preventing a group of voters (who otherwise would join the bandwagon of a white candidate) from identifying with the black nominee – and also by causing some people who were supporting the black candidate to choose another candidate. All of this happens as the campaign unfolds and the candidates' likelihoods of winning are changing. We investigate the slow-down of momentum due to attitudes about race in two distinct ways. First, we demonstrate that Obama's race interacts with attitudes about race by estimating whether we observe a different decision calculus in the Obama–Clinton contest than in a primary contest between Clinton and the other white Democrats. Then we examine whether the effects of attitudes about race explain voters' transitions from one candidate to another over the course of the campaign – and whether they do so in different ways depending on the composition and timing of the transitions.

To accomplish this, we make use of a well-known type of racial prejudice: symbolic racism (Kinder & Sears, 1981).[3] We operationalize symbolic racism using the widely used racial resentment battery due to Kinder and Sanders (1996).[4] To reiterate, our goal is to assess whether racial attitudes explain the reluctance of some voters to join the Obama bandwagon, net of other factors, such that decision-making is different when Obama is in the choice-set compared to when he is not. We also investigate whether these attitudes explain transitions away from (or to) Obama over the course of the Democratic nominating campaign. We begin the investigation in December of 2007, when Obama was gaining ground on Clinton – but prior to any primary or caucus victories – and before any of the more explicit references to race were made by the candidates themselves.

Data and Analyses

In 2008, we directed the Cooperative Campaign Analysis Project (CCAP) (Jackman & Vavreck 2009a), a six-wave, nationally representative panel study of registered voters fielded between December 2007 and November 2008. CCAP had three primary election waves, which were conducted in December (2007), January, and March, and a post-primary survey in September. A total of 12,617 respondents were interviewed in each one of these primary waves, and we rely on these data in the analyses that follow.

CCAP was administered on-line by YouGov/Polimetrix, a survey research firm in Palo Alto, California. The project was a joint venture of 27 research teams around the world. For details on the structure of the cooperative projects, see Vavreck and Rivers (2008) and Jackman and Vavreck (2009c). Details on the construction of the sample and comparisons with other election studies are presented in the Appendix. For this paper, we use data from the "Common Content" portion of CCAP, containing 20,000 total respondents, more than half of whom are empanelled across every primary wave.[5]

Preferences at the Beginning of the Primary Season

We begin by explaining people's initial preferences as measured in December of 2007. We have 8,425 respondents who report that they will either surely or possibly vote in their state's Democratic primary.[6] Of these people, 31% prefer Clinton, 25% Obama, and 14% choose Edwards. Twenty-one percent are not sure for whom they will vote; the remainder intend to vote for one of the other candidates in the race.[7] We present these results in the right-hand column of Table 1. What explains these preferences?

Race, Gender, and Age

With a young, African-American man and a white woman as the two front-runners for the Democratic nomination, respondent age, race, and gender are quite likely to be associated with initial support for the Democratic candidates; e.g. see Grose et al. (2010) in this volume for historical patterns on gender and race. Table 1 shows the distribution of December 2007 voting intentions over the Democratic field conditional on respondent race. White respondents constitute 67% of those intending to vote in the Democratic primaries and caucuses; among these white respondents Clinton enjoys a 12-point margin over Obama (31% to 19%), but 23% of white respondents say they are not sure who they will support. Hispanics constitute 10% of respondents intending to vote in the Democratic primaries and caucuses and here Clinton leads Obama 46–21; Clinton's 46% support among Hispanics represents her best result within any racial group. Among black respondents – who constitute 19% of respondents intending to vote in the Democratic primaries and caucuses – Obama leads Clinton by 22 points, 47–25. That is, as of December 2007, blacks are 2.5 times more likely to support Obama than whites.

Table 2 shows levels of support for the Democratic candidates conditional on respondent gender. Hillary Clinton wins 13 percentage points more support among women than Obama, while Obama beats Clinton among men by a margin of only

Table 1. Democratic primary voting intentions (percentages), December wave, conditional on respondent race

Race:	White	Black	Hispanic	Other	All
Marginal	67	19	10	4	
Clinton	31	25	46	30	31
Edwards	17	5	10	13	14
Obama	19	47	21	24	25
Other	10	3	8	11	8
Not sure	23	20	15	22	21
Total	100	100	100	100	100

Note: Unweighted n = 8,425. χ^2 = 742, df = 12, $p < 0.01$.

Table 2. Democratic primary voting intentions (percentages), December wave, conditional on respondent gender

	Male	Female	All
Marginal	43	57	
Clinton	25	36	31
Edwards	16	13	14
Obama	28	23	25
Other	13	5	8
Not sure	18	24	21
Total	100	100	100

Note: Unweighted n = 8,425. χ^2 = 321, df = 4, $p < 0.01$.

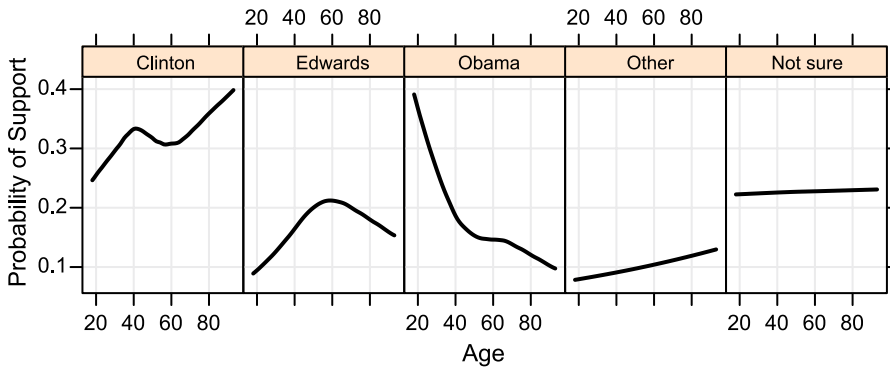

Figure 1. Preferences for Democratic candidates and respondent age, December wave of CCAP. Each panel shows the proportion of respondents preferring the indicated candidate as a function of the respondents' ages. Each function is fit using local linear logistic regression, with a bandwidth chosen so as to minimize AIC.

3 points. Women are generally more likely to support Clinton or be undecided and less likely to support one of the men in the race compared to male voters. In short, in December 2007, women are 1.5 times more likely to support Clinton than men.

Figure 1 shows how preferences over the candidates vary as a function of respondent age. Obama is the preferred candidate of younger voters, where he wins close to 40% support (compared to Clinton's 25%), with Clinton the most preferred candidate among voters over 30. Obama's support falls rapidly across age cohorts, to about 15% among respondents in their mid-40s to 60s. Clinton's support hovers around 30% among middle-aged respondents, before reaching 40% among the oldest respondents in our data. Edwards' support reaches it maximum with voters in their 50s, and he has little support among younger voters. Candidates other than

Obama, Clinton and Edwards also appear to fare poorly among younger voters. At the baseline wave, young people are 1.6 times more likely to support Obama than 40–60 year olds; and older voters are roughly twice as likely to support Clinton as are young people.

Income

What about Clinton's claims that "hard work" was a dimension on which she and Obama had differential levels of support among voters? We do not take Clinton's words literally; we parse her reference to "hard-working" Americans as a proxy for lower-income, blue-collar workers. We observe support for Obama generally increasing with household income among white voters. Figure 2 presents levels of support for Obama (as a proportion of respondents indicating support for either Obama or Clinton in the Democratic nomination contest across a collapsed set of

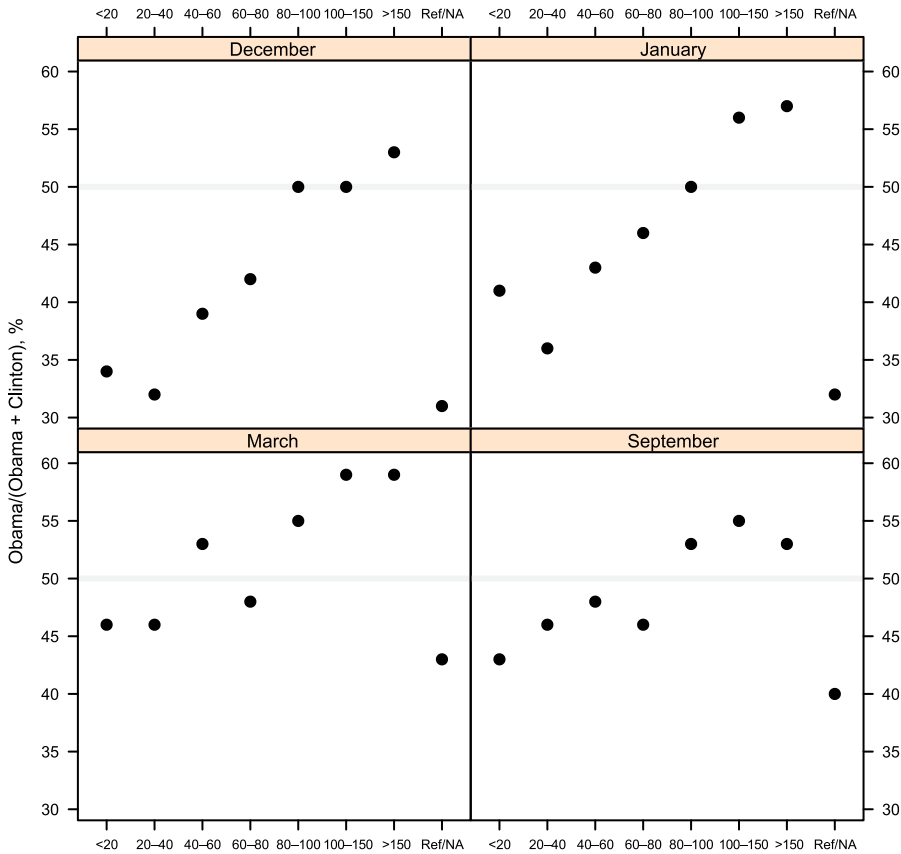

Figure 2. Family income (in thousands of dollars per year) and vote for Obama (white voters only).

income categories. We present the results for the four waves of our panel study fielded over the nominating campaign, with the results for December 2007 appearing in the top left panel.[8] Casual, visual inspection of the results suggests that Clinton led Obama among whites in households with incomes of less than $80,000 a year.

Looking across the four panels in Figure 2 we see that the intercept-shifts across the panel waves – showing the "across-the-board" boost in Obama's support indicative of his momentum – are pronounced and substantively important. With every passing wave (up to March), Obama gains roughly 5 points of vote share across all income levels. We will see this pattern repeatedly when we turn to the analysis of transitions.

A Role for Bill Clinton

We also consider evaluations of Bill Clinton as a factor shaping preferences over the Democratic candidates – akin to a within-party measure of partisan-type. We suspect that respondents who view President Clinton favorably vis-à-vis other modern presidents will transfer some of this adulation on to the other Clinton in the Democratic race. For some Democrats, a vote for Senator Clinton might be seen as a way to vote once more for President Clinton. We asked respondents (in the January and March waves of our survey) to rate Presidents Johnson, Nixon, Carter, Reagan, G.H.W. Bush and Clinton, by picking their top four from this set and putting them in rank order. We present these results in Table 3. The rankings are very stable over the waves and here we discuss measures from March. Fifty-four percent of respondents intending to vote in the Democratic primaries and caucuses rated President Clinton their top pick from this set of US presidents, with another 18% rating him second. Support for Hillary Clinton decreases monotonically with the rank assigned to Bill Clinton; among those rating Bill Clinton the best of the set of six presidents, Hillary Clinton garners 41% support, falling to just 11% among those who assign Bill Clinton rank 5 or 6.

Table 3. Democratic primary voting intentions (percentages), December wave, conditional on ranking of Bill Clinton

Bill Clinton rank	1	2	3	4	>4	All
Marginal	54	18	9	5	14	
Clinton	41	29	18	14	11	31
Edwards	14	16	19	16	13	15
Obama	23	28	25	25	24	24
Other	7	9	11	12	11	9
Not sure	15	18	26	33	42	21
Total	100	100	100	100	100	100

Note: Each respondent was asked to rank Presidents Johnson, Nixon, Carter, Reagan, G.H.W. Bush and Clinton. Unweighted $n = 7{,}471$. $\chi^2 = 726$, df = 16, $p < 0.01$.

Support for Edwards, Obama and other Democratic candidates is effectively constant over the rankings of Bill Clinton, but the proportion of respondents giving the "not sure" response rises steadily as the rank assigned to Clinton falls (from 15% to 42%). These results strongly suggest that evaluations of Bill Clinton were both an asset and a liability for Hillary Clinton – largely the former – but with a substantial proportion of would-be voters in Democratic primaries and caucuses harboring less-than-stellar views about Bill Clinton and apparently linking those views to their voting intentions.[9]

Attitudes about Race

Clinton pointed out that Obama's support among white Americans was weakening. But she prefaced her reference to "white Americans" with the phrase "hard-working Americans". We contend that Clinton's juxtaposition of the words "hard working" and "white" is not accidental; "hard working" does not literally modify "white", but is intended to be synonymous with "white". Clinton was engaging in some not-so-subtle cueing, offering legitimate "cover" for white voters motivated to dislike Obama out of racial animus. The phrase "hard working" made the appeal to race acceptable and more powerful because Clinton cloaked the appeal to prejudice in a statement about equality and work ethic.

In fact, there is perhaps no better recent exemplar of symbolic racism in American political rhetoric than these comments by Clinton. Twice during CCAP – once in March and again in September – we fielded the racial resentment battery (Kinder & Sanders, 1996). We scale responses to these items using a one-dimensional factor analysis,[10] assigning scores on the recovered dimension using regression scoring. The resulting scale is oriented such that higher scores denote higher levels of symbolic racism; we normalize the scale to have mean zero and unit variance.

Were white Democratic voters using attitudes about race in general (as opposed to Obama's race) as they made decisions about whether to vote for Obama or Clinton? Was Clinton right to try to prime this dimension during the Democratic contest? To answer these questions, we fit a local logistic regression to the two-candidate vote choice over changing levels of symbolic racism from the March wave of the CCAP survey. The March wave went into the field after Super and Tsunami Tuesdays, just after Reverend Wright became a household name, and after Obama's landmark speech on race in America. In many ways, this wave took place at the height of explicit racial cuing in this election.[11]

Simple, exploratory data analysis suggests that symbolic racism – as measured by the racial resentment scale – is strongly associated with preferences over the Democratic candidates. Figure 3 shows a series of local logistic regressions, illustrating how the proportions in each of the outcome categories vary as a (non-parametric) function of racial resentment; we restrict this analysis to white respondents. The results are unambiguous: support for Clinton is an increasing function of racial resentment, while support for Obama is a sharply decreasing function of racial resentment. Among the most racially liberal respondents intending to

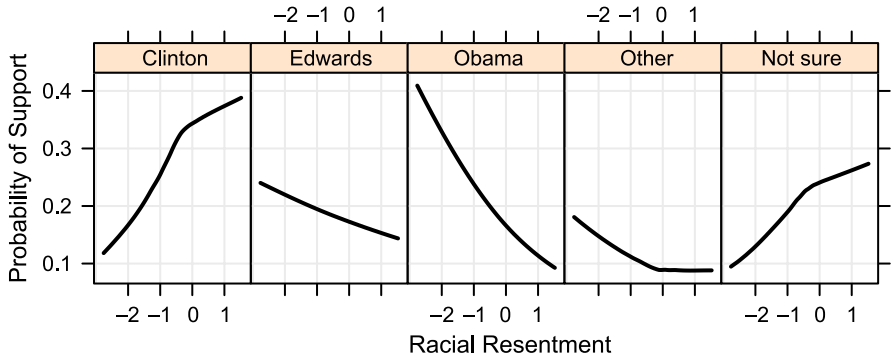

Figure 3. Preferences for Democratic candidates and racial resentment, December wave of CCAP, white respondents. Each panel shows the proportion of respondents preferring the indicated candidate as a function of racial resentment. Each function is fit using local linear logistic regression, with a bandwidth chosen so as to minimize AIC.

vote in the Democratic primaries and caucuses, Clinton wins around 12% support; for Obama the corresponding figure is about 40%. That is, racially liberal voters were 3.3 times more likely to vote for Obama than their racially conservative counterparts.

This position is reversed at the other end of the racial resentment distribution: among the most racially conservative respondents, Obama's support has fallen to around 10%, and Clinton's is approximately 40%. White voters with a high level of racial antipathy were four times more likely to vote for Clinton than those with low levels. Support for Edwards also falls with increasing levels of racial resentment, but in a far less pronounced way than for Obama, with Edwards only garnering 25% support among the most racially liberal respondents, and about 15% among racial conservatives intending to vote in the Democratic primaries and caucuses. The Edwards–Obama comparison suggests that Obama's race interacts with white voters' attitudes about race to produce dramatic effects.

This point cannot be made too subtly: white Americans voting in the Democratic nominating contests were driven to choice in these elections in large part by their general attitudes about race in America. Both Clinton and Obama could have benefited from the priming of these attitudes during the campaign. Perhaps for Obama being black was cue enough for those with extremely low levels of racial antipathy to rally to his side, as argued by Tesler and Sears (2010). But for Clinton, being white was probably not enough to cue those with high levels of antipathy – and she had the additional burden of being a woman, which may have been as effective a signal as Obama's race. To prime racial attitudes, Clinton may have felt as though she had to remind white Democrats who were disinclined to vote for Obama because he was black that they had a place among her supporters and in her campaign.

Issues

It is possible that even in an intra-party contest, issues sharply separate the candidates and their constituencies. In 2008, however, most of the differences on voters' issue positions were across-party, not within. Further, respondents' positions on issues show high levels of consistency over the waves of the panel. In our data the distribution of opinions on issues is almost completely invariant over candidate choice. Hence, we are not optimistic about the role of issues in predicting candidate preferences in this election. Nonetheless, we investigate the role of issues here since others in this volume argue that issue salience (Hillygus & Henderson, 2010) and economic retrospections (Johnston et al., 2010; Grose et al., 2010) are important predictors of voters' preferences.

We examine seven issues: whether the US should leave Iraq "now"; if taxes should be increased on those earning more than $200K; whether there should be a publicly funded health care option; whether abortion should be legal; if illegal immigrants should be allowed to become citizens; ideological self-placement; and retrospective evaluations of the nation's economy. Our approach is to investigate the role that issues play in predicting vote through a simple variance decomposition analysis. We regress each set of ordinal issue responses (separately for each issue) on candidate choice (entering the model as a series of mutually exclusive and exhaustive indicators for Clinton, Edwards, Obama, Other, and in December we include people who say they are not sure as a separate category). In Table 4, we report the goodness of fit (r^2 or variance explained) for these simple models run in

Table 4. Explained variation in selected issues by preferences over Democratic candidates, December 2007 and September 2008

	December	September
Iraq exit	0.02	0.01
Taxes on rich	0.02	0.01
Health care	0.01	0.01
Abortion	0.01	
Immigration	0.02	0.03
Economy retrospection	0.01	0.00
Ideological self-placement	0.01	0.01
Racial resentment	0.11	0.10
Ranking of Bill Clinton	0.09	0.06

Note: Cell entries show the proportion of variance in issue responses that is attributable to variation in respondents' preferences over the candidates (Clinton, Edwards, Obama, Other and Not sure, with the "Not sure" option dropped in the September wave). The remaining variance is within-candidate variation. The responses to each issue are a series of ordinal categories. See the text for details on the construction of the racial resentment measure (for this variable the relationship with candidate preference is assessed in March and September 2008). Abortion preferences were measured only in the December 2007 wave of the survey. Ratings of Bill Clinton were obtained in the January and March waves of our survey; we assess the relationship with candidate preference in those panel waves.

our December (2007) wave and then in the September (post-primary) wave. This approach – nothing more than a one-way analysis of variance – lets us assess how much of the variation in issue positions is associated with voters' preferences over the Democratic candidates. The remaining unexplained variation can be thought of as within-candidate variation as opposed to between-candidate variation.

Of the issues we examine, virtually *none* of the variation in responses, including retrospective evaluations of the economy, is accounted for by candidate choice. Respondents' preferences over the candidates account for 1% or 2% (on average) of the variation in positions. For the sake of comparison, in the last two rows of the table, we report the explained variation for two other variables that we think are important in this contest: racial resentment and rankings of Bill Clinton. Variation in candidate choice accounts for 11% and 9% of the variation in these measures, respectively, 10 times more than the between-candidate variation we observe for the issues presented in the top portion of the table. We conclude from this analysis that although statistically significant effects for issue positions on vote choice can be found, those effects are substantively unimpressive and much less important than the effects of other concepts we measure here.

Multivariate Analysis

We have shown that race, gender, age, income, and opinions of Bill Clinton are important determinants of vote choice in the initial stages of the primaries. The associations reported in the preceding pages are largely replicated when we employ multiple-variable methods. We assess the contributions of these determinants of December 2007 preferences over the Democratic candidates with multivariate statistical modeling. Since the outcome variable y_i is nominal, we use a multinomial logistic regression model. With the Hillary Clinton outcomes considered the "baseline" outcome, we model four log-odds ratios for the Edwards/Clinton, Obama/Clinton, Other/Clinton and Not sure/Clinton comparisons, employing an extensive set of predictors. In light of the discussion above, we include respondent characteristics such as race, gender, age (entering the multinomial model as a quadratic function), income, education and racial resentment. In addition, we include the respondent's ranking of Bill Clinton via a series of indicator variables for each recorded rank (1, 2, 3, 4, and lower than 4) and ideological self-placements. We also include an indicator variable for whether the respondent believed that the United States should leave Iraq "now", since it is one of the few issues on which the candidates themselves held different positions.

Maximum likelihood estimates for the multinomial logistic model appear in Table 5, along with standard errors.[12] The estimates largely confirm the results of the "variable-at-a-time" exploratory analyses reported above. Constraints of space prohibit a detailed discussion of all of the estimated coefficients. Respondent race, gender, age, household income, self-assessed ideology and ratings of Bill Clinton have large effects. The estimates of the effect of the timing of Iraq exit are statistically significant, but small in substantive terms.

Table 5. Multinomial logit analysis of voting intentions in Democratic primaries and caucuses, December 2007 wave

	Edwards		Obama		Other		Not sure	
	MLE	SE	MLE	SE	MLE	SE	MLE	SE
Intercept	–2.29	0.41	0.95	0.31	–0.64	0.45	–0.82	0.35
Black	–1.17	0.15	0.82	0.09	–1.18	0.19	0.23	0.11
Hispanic	–0.91	0.15	–0.48	0.12	–0.47	0.16	–0.65	0.13
Female	–0.58	0.08	–0.57	0.07	–1.38	0.10	–0.17	0.08
Age/100	6.65	1.60	–6.94	1.31	–1.43	1.81	–0.44	1.37
$(\text{Age}/100)^2$	–5.61	1.58	4.78	1.35	1.60	1.79	0.35	1.38
Income: 20K–40K	–0.21	0.16	0.14	0.14	–0.10	0.19	–0.19	0.13
Income: 40K–60K	0.14	0.16	0.50	0.14	0.21	0.20	0.11	0.14
Income: 60K–80K	0.18	0.17	0.27	0.15	0.11	0.21	–0.11	0.15
Income: 80K–100K	0.44	0.20	0.67	0.18	0.21	0.25	0.18	0.19
Income: 100K–150K	0.13	0.19	0.47	0.16	0.25	0.22	–0.22	0.18
Income: >150K	0.35	0.22	0.62	0.20	0.25	0.26	–0.33	0.24
Income: Refused/missing	0.09	0.15	0.11	0.13	–0.20	0.19	0.13	0.12
College Degree	0.05	0.09	0.14	0.08	0.19	0.11	0.02	0.09
Ideology: Liberal	–0.37	0.12	0.08	0.11	–0.52	0.15	0.02	0.14
Ideology: Moderate	–0.30	0.13	0.22	0.12	–0.31	0.15	0.14	0.13
Ideology: Conservative	–0.55	0.17	0.19	0.15	–0.43	0.20	0.02	0.17
Ideology: Not sure	–0.90	0.18	–0.63	0.17	–1.54	0.27	0.64	0.15
Leave Iraq now	0.10	0.08	–0.29	0.07	0.19	0.10	–0.40	0.08
Bill Clinton rated 2	0.58	0.10	0.63	0.09	0.67	0.13	0.55	0.10
Bill Clinton rated 3	1.38	0.15	1.19	0.14	1.55	0.17	1.41	0.14
Bill Clinton rated 4	1.60	0.21	1.73	0.20	2.08	0.24	1.96	0.18
Bill Clinton rated > 4	1.62	0.15	2.02	0.14	2.28	0.17	2.35	0.13
Racial resentment scale	–0.33	0.05	–0.64	0.04	–0.43	0.06	–0.24	0.04

Note: Base category is Clinton. Cell entries are maximum likelihood estimates and standard errors. Unweighted n = 7,257.

In the bottom row of Table 5 we report the parameter estimates for racial resentment. Even in the presence of the many covariates that appear in Table 5, racial resentment remains a big source of variation in preferences over the candidates. For ease of interpretation, we let racial resentment enter the multinomial model as a linear

predictor (with effects that are linear on the log-odds scale). Also recall that this variable is normalized to have mean zero and unit variance in the entire sample; among respondents intending to vote in the Democratic primaries and caucuses, racial resentment has mean –0.40 and ranges from a low of –2.5 to 1.5 (four units) and has an inter-quartile range (IQR) of about 1.5 units. The parameter estimates reported in Table 5 imply that movement over the IQR generates large change in the patterns of candidate support, consistent with the descriptive results presented in Figure 3. In the Obama/Clinton pairing, movement over the IQR of racial resentment produces about one unit of movement on the log-odds scale, roughly twice the effect size associated with gender and 120% the magnitude of the differences we observe between white and black respondents.[13] This 120% difference showcases why the other authors writing about race in this volume (Grose et al., 2010) come to a different conclusion than we do – the effects on vote choice are greater when the impact of "race" is measured through the interaction of attitudes about race with both Obama's and the respondent's race.

Higher levels of racial resentment are also consistently associated with large and statistically significant movements towards Hillary Clinton; these effects are especially marked in the Obama/Clinton pairing (logit coefficient of –0.64), but are not small in the Edwards/Clinton pairing (–0.33), the Other/Clinton pairing (–0.43) nor even in the Not sure/Clinton pairing (–0.24). This is another sign that Obama's race interacts with racial attitudes to amplify their effects.

Racial resentment may well measure more than racial prejudice per se, and this is why it is an important and statistically significant predictor of choices between "Other" Democratic candidates for president and Hillary Clinton; the fact that racial resentment works well in this context – discriminating between supporters of different white candidates for the Democratic nomination for president – may also say something about the centrality of race and policy matters related to race in American politics. As Tesler and Sears (2010) suggest, when Clinton became the alternative to Obama, her candidacy was "racialized" such that opinions about her as a candidate were linked to attitudes about race. Tesler and Sears do not claim that this link persists even when Obama is not directly relevant to the choice at hand, but these data are consistent with that conclusion.

Transitions in Voter Support over the Campaign

Having considered the determinants of preferences over the candidates in the baseline, December 2007 wave of our panel, we now consider a simple question: how much movement was there in voters' preferences over candidates for the Democratic nomination? There were at least eight serious contenders for the nomination in December 2007; as the field of contenders winnows we will necessarily observe transitions towards the surviving candidates. But what are these shifts? And are they consistent with our ideas about racialization and the slowing of Obama's momentum?

In the analysis below we use a series of cross-tabulations (transition tables) to compare voters' earlier intentions with their subsequent reports of how they voted in

Table 6. September 2008 vote reports (rows) conditional on December 2007 intentions (columns)

	December 2007					
	Clinton	Edwards	Obama	Other	Not sure	September Marginal
September 2008						
Clinton	82	29	7	26	35	41
Edwards	1	28	1	5	6	6
Obama	16	38	89	41	51	47
Other	1	5	3	28	7	5
Total	100	100	100	100	100	100
December Marginal	32	16	27	9	16	

Note: Unweighted n = 4,804. Cell entries are column percentages.

the Democratic primaries.[14] In these tables, we examine the transition from respondents' reported *intentions* to either another intention (if the respondent's state primary has not taken place yet) or a vote report (if their state primary was held between the waves bracketed by a particular transition table). Respondents living in states that held their primaries prior to a given wave are dropped from the analysis examining transitions from that wave to the next.

As we expected, there is a good deal of movement during the primary contests. When we examine the period from December 2007 to September 2008, we estimate that 42% of Democratic primary voters changed their minds at least once over the six months of Democratic primaries and caucuses.[15] In Tables 6 to 9 we detail the movement of those who stayed in the Democratic contest conditional on candidate preferences from one wave to the next. As a first look at the dynamics over the period, we examine the "long transition" from December 2007 intentions to September 2008 vote reports in Table 6. Clinton holds on to roughly 82% of her initial support, losing a stunning 16% to Obama. But, Obama retains 89% of his initial supporters, losing only 7% to Clinton.

Only 28% of Edwards' initial supporters cast ballots for him before he drops out of the race. Most Edwards voters transition to either Clinton or Obama. Obama picks up 38% of Edwards' supporters, while Clinton wins 29%. This pattern of Obama outperforming Clinton vis-à-vis the supporters of candidates leaving the race is repeated over the primary season. In fact, three processes are at work: (a) Clinton loses support to Obama over time; (b) he holds his support better than she does; and (c) people who are forced to make a second (or third) choice are more likely to choose Obama over Clinton. Of those who are not sure for whom they will vote in December, 51% ultimately report voting for Obama, compared to 35% for Clinton. Similarly, Obama wins by 15 points among respondents initially supporting a candidate other than one of the top three. Overall,

Obama picks up 20 points over the course of the nominating process while Clinton gains only 9 points.

The shorter transitions also tell us a lot about the dynamics of the Democratic nominating campaign. From December to January (see Table 7), both candidates pick up support, but Obama gains more than Clinton (6 points to 2 points, respectively). Among Edwards supporters, those supporting others, and undecideds, Obama does better than Clinton by anywhere from 2 to 6 points.

The January to March transition (Table 8) shows the most movement of the transitions we investigate here. Recall that this was a period in which many primaries

Table 7. January reports/intentions (rows) conditional on December intentions (columns)

	December					
	Clinton	Edwards	Obama	Other	Not sure	January Marginal
January						
Clinton	84	10	5	16	17	35
Edwards	3	69	2	25	12	16
Obama	6	12	87	22	16	30
Other	1	1	1	27	3	3
Not sure	7	8	6	10	52	16
Total	100	100	100	100	100	100
December Marginal	33	15	24	8	20	

Note: Unweighted n = 6,059. Cell entries are column percentages.

Table 8. March reports/intentions (rows) conditional on January intentions (columns)

	January					
	Clinton	Edwards	Obama	Other	Not sure	March Marginal
March						
Clinton	88	22	2	11	27	38
Edwards	1	26	0	9	3	5
Obama	9	44	96	32	44	49
Other	0	3	1	41	3	3
Not sure	2	5	1	6	23	5
Total	100	100	100	100	100	100
January Marginal	34	17	34	3	12	

Note: Unweighted n = 4,602. Cell entries are column percentages.

were held and in which many candidates left the race, the latter forcing preference changes for respondents who (a) live in states yet to vote and (b) were supporting a candidate exiting the race. In Table 8 we see movement toward Obama that could be called momentum. Obama's vote share increases by 15 points to just under 50%. Clinton gains only 4 points.

Respondents who preferred other candidates in January break solidly for Obama over Clinton (32% to 11%, a 21 point margin); respondents who reported being undecided January break for Obama by 17 points (44% to 27%). Edwards supporters break for Obama over Clinton 44–22, a 2–1 margin. And once again, Clinton is losing support to Obama. Just over 9% of her January supporters transition to Obama. On the other hand, Obama only loses 2% to her (and holds on to 96% of his supporters). By the end of our March wave, only 5% of respondents are undecided about their preferences over the remaining Democratic field.

It is in the transitions from March to September wave (Table 9) that the story changes a bit and we see evidence of the slowing of Obama's momentum. Among voters participating in relatively late Democratic primaries and caucuses (and hence still reporting a voting intention in the March wave), Clinton gains more support than Obama (3 points compared to no gain for Obama). This is the first transition in which we observe Clinton's increase in support outpacing Obama's. To reiterate, among respondents voting in the Democratic primaries held after mid-March, Obama does not gain vote share. Moreover, among this set of voters, Obama loses as much support to Clinton as she loses to him. Table 9 also demonstrates that the few remaining Edwards supporters break heavily for Clinton now –22% to 7%; those who remained unsure of their vote choice as late as March eventually report breaking for Clinton over Obama by a 17 point margin (50% to 33%). If Obama was riding a wave of momentum between January and March, the swell significantly diminished between March and September. Indeed, having experienced "Big Mo" early in the process, this latter stage seems best described as "Slow-Mo". What

Table 9. September vote reports (rows) conditional on March intentions (columns)

	March					
	Clinton	Edwards	Obama	Other	Not sure	September Marginal
September						
Clinton	91	22	6	10	50	43
Edwards	2	55	3		7	5
Obama	6	7	89	37	33	48
Other	2	15	3	52	11	4
Total	100	100	100	100	100	100
March Marginal	40	4	48	2	7	

Note: Unweighted n = 1,203. Cell entries are column percentages.

happened to Obama's momentum? We suspect that Clinton's focus on Obama's dwindling support among hard-working, white Americans tells much of the story. That is, as Obama's chances of becoming the nominee increase, the contest becomes more racialized – and two things occur, racial liberals move toward Obama and racial conservatives move away from him.

What Explains the Transitions?

Our analysis of vote intentions reported in the December 2007 wave highlighted the role of several key predictors such as respondent race, age, gender, income and racial resentment. We now consider the impact of these predictors in accounting for the transitions we described in the previous section, with particular attention on the role of attitudes about race.

We are interested in the decision to support either Obama ($y_i = 1$) or Clinton ($y_i = 0$); we will ignore voting for Edwards and other candidates, as well as respondents who do not report voting in the Democratic primaries. With this restriction, our analysis amounts to conventional logistic regression for a binary outcome, although we will estimate separate logistic regressions conditional on the preferences reported by a respondent in the December 2007 wave of our study. That is, we model the transition from one of five originating states J = {Obama, Clinton, Edwards, Other, Not sure} to two terminal states $y_i \in$ {Clinton, Obama}. We measure the binary vote choice y_i with the initial report of a vote actually cast (not an intention) in the Democratic primaries by respondent i. For most respondents (70%) voting in the Democratic contests this vote report is provided in the March wave of our survey, with 4% supplying a vote report in the January wave of our survey (e.g. respondents living in Iowa, New Hampshire, South Carolina, etc.), and 26% giving us an initial vote report in the September wave of our survey.[16]

We model these transitions from the five originating December states to the two binary terminal states via logistic regression, conditioning on the originating state. We employ many of the same covariates we used in the multinomial logistic regression analysis of initial December preferences, although we expect these covariates to work differently than in that analysis (since here we are predicting either staying with Obama or switching from some other candidates to Obama). In short, the analysis here is trying to ascertain how people "find their way" to where they wind up in the Democratic primaries (in the limited sense of voting for either Obama or Clinton), given where they start in December. The logistic regression models we use here have the form

$$\Pr(y_{it} = 1 \mid y_{i0} = j) = F[\alpha_{jt} + x_i\beta_j + g_{jt}(r_i) + h_j(\text{age}_i)] \quad (1)$$

where $y_i = 1$ if respondent i reports voting for Obama and $y_i = 0$ for a Clinton vote report; j indexes the set of five December vote intentions (y_{i0}), t indexes the set of panel waves in which respondents can provide a report of how they voted in the

Democratic primary (January, March, or September), $\boldsymbol{x}_i$ is a vector of covariates for respondent i and β_j is a vector of unknown parameters, g and h are functions of the respondent's racial resentment (r_i) and age, respectively, to be estimated from the data, and F: $\Re \rightarrow [0,1]$ is the logistic cumulative distribution function. The parameters α_{jt} are constant terms specific to each of the three waves in which respondents provide vote reports; we include an intercept in the model and so estimate α_{j2} and α_{j3} as offsets for March and September, relative to the January terms absorbed into the intercept.

Racial resentment and age enter the logistic regression model separately and additively, but non-parametrically.[17] Note in equation 1 that the g functions over racial resentment (r_i) vary over initial states j and time of voting report t; that is, we are interested in whether racial resentment plays a different role depending on the stage of the primary season and Obama's chances at becoming the nominee. We begin by estimating three g_{jt} functions for each initial state j (recalling that t indexes the January, March and September 2008 waves of our panel study) and test the restriction that a single g_j can be fit to the data for initial state j. In three out of five cases we fail to reject this restriction – for Clinton supporters, Edwards supporters, and those aligning with other candidates, the function mapping attitudes about race to the probability of switching to Obama is invariant to time (or Obama's chances of winning), save for an intercept shift. Only for the "Obama" and "Not sure" initial states do we reject this restriction. In other words, in these cases, the effects of attitudes about race vary over the months of the nominating process in more ways than just a changing intercept.

Maximum likelihood estimates of the parametric part of the transitions models appear in Table 10, accompanied by their estimated standard errors; Figures 4 and 5 show the fitted smooth, non-parametric functions over racial resentment and age, respectively. The models fit reasonably well, with the area under the ROC curve for each transition model reported in the lower portion of Table 10; these statistics range from 0.75 to 0.81, indicating acceptable fits to the data.

The estimates of the time-specific offsets, α_{jt}, appear in the second and third rows of Table 10 labeled "March Wave" and "September Wave"; these parameter estimates are offsets relative to the January wave. Conditional on a December preference for Obama and net of the other predictors in the model, there is no discernible pattern in support for Obama over Clinton over the three waves (the estimates of the α parameter in the Obama column are both indistinguishable from zero). However, conditional on a December preference for Clinton, we see a substantial increase in the probability of reporting a transition to Obama in March and September relative to January ($\hat{\alpha}$ = 1.52 and 1.92, respectively). That is, net of other predictors we find a quite large boost over time in Obama support (a) among respondents who initially state a preference for Clinton or are unsure as to whom they will support, but (b) this over-time boost consists of a December–January–March gradual boost in Obama support, with no further consolidation in Obama support evident among those respondents living in states with relatively late Democratic primaries and caucuses.

Table 10. Logistic regression analysis, Obama (1) vs Clinton (0) reported vote in Democratic primary and caucuses, conditional on December stated preference

	Obama (27%)		Clinton (36%)		Edwards (14%)		Other (8%)		Not sure (15%)	
December preference:	MLE	SE	MLE	SE	MLE	SE	MLE	SE	MLE	SE
Intercept	1.47	0.83	–3.73	0.63	0.51	1.11	0.33	1.64	–1.38	0.93
March wave	0.74	0.65	1.52	0.52	0.78	0.98	0.19	1.50	1.73	0.80
September wave	–0.14	0.69	1.92	0.53	0.67	0.99	0.21	1.52	1.50	0.81
Black	1.22	0.38	1.14	0.19	2.32	0.77	1.95	0.92	1.90	0.33
Hispanic	–1.22	0.38	–0.99	0.32	–1.06	0.42	–0.84	0.47	0.11	0.35
Female	–1.13	0.30	–0.27	0.17	–0.74	0.22	–1.04	0.34	–0.20	0.20
Income: 20K–40K	0.98	0.46	0.53	0.30	–0.57	0.46	0.05	0.80	–0.43	0.41
Income: 40K–60K	1.05	0.47	–0.28	0.33	–0.84	0.48	–0.24	0.77	–0.21	0.42
Income: 60K–80K	0.84	0.51	–0.08	0.34	–0.60	0.48	–0.01	0.81	–0.38	0.43
Income: 80K–100K	1.00	0.60	0.56	0.40	–0.65	0.52	0.29	0.86	–0.30	0.53
Income: 100K–150K	1.15	0.59	–0.74	0.42	–0.24	0.55	–0.47	0.80	–0.02	0.46
Income: >150K	1.59	0.77	–0.02	0.46	–1.02	0.58	–1.36	0.85	–0.26	0.64
Income: Refused/Missing	1.32	0.50	0.06	0.30	–0.94	0.45	–0.16	0.82	–0.48	0.38
College Degree	–0.01	0.30	0.09	0.19	0.35	0.27	0.45	0.32	0.01	0.23
Ideology: Liberal	0.83	0.42	0.03	0.26	0.11	0.32	0.29	0.41	0.08	0.33
Ideology: Moderate	–0.05	0.40	0.22	0.25	–0.42	0.34	–0.60	0.43	–0.15	0.35
Ideology: Conservative	–0.77	0.53	0.42	0.33	–0.51	0.52	–0.84	0.77	–0.48	0.47
Ideology: Not sure	1.12	1.06	0.43	0.34	–0.84	0.63			0.06	0.43
Leave Iraq Now	0.22	0.28	–0.18	0.16	0.01	0.23	1.13	0.33	0.18	0.20
Bill Clinton Rated 2	0.83	0.38	–0.71	0.27	0.22	0.29	–0.04	0.44	0.56	0.26
Bill Clinton Rated 3	1.30	0.71	–0.03	0.39	1.40	0.41	–0.99	0.57	0.95	0.38

Table 10. (Continued)

December preference:	Obama (27%)		Clinton (36%)		Edwards (14%)		Other (8%)		Not sure (15%)	
	MLE	SE	MLE	SE	MLE	SE	MLE	SE	MLE	SE
Bill Clinton Rated 4	0.34	0.64	1.20	0.58	0.98	0.64	1.71	0.95	0.73	0.46
Bill Clinton Rated > 4	1.32	0.55	0.74	0.37	1.70	0.48	2.27	0.74	0.87	0.34
Racial Resentment	See Figure 4									
Age	See Figure 5									
Area under ROC curve	0.76		0.75		0.81		0.78		0.76	
Unweighted *n*	1293		1694		664		360		704	
Marginal distribution of *y*, 0:1:	6:94		87:13		40:60		37:63		44:56	

Note: Non-parametric smooths (thin-plate splines) are fit for the continuous predictors racial resentment and age; see Figures 4 and 5.

Many of the respondent characteristics that predict initial preferences are also good predictors of transitions (or not transitioning). Net of the effects of other predictors in the model, black respondents are far less likely to transition away from Obama than white respondents, while Hispanics are just as likely to transition from Obama to Clinton. We see a similar set of results for respondents initially preferring Clinton, with black respondents considerably more likely to transition to Obama than white respondents ($\hat{\beta} = 1.14$), and Hispanic respondents less likely to switch to Obama ($\hat{\beta} = -0.99$). This pattern of black respondents switching to Obama is repeated for the other originating states (Edwards, Other, Not sure); the pattern of Hispanic respondents breaking disproportionately for Clinton (net of other factors) is also apparent for the Edwards and Other originating states.

The results in Table 10 indicate that women initially supporting candidates other than Clinton are more likely to eventually report voting for Clinton than Obama. Conditional on supporting Clinton in December, gender has a small and imprecisely estimated role in determining whether one winds up supporting Obama or Clinton. Gender is something that helps respondents get to supporting Clinton (with women considerably more likely to transition to the "Clinton" state than men), but it is not a factor in driving respondents from Clinton to Obama.

Family income is almost never a statistically significant predictor in the transition models reported in Table 10. Similarly, ideology barely makes any impact on transition probabilities, save for the case of the initial state being Obama, where we reject the restriction that the ideology coefficients are all zero ($p = 0.02$). Rankings of Bill Clinton carry some predictive power across all initial states, almost always with the effect of making transitions to Obama (or staying with Obama) more likely than a transition to Hillary Clinton as rankings of Bill Clinton get less favorable.

Educational attainment has no impact on transitions, net of other factors in the model; none of the five coefficients can be distinguished from zero. Believing that the US should leave Iraq immediately appears to have no impact on the probability of a transition from initial December state, save for the 8% of respondents initially supporting candidates other than Obama, Clinton or Edwards. In this case, the belief that the US should leave Iraq immediately is associated with $\exp(1.13) \approx 3$-fold increase in the odds of supporting Obama over Clinton, but this is the only case in which we find beliefs over Iraq policy having any significant impact the evolution of support for the Democratic candidates.

Recall that we fit the racial resentment and age covariates via non-parametric smoothing splines. Figure 4 presents the fitted curves for racial resentment conditional on the five initial states, holding the other predictors fixed at known values.[18] For the case of respondents initially supporting Obama in December, there is no discernible relationship between the probability of reporting voting for Obama and racial resentment in the January and March waves of our panel ($p = 0.63$ and $p = 0.79$, respectively). For voters in states holding relatively late primaries and caucuses (reporting their votes in the September wave of our panel) we see some transitions away from Obama among respondents holding conservative racial attitudes, with Obama "stay" probabilities dropping to about 0.7 at the high end of the racial resentment scale.

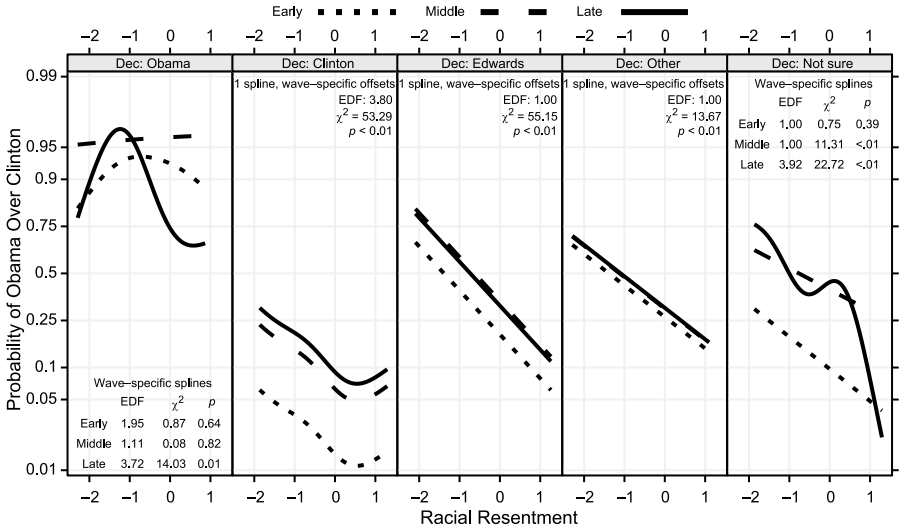

Figure 4. Probability of reporting voting for Obama over Clinton, conditional on December 2007 intentions and racial resentment. For the Clinton, Edwards and Other panels we fit one (time-invariant) thin-plate regression spline $g_j(r_i)$; nonetheless, three lines are shown in each panel, one for each of three waves in which respondents were reporting primary/caucus choices (January, March and September), formed by shifting g_j on the log-odds scale by the wave-specific intercept shifts $\hat{\alpha}_{jt}$. For the Obama and "Not sure" panels there are actually three, unique, wave-specific splines fit to the data. The predicted transition probabilities are generated assuming a white male respondent, ideologically moderate, less than college educational attainment, median age, 40–60K of family income, who rates Bill Clinton a "1" and who does not report that the United States should leave Iraq "immediately" (for the categorical predictors these are the modal outcomes among voters in the Democratic primaries and caucuses). The summaries superimposed on the panels list the equivalent degrees of freedom (EDF) consumed by each fitted function and a χ^2 (likelihood ratio) test of the contribution of each fitted function to the model fit. Note the log-odds scaling of the probabilities on the vertical axis.

The second panel in Figure 4 shows the fitted $g_j(r_i)$ function for respondents initially supporting Clinton. Racial resentment generates substantial variation in the probability of a transition to Obama (EDF = 3.40, $p < 0.01$), with racial liberals substantially more likely to transition than other respondents. For respondents initially supporting Edwards, one unit of movement on the racial resentment scale (a standard deviation) tends to generate a 0.2 change in the fitted probability of voting for Obama; these effects are quite large relative to the other sources of variation in transition probabilities. Effects of a similar magnitude are apparent for respondents initially supporting "Other" candidates. For respondents initially unsure as to whom they would support, racial resentment plays no statistically significant role in driving support to either Obama or Clinton in the earliest primaries and caucuses. By March, we see that not only is Obama doing much better among this particular group of voters (the large vertical offset between the January and March curves in

the right-hand panel of Figure 4), but that racial resentment is sorting respondents into supporting Obama or Clinton almost as powerfully as it does for Edwards and "Other" supporters. For late voting respondents (reporting their vote to us in September) who were initially unsure of their preference, we see a vast difference between racial liberals – breaking for Obama over Clinton 75–25 – and racial conservatives, almost none of whom are predicted to vote for Obama.

The combination of Obama's losses in the March–September period and the increased relevance of attitudes about race for those who are initially unsure who to support highlight the slowing of Obama's momentum in this period. Among those initially supporting Obama, but voting after 21 March, even those with average levels of racial resentment are much less likely (roughly 20 points) to stay with Obama than are otherwise similar respondents who voted before the March wave. The same is true for those with the highest levels of racial animus who were unsure which candidate they preferred in December; these voters are roughly 20 points less likely to choose Obama if they vote after 21 March than if they vote before this date. Obama's momentum stalled – and attitudes about race explain a good bit of the slowdown.

Finally, we also use graphical techniques to examine the (non-parametric) contribution of respondent age to the transition probabilities. Conditional on initially being for Obama in December, there is no statistically meaningful variation in the probability of staying with Obama as a function of age ($p = 0.62$), net of other factors in the model. But age appears to play an important role in transitions to Obama from other candidates. We observe a tendency for younger voters to be considerably more likely to transition from Clinton to Obama than older voters ($p < 0.01$). This is not particularly consequential in January, when few Clinton supporters are transitioning to Obama, but much more consequential in March and September when – at least for the hypothetical scenario considered in Figure 5 – we estimate defection rates of almost 25% for the youngest Clinton supporters. Obama does best among Edwards supporters in their 30s, particularly in the middle and later stages of the primary season, when the transition rates to Obama reach into the 70% range for this set of voters. Older Edwards voters – say, those over 50 years of age – are considerably less likely to favor Obama over Clinton, and in the scenario contemplated in Figure 5 actually favor Clinton over Obama.

Younger respondents initially unsure as to whom they would support for the Democratic nomination transition to Obama at slightly high rates than older, initially unsure respondents (we reject the null of no effect in this case with $p < 0.07$); for the scenario contemplated in Figure 5, younger voters transition to Obama over Clinton by a 3 to 1 ratio, with this transition rate falling to 50% at around age 40 and above.

Conclusion

The record amounts of money the candidates raised and spent in the Democratic nominating process in 2008 seems to have been used to remind voters of their fundamental identities. The movement toward Obama, and slightly away from him

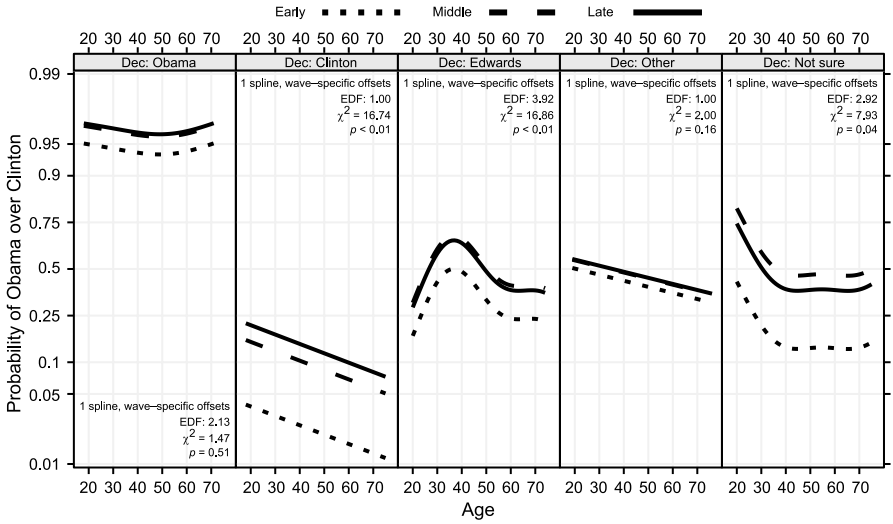

Figure 5. Probability of reporting voting for Obama over Clinton, conditional on December 2007 intentions and age. One (time-invariant) thin-plate regression spline h_j (age$_i$) is fit per initial state j. Nonetheless, three lines are shown in each panel, one for each of three waves in which respondents were reporting primary/caucus choices (January, March and September), formed by shifting h_j on the log-odds scale by the wave-specific intercept shifts $\hat{\alpha}_{jt}$. The predicted transition probabilities are generated assuming a white male respondent, ideologically moderate, less than college educational attainment, with the median level of racial resentment, 40-60K of family income, who rates Bill Clinton a "1" and who does not report that the United States should leave Iraq "immediately" (for the categorical predictors these are the modal outcomes among voters in the Democratic primaries and caucuses). The summaries superimposed on the panels list the equivalent degrees of freedom (EDF) consumed by each fitted function and a χ^2 (likelihood ratio) test of the contribution of each fitted function to the model fit. Note the log-odds scaling of the probabilities on the vertical axis.

at the end, is best explained by political fundamentals. Age, gender, race, and attitudes about race explain not only people's initial preferences in December of 2007, but also their movements among the different candidates throughout the process. Of all of these predictors, attitudes about race play the greatest role in both initial preferences and transitions.

Some measure of the distinctively racial component of "racial resentment" is apparent in the fact that the logit coefficient on racial resentment in the Obama/Clinton pairing is twice as large as that obtained in the Edwards/Clinton pairing, and 1.5 times as large as the racial resentment coefficients estimated in the Other/Clinton pairing. Put another way, the effects of attitudes about race are twice as large in the Clinton/Obama contest as the effects of gender and more than twice as large as the effects of respondent's race. Obama's race, the respondent's race, and people's attitudes about race in America interact even in the Democratic primary to powerfully structure preferences over who should be the party's nominee.

Over time, these preferences shift in predictable ways. There are broad intercept shifts toward Obama, particularly among people who initially supported Clinton or were not sure who they liked in December. As with initial choices, blacks are more likely to move to Obama and Hispanics are more likely to move to Clinton. Further, blacks are much less likely to move away from Obama (relative to whites) if they initially preferred him and Hispanics in this state are equally likely to move to Clinton (as whites).

Women who initially supported candidates other than Clinton are considerably more likely to end up voting for Clinton over Obama in the end. But men who initially supported Clinton are not likely to move away from her, all else being equal. Age also plays an interesting role in the transitions. Older people who preferred Clinton initially are much less likely to switch to Obama relative to younger people who supported Clinton. Conditional on supporting Obama initially, age played no role in predicting movements away from him, all else being equal.

By far the strongest predictors of transitions to and away from Obama are attitudes about race. Increasing levels of racial antipathy lead to lower rates of transition to Obama, across all waves of the nominating process for voters and irrespective of a respondents' initial preference. Not until late in the process do Obama voters switch away from his candidacy with increasing levels of racial resentment, thus slowing his momentum.

We stress that we estimate large effects for racial resentment even in the presence of a rich set of other covariates, including numerous relevant demographic and attitudinal variables. With the possible exception of ratings about Bill Clinton (on which there is more uniformity among Democratic primary voters than for racial resentment), it is difficult to point to an attitudinal variable that makes a greater contribution to variation in support for the Democratic presidential candidates or transitions among them. For example, among demographic variables we see large effects associated with respondent race, gender, age, and income, and away from the Obama/Clinton pairing these variables are usually more important than racial resentment. But in the choice that was the most politically consequential in the Democratic primary – the Obama/Clinton pairing for white voters – racial resentment is unmatched in its predictive power and substantive implications.

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Notes

1. The pledged delegate count remained very close right until the last contest, making Clinton's late victories important. Further uncertainty arose from the controversy over the status of Florida and Michigan delegates; these states held their primaries earlier than allowed by party rules and both primaries were won by Clinton. On the other hand, the superdelegate count appeared to favor Obama and at an increasing rate throughout the process. These unknowns left enough uncertainty about what the delegate count actually was to keep Clinton alive throughout.
2. A sampling of the literature includes Aldrich (1980); Wattier (1983); Bartels (1988); Geer (1989); Abramowitz (1989); Norrander (1986); Brady and Johnston (1987); Abramson et al. (1992); Johnston et al. (1992); Mutz (1995, 1997); Vavreck et al. (2002); Stone et al. (1992); Morton and Williams (2001); Polsby et al. (2007); Fowler et al. (2003); Mayer (2000).
3. Symbolic racism taps components of racial prejudice in domains such as the values and norms of racial groups (e.g. the stereotype that a particular racial group violates norms of hard work or self reliance) or support for public policies designed to redress racial inequality (e.g. affirmative action).
4. The symbolic racism measures ask respondents to agree or disagree with the following: (1) Generations of slavery and discrimination have created conditions that make it difficult for African Americans to work their way out of the lower class. (2) Many other minority groups have overcome prejudice and worked their way up. African Americans should do the same without any special favors. (3) Over the past few years, African Americans have gotten less than they deserve. (4) It's really a matter of some people not trying hard enough; if African Americans would only try harder they could be just as well off as whites. Respondents could answer: agree strongly, agree somewhat, neither agree nor disagree, disagree somewhat, disagree strongly.
5. The Common Content portion of CCAP is the first 10 minutes of every respondent's survey. The total length of the survey is 20 minutes. After the common part of the survey respondents are routed to any one of the many team studies, which make up the second half of the survey. For details on the mechanics of how this works, see Vavreck and Rivers (2008).
6. From here on, when we say "primary" we mean "primary or caucus".
7. The remaining candidates include Chris Dodd, Joe Biden, Mike Gravel, Dennis Kucinich, and Bill Richardson.
8. Note that the last category on the *x*-axis is for those who refuse to report their income.
9. Of course, we are alert to the possibility that evaluations of Bill Clinton – measured in March – are endogenous to voting intentions, particularly since Bill Clinton was playing such an active and vocal role in his wife's campaign, including some widely-reported criticism of Obama's experience and electability. On balance, we think our elicitation of evaluations of Bill Clinton – asking respondents to rank a set of recent US presidents – puts some cognitive and affective distance between evaluations of Clinton and preferences over Democratic candidates.
10. We ignore the discrete, ordinal nature of the five point responses. The matrix of polychoric correlations for the five indicators (computed using pairwise deletion of a small amount of missing data) has an eigen-structure that suggests a one dimensional factor analysis model is sufficient for these data; using responses from whites in the September wave of CCAP, the eigenvalues of the correlation matrix are 2.7, 0.6, 0.3 and 0.3.
11. Local logistic regression is a version of loess tailored for the case of a binary dependent variable *y*; it is a semi-parametric (or largely "model free") estimate of the proportion of cases with $y = 1$ in a local

neighborhood of a target point x_0, formed by running a weighted logistic regression of y on x with weights that reach a maximum at the target point x_0, but then taper away to zero (see Wood, 2003).

12. We fit the multinomial logistic model using the multinom function in the R package nnet (Venables & Ripley, 2002).
13. That is, $1.5 \times -0.64 = -0.96$ which is about 120% the magnitude of the 0.82 logit coefficient on the black indicator variable in the Obama/Clinton pairing.
14. The form of our vote intention and vote report questions is worth explaining. Respondents were administered items tailored to their state of residence. This included asking respondents in primary states about "primaries" and respondents in caucus states about "caucuses". But importantly, each respondent was fielded a vote intention or report depending on whether his or her state primary was yet to occur or had already taken place. In this way, the CCAP primary vote questions are closely tied to the political reality experienced by each respondent; we did not rely on a vague or unrealistic item asking respondents to give a hypothetical vote intention as "if their state primary were held today". Quite the contrary. If a respondent lived in New Hampshire, he or she got the vote intention question in December, but a vote report question in all the subsequent waves. Someone in Pennsylvania got a vote intention question all the way through the March wave.
15. This includes respondents who say they are "not sure" about which candidate to support in the initial wave of interviews.
16. A total of 8,425 respondents (an unweighted count) indicate that they intend to vote in the Democratic contests and provide some indication as to their preferred candidate in December (including "Not sure"). After accounting for those who dropped out, voted for someone other than Obama or Clinton, or were missing on covariates, we are left with 4,718 cases for analysis (again, this is an unweighted count). We lose another three respondents supporting other Democratic candidates who state they were "Not sure" as to their political ideology, due to over-fitting when trying to include these respondents in the logistic regression analysis (these three respondents all report voting for Obama).
17. We restrict the g and h functions to lie in the class of thin-plate regression splines (e.g. Wood, 2003: 157–160) and estimate the resulting functions so as to minimize a penalized goodness-of-fit criteria (with the penalty term protecting against the over-fitting the data). The resulting model – a semi-parametric logistic regression model, or a generalized additive model – is implemented using the R package mgcv (Wood, 2008). In the case of a binary dependent variable, the fitting criterion is the Unbiased Risk Estimator, equivalent to Mallows' (1973) C_p model selection criterion (see Wood, 2006, 2008).
18. For the Obama and "Not sure" initial states, we reject the null hypotheses that the non-parametric functions $g_{jt}(r_i)$ mapping racial resentment r_i to transition probabilities are constant over the three time periods, and we show the three functions for each of these initial states. For each of the other three initial states, we fail to reject H_0: $g_{jt} = g_j$, $t = 1, 2, 3$, and so a single non-parametric function $g_j(r_i)$ is fit, with the three separate functions separated by intercept shifts (the wave-specific offset terms α_{jt}).

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APPENDIX

Sample

Step 1: Defining the Target Sample

YouGov/Polimetrix constructed a sampling frame for CCAP from the 2005–2007 American Community Study (ACS), including data on age, race, gender, education, marital status, number of children under 18, family income, employment status, citizenship, state, and metropolitan area. The frame was constructed by stratified sampling from the full 2005–2007 ACS sample with selection within strata by weighted sampling with replacements (using the person weights on the public use file). Data on reported 2008 voter registration and turnout from the November 2008 Current Population Survey Supplement was matched to this frame using a weighted Euclidean distance metric. Data on religion, church attendance, born again or evangelical status, news interest, party identification and ideology was matched from the 2007 Pew Religious Life Survey. The target sample was selected by stratifying on age, race, gender, education, and state (with battleground states double sampled) using simple random sampling within strata, excluding all non-registered persons.

Step 2: Matching to the Target to Generate the "Pool"

With the target defined, respondents were chosen from the YouGov/Polimetrix Polling-Point Panel and the MyPoints panel using a five-way cross-classification

(gender × race (3 categories) × battleground state). At each wave, additional cases were added to deficient cells to achieve approximately 30,000 interviews. All respondents who had completed any prior wave were re-invited to subsequent waves. The final set of completed interviews (numbering approximately 48,000, after quality controls were applied) was then matched to the target frame, using a weighted Euclidean distances metric, scaled by standard deviation of the target variable (the Mahalanobis distance) with penalty matrices for categorical variables. This set of respondents is called the "pool" of completed interviews from which the final matched sample will be drawn.

The variables in the distance function are the percentage waves completed out of possible completed waves, state, region, metropolitan statistical area, marital status, born again/evangelical status, income, employment, age, race (white, black, Hispanic, other), years of education, interest in news, gender, 5-point party identification, 3-point ideology, the interaction of news interest and ideology, turnout, and "don't know" response on ideology. For unordered variables, matrices of distances were used, as indicated above.

Step 3: Constructing the Matched Sample from the Pool

With 48,000 people in the pool, there are, on average, between two and three possible matches from the pool for each of the 20,000 respondents in the target sample. For example, if a 40 year-old Republican woman with a college degree is drawn for the target sample (off the ACS), Polimetrix uses nearest neighbor matching (using the variables above) to find the closest match to this woman in the pool of completed interviews. This reduces the pool from 48,000 to 20,000. The resulting sample is called the "matched sample".

Even though care has been taken to hit the targets before the final sample is constructed, the sample may still miss on some combinations of characteristics. In other words, no match is guaranteed to be perfect. Because of this, the final step in sample construction is to generate a set of post-stratification weights.

Step 4: Weighting the Matched Sample

The matched cases were weighted to the sampling frame using propensity scores. The matched cases and the frame were combined and a logistic regression was estimated for inclusion in the frame. The propensity score function included age, years of education, gender, black and Hispanic race indicators, news interest, turnout, saying "don't know" on ideology, party identification, and interactions of age and gender, and turnout and gender. Weights were constructed by quantiling the propensity scores into 10 cells. The final weights were then post-stratified by battleground status, gender, and race. Weights were not trimmed. The largest weight is 10.26. The final weights were normalized such that their sum equals the sample size.

Waves and Response Rates

The baseline wave of CCAP was fielded on 17 December 2007. Polimetrix has a steady stream of panelists taking surveys every day, and as people hit the survey servers, they are sent to the survey that needs their "match" the most. The CCAP baseline wave was completed by 43,739 panelists. These people make up the pool of respondents from which the final matched sample will be drawn. Subsequent waves were fielded in 2008 on 24 January, 21 March, 17 September, 22 October, and 5 November. Each wave was in the field for approximately 2 weeks (see the CCAP Codebook for exact dates). The within-panel response rate off the baseline pool for each wave is roughly 66% of the initial set of completed baseline interviews. Fresh cross was added in every wave except September. The re-interview rate of fresh cross was less than in the initial invitation group – about 46%. Of ultimate interest, however, is the final matched and weighted sample. Not all of the completed interviews (the pool) are used in the final matched sample – the point of sample matching is to choose the closest match for each target given a set of possible matches. The final matched sample contains 15,375 completed interviews in the baseline wave. The within-panel response rate (off of completed baseline interviews) for the matched sample is 82%, 88%, 84%, 76%, and 87% in each respective wave. The current release (2.0) of CCAP data contains a total of 20,000 respondents, 8,839 of whom were interviewed in each of the six waves of the project. Table A1 presents comparisons of CCAP weighted marginals on demographics to the Census and other probability-based sampling datasets (ANES 2008 Internet panel, ANES face to face time series, NAES 2004 telephone, and ANES 2004 time series).

Table A1. Weighted marginals across six recent election studies

	Census (2004 ACS)	NAES 2004	NES 2004	CCES 2006	Census (2008 CPS Reg. Voters Only)	CCAP 2008 V2.0	NES 2008 (FTF)	NES 2008 (Internet Panel)
Target Population	General	General	General	General	Registered Voters	Registered Voters	General (but these results for RV only)	General (but these results for RV only)
Education								
Less than HS	**16.1**	7.3	14.4	3.9	**8.0**	10.4	11.8	8.7
HS	**29.5**	25.6	31.6	42.3	**28.6**	27.3	31.4	31.3
Some college through 4 year degree	**44.5**	51.7	44.1	45.1	**52.5**	52.6	47.2	50.2
Advanced degree	**9.9**	14.3	9.9	8.7	**10.9**	9.8	9.6	9.7
Age								
18–24	**12.3**	7.7	11.5	8.6	**10.3**	11.1	11.0	10.5
25–34	**18.1**	16.1	17.2	17.0	**15.5**	15.9	18.2	14.2
35–44	**20.5**	20.3	19.4	25.0	**17.4**	19.7	15.9	19.8
45–54	**19.3**	21.6	19.2	30.8	**20.6**	21.9	21.0	21.3
55–64	**13.6**	16.3	15.8	10.6	**16.9**	14.6	15.3	15.9
65+	**16.1**	17.9	16.9	8.1	**19.2**	16.8	17.6	18.3
Race								
White (non– Hispanic)	**67.3**	78.2	70.9	71.1	**76.0**	76.5	74.3	75.6
Black	**12.8**	8.0	14.8	10.9	**11.7**	11.6	12.0	11.5
Hispanic	**14.1**	5.0	6.3	12.2	**7.9**	7.4	9.1	7.7
Other	**5.8**	8.8	8.0	5.8	**4.4**	4.5	4.6	5.2

(*Continues*)

Table A1. (Continued)

Target Population	Census (2004 ACS)	NAES 2004	NES 2004	CCES 2006	Census (2008 CPS Reg. Voters Only)	CCAP 2008 V2.0	NES 2008 (FTF)	NES 2008 (Internet Panel)
	General	General	General	General	Registered Voters	Registered Voters	General (but these results for RV only)	General (but these results for RV only)
Gender								
Male	**48.9**	44.7	49.5	48.2	**46.6**	46.9	45.2	47.2
Female	**51.1**	55.3	50.5	51.8	**53.4**	53.1	54.8	52.8

Note: Marginals are weighted using weights provided by survey vendor or principal investigators. Data compiled by Seth Hill, Michael Tesler, and Delia Bailey. Bold text indicates census targets.