

# Does it Help or Hurt Kerry if Nader is on the Ballot? \*

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## Abstract

### Does it Help or Hurt Kerry if Nader is on the Ballot?

We report results of a pair of experiments designed to test whether Ralph Nader's presence on the ballot in 2004 makes some voters more, not less, likely to vote for John Kerry. Intuitive spatial considerations suggest Nader should hurt Kerry, because most voters placed Nader left of Kerry and Kerry left of Bush. But a psychological theory based on the tradeoff contrast principle and the extremeness aversion principle suggests that, precisely because Nader is left of Kerry, Nader's presence on the ballot may help Kerry. We use estimates of treatment effects supported by matching and a simple spatial model, binary and trinary logit models and GEV choice models to assess the effects Nader's presence may have. One experiment is conducted using a sample of 566 university students, and the other experiment uses a national sample of 1,048 adults obtained through the NSF-funded Time-sharing Experiments for the Social Sciences project. We use matching methodology both to estimate average treatment effects and to construct matched samples in which to estimate the choice models. The student data support the psychological theory: when Nader is in the choice set, moderate voters see themselves as closer to Kerry and are somewhat more likely to vote for Kerry. Such effects do not occur for other voters. In the national sample the conditions for the theory to apply do not hold: most respondents do not place Nader left of Kerry. Nader hurts Kerry among liberals, but hurts Bush among conservatives. The reason for that is not captured by the intuitive spatial story, but reflects the fact that when Nader is in the choice set all voters' choices are more sharply aligned with their spatial placements of the candidates.

## Introduction

Did it matter in the 2004 U.S. presidential election whether Ralph Nader was on the ballot? Democrats clearly thought so: they exerted substantial effort that kept Nader off the ballot in key states such as Ohio and Pennsylvania. Democrats' actions were of course prompted by the fact that the number of votes that went to Nader instead of to the major party in 2000 candidates was sufficient to decide the outcome (Magee 2001; Hillygus 2003), particularly in Florida (e.g. Toobin 2001, 275). Ross Perot's 1992 run spawned a literature that examined the combined effect of voters choosing Perot instead of a major party candidate and of voters turning out who would not have voted otherwise (Alvarez and Nagler 1995; Koch 1998; McCann, Rapoport, and Stone 1999; Lacy and Burden 1999). Nader's run in 2000 did not appreciably affect voter turnout, and with or without Nader turnout would have been high in 2004. But was his presence on the ballot again sufficient to change the outcome?

Many expect that Nader, being perceived as a leftist candidate, would take more votes away from the Democrat, John Kerry, than from the Republican, George W. Bush. In preelection polling conducted during 2004 such an effect is surprisingly difficult to identify with any reliability, because of the way pollsters handled the Nader-absent counterfactual. Most preelection polls asked vote intention questions in one of three classes of formats. One class was to ask either an open "who would you vote for?" question or a question that included Nader among a list of specified choices. In some cases the only assessment of the distribution of the vote without Nader then came from tabulating the two-party vote, but another class of formats used a follow up question that asked something like "what if Nader were not a choice?" A third class of formats asked first for a choice between Bush and Kerry then followed up with a question along the lines of "what if Nader were added?" The problem with these approaches is that they all depend on the poll respondent's effectively imagining the counterfactual. Such an introspective method is not a trustworthy way to assess the effect. Such a setup does not match a reality in which each voter either

will or will not have Nader in his choice set as presented on the ballot on election day.

Notwithstanding such difficulties, a survey of the preelection polls presents a mixed pattern. For instance, early in 2004 two polls were conducted in close temporal proximity by the Pew Research Center. One was in the field February 24–29, 2004, and asked registered voters how they would vote in a choice between Bush and Kerry. Bush received 44 percent, Kerry 48 percent and other or don't know 8 percent (Pew Research Center 2004a). Another Pew poll was in the field in mid-March, asking registered voters how they would choose among Bush, Kerry and Nader. Here Bush received 42 percent, Kerry 49 percent, Nader 4 percent and other or don't know 5 percent (Pew Research Center 2004b). The difference between the polls may suggest that at that time Nader's candidacy was hurting Bush, but of course there are numerous questions in the way of such a conclusion. USA Today/CNN/Gallup Polls conducted during the same period tend to point in the opposite direction. During March 5–7, registered voters asked to choose between Bush and Kerry gave Bush 45 percent, Kerry 50 percent and neither or other 5 percent. When prompted to say how they would choose if Nader were running as an independent candidate, the split was Bush 45 percent, Kerry 47 percent, Nader 5 percent and neither or other 3 percent (USA Today 2004). Evidently Nader's effect on voters was not as simple as the intuitive spatial analysis may suggest.

One body of theory that suggests predictions opposed to the intuitive spatial story comes from experiments intended to explore what happens when a third alternative is added to a binary choice set (Simonson and Tversky 1992; Tversky and Simonson 1993). This theory suggests that if Nader is left of Kerry, Nader's presence on the ballot will make some voters *more*, not less, likely to vote for Kerry. The theory features two principles. The "tradeoff contrast" principle suggests that voters for whom neither Bush nor Kerry is a dominant choice will view Kerry more favorably when Nader is present. This is because Nader on the left is worse than Bush or Kerry in terms of electability while more similar to Kerry than to Bush in terms of policy. Tradeoff contrast can explain the "asymmetric

dominance” effect (Huber, Payne, and Puto 1982; Simonson 1989). The second principle, “extremeness aversion,” suggests that including Nader will make Kerry more attractive since Nader on the left makes Kerry the intermediate option. This principle generalizes Simonson’s (1989) “compromise effect.” Experiments by Levine (2003) found compromise effects for political candidates.

We use a simple spatial model to describe the effects Nader’s presence may have. Suppose voter  $i$  has policy ideal point  $x_i$ , places Bush at  $x_{Bi}$  and Kerry at  $x_{Ki}$ . Ignoring abstention, a binary logit model for the probability of choosing Bush can be written by defining the observed utility from choosing Bush as

$$u_{Bi} = a_0 + a_1|x_i - x_{Bi}| + a_2|x_i - x_{Ki}| ,$$

where  $a_1 < 0$  and  $a_2 > 0$ . Normalize the observed utility from Kerry to be  $u_{Ki} = 0$ . Using  $E_i = 1 + \exp(u_{Bi})$ , the probability of a vote for Bush is  $p_{Bi} = \exp(u_{Bi})/E_i$  and for Kerry,  $p_{Ki} = 1 - p_{Bi}$ .

Now introduce Nader. Voter  $i$  places Bush at  $y_{Bi}$ , Kerry at  $y_{Ki}$  and Nader at  $y_{Ni}$ . Again ignoring abstention, a trinary logit model for the probabilities of choosing each of the three candidates can be written by defining the observed utilities from choosing Bush as

$$u_{Bi} = b_0 + b_1|x_i - y_{Bi}| + b_2|x_i - y_{Ki}| ,$$

where  $b_1 < 0$  and  $b_2 > 0$ , and from choosing Nader as

$$u_{Ni} = c_0 + c_1|x_i - y_{Bi}| + c_2|x_i - y_{Ki}| + c_3|x_i - y_{Ni}| .$$

Again normalize  $u_{Ki} = 0$ . Using  $F_i = 1 + \exp(u_{Bi}) + \exp(u_{Ni})$ , the probability of a vote for Bush is  $p_{Bi} = \exp(u_{Bi})/F_i$ , for Kerry,  $p_{Ki} = 1/F_i$  and for Nader,  $p_{Ni} = \exp(u_{Ni})/F_i$ .

In accordance with the tradeoff context and extremism aversion principles there are

three ways in the trinary logit model that the odds of voting for Kerry rather than Bush may increase when Nader is present. First, Kerry may be seen as closer to the voter's ideal point while the distance from Bush remains unchanged, i.e.,  $|x_i - x_{Ki}| > |x_i - y_{Ki}|$  while  $|x_i - x_{Bi}| = |x_i - y_{Bi}|$ . Second, the baseline preference for Bush instead of Kerry may decline, i.e.,  $a_0 > b_0$ . Third, the sensitivity to distance from Kerry may decrease while the sensitivity to distance from Bush remains the same, i.e.,  $a_2 > b_2$  while  $a_1 = b_1$ .

Somewhat more complicated is the possibility that the trinary choice is best described by a GEV model (McFadden 1981; Maddala 1983), with the Kerry and Nader choices related by residual similarity. In this case, using  $J_{KNi} = 1 + \exp(u_{Ni})$  and  $H_i = J_{KNi}^{1-\sigma} + \exp(u_{Bi})$ , the probability of a vote for Bush is  $p_{Bi} = \exp(u_{Bi})/H_i$ , for Kerry is  $p_{Ki} = J_{KNi}^{-\sigma}/H_i$  and for Nader is  $p_{Ni} = \exp(u_{Ni})J_{KNi}^{-\sigma}/H_i$ . If  $\sigma = 0$ , then the model reduces to the trinary logit model. If  $\sigma = 1$ , the GEV model becomes a hierarchical elimination by aspects (EBA) model (Tversky 1972). If  $\sigma > 0$ , the odds of a vote for Kerry rather than Bush are  $\exp(-u_{Bi})/J_{KNi}^{\sigma}$  and not simply  $\exp(-u_{Bi})$ , so beyond the conditions  $a_0 > b_0$ ,  $a_2 > b_2$  and  $|x_i - x_{Ki}| > |x_i - y_{Ki}|$  the outcome depends on  $u_{Ni}$ .<sup>1</sup>

Suppose Kerry is believed to be left of Bush, i.e.,  $x_{Ki} < x_{Bi}$  and  $y_{Ki} < y_{Bi}$ . Voters with  $x_i < x_{Ki}$  or  $x_i > x_{Bi}$  do not face as much of a tradeoff in evaluating the two candidates as do voters whose ideal points lie between the two candidates. The tradeoff contrast principle suggests that the gain to Kerry from adding Nader to the choice set on the left should primarily affect these centrist voters. Voters who choose the midpoint of a scale used to measure  $x_i$  may face even greater tradeoffs because their midpoint choice may indicate they are expressing nonattitudes and not evaluating the candidates in terms of policies at all.

The two principles do not make predictions for the consequences of adding Nader to the choice set if Nader is not believed to be left of Kerry. But if Nader is believed to be right of Bush, then the theory predicts votes for Bush will increase and Bush will be placed further

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<sup>1</sup>In a GEV model with the Bush and Kerry choices related by residual similarity, i.e.,  $J_{BK_i} = \exp(u_{Bi}) + 1$ ,  $G_i = J_{BK_i}^{1-\sigma} + \exp(u_{Ni})$ ,  $p_{Bi} = \exp(u_{Bi})J_{BK_i}^{-\sigma}/G_i$ ,  $p_{Ki} = J_{BK_i}^{-\sigma}/G_i$  and  $p_{Ni} = \exp(u_{Ni})/G_i$ , the highlighted conditions for an increase in the odds of a vote for Kerry, given Nader's presence, are the same as in the trinary logit model.

to the left when Nader is added.

We conducted two experiments to test the psychological theory and assess the difference between Nader being on and Nader being off the ballot. The first experiment was conducted using a set of university students early in May of 2004, and the second was conducted using a national sample of adults ten days before the fall election. The basic design is to present each respondent with one of two basic forms of a vote intention query. In what we consider the control condition, respondents are asked to choose between Bush and Kerry. In the treatment condition they are asked to choose among Bush, Kerry and Nader. That is the experimental manipulation: two candidate choices or three. We also ask respondents to place themselves and each of the candidates on a seven-point scale ranging from “extremely liberal” to “extremely conservative.” We use those placements to assess how spatial placements relate to vote choices.

## **Student Population Experiment**

The first experiment with a university student population gave modest support to the psychological theory. We fielded this experiment during May 8–15, 2004, with a diverse sample of 586 university students. Students were recruited to participate in a range of venues, including undergraduate political science and economics course review sessions, in introductory Arabic and political science courses, prior to a political science course exam, following exams in a chemistry course and a large sociology course, and at a social event for sociology graduate students and their partners. Respondents were presented with a questionnaire on paper and asked to fill it out and return it. All the questionnaires were formatted with items on three pages according the following scheme. (1) “If the election for U.S. President were held today, and the candidates were George W. Bush and John Kerry, which of these candidates would you vote for?” (new page) (2) “On a scale from 1 to 7, where 1 is extremely liberal and 7 is extremely conservative, where would you place George W. Bush?” (repeat for John Kerry, then new page) (3) “Have you decided who you will

vote for in the coming election?” (4) “How closely have you been following the presidential campaign?” (5) “When it comes to politics, do you usually think of yourself as extremely liberal, liberal, slightly liberal, moderate or middle of the road, slightly conservative, conservative or extremely conservative?” We systematically rotated the ordering of the candidates’ names in the initial vote choice and in the ideological placement items to approximate randomized presentation. When Nader was added to the choice set by modifying question 1, an item using the format of question 2 was also added to place Nader on the ideology scale. See Appendix 1 for a representation of the instrument. We obtained 566 completed surveys.

The manipulation in this experiment has two aspects. The set of candidates for choice varies, but also the set of candidates to be placed on the ideology scale varies. This dual stimulus reflects limitations of the self-administered, paper format. We could not control the order in which a respondent completed the items, so we wanted to be sure that in the two-candidate condition no mention of Nader occurred anywhere in the questionnaire.

Table 1 shows that the respondents candidate placements’ mostly satisfy the conditions for the two psychological principles to apply to Kerry, in that most respondents placed Nader left of Kerry. Table 2 shows that Nader received just more than 5 percent of the votes in the treatment condition, mostly but not solely from students who placed themselves on the left.

\*\*\* Tables 1 and 2 about here \*\*\*

We use Abadie and Imbens’s (2004) matching estimators for the Rubin (1978) causal model, as implemented by Sekhon (2004), to estimate average treatment effects for the candidate placement and vote choice variables. The covariates include the responses to the items asking whether the respondent had decided for whom to vote and how closely the respondent had been following the presidential campaign. The format in this experiment makes all the variables post-treatment, but we treat the self-placements and the covariates as predetermined. The covariates are correlated with treatment while the self placements

are not. The estimated average effect of the treatment for the treated (ATT) in Table 3 is produced by direct matching on the covariates, and the average treatment effect (ATE) estimates are produced using an estimated propensity score, with and without a caliper.<sup>2</sup> All three estimates give the same results. There is a significant increase (+.2) in Kerry’s placement, a small and insignificant decrease (−.03) in Bush’s placement, and a tiny and insignificant effect on intentions to vote for Bush. The candidate placement effects are shifts toward the midpoint of the scale: Kerry’s mean placement among the control respondents is 3.0, and Bush’s is 5.8.

\*\*\* Table 3 about here \*\*\*

In line with the theory, Table 4 shows that the significant increase in Kerry’s placement is confined to respondents with self placements in the middle part of the scale ( $\text{self} \in \{3, 4, 5\}$ ). There is still no effect on intended vote for Bush. An increase in votes for Bush from the treatment does occur among respondents placing themselves at the conservative extreme of the scale ( $\text{self} \in \{6, 7\}$ ). Theory does not predict this effect.

\*\*\* Table 4 about here \*\*\*

Table 5 reports estimates of a binary logit model for the control respondents and a trinary logit model<sup>3</sup> for the treated respondents. The two samples are matched on the covariates using estimated propensity scores and weights appropriate for estimating ATE effects. None of the coefficients in  $u_{Bi}$  differ significantly between the control and treated groups. Table 6 shows that there are also no significant differences if the models are estimated for the subset of respondents with  $\text{self} \in \{3, 5\}$ , but there is a structural difference among respondents who placed themselves at the midpoint of the scale ( $\text{self} = 4$ ). For the  $\text{self} = 4$  respondents the appropriate three-category model is the hierarchical EBA model that groups Kerry and Nader, and for neither control nor treated respondents is the coefficient for distance from Kerry significant in  $u_{Bi}$ . For these

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<sup>2</sup>Matching (with replacement) and standard error estimation is done using the method developed by Abadie and Imbens (2004), as implemented by Sekhon (2004).

<sup>3</sup>Estimating the two GEV models does not reject the trinary logit specification.

respondents, the expressed vote choice seems to be primarily a referendum on Bush then secondarily a question of agreeing or not with Nader.

\*\*\* Tables 5 and 6 about here \*\*\*

The theoretically predicted reduction in distance from Kerry, i.e.,  $|x_i - x_{Ki}| > |x_i - y_{Ki}|$ , occurs only for respondents with  $\text{self} = 5$ . For those respondents the ATE estimate is  $-.40$  (SE .16). For no other subset of respondents is there a significant treatment effect on distance from Kerry. Treatment effects on distance from Bush are never significant.

If for the  $\text{self} = 5$  respondents the distance from Kerry shrinks while the choice structure remains unchanged, then the probability of a vote for Bush should decline when Nader is in the choice set. The proportion of  $\text{self} = 5$  respondents voting for Bush does decline, but the standard error is too large for the decline to be significant (ATE=  $-.11$ , SE .10).

## National Population Experiment

The experiment with a national sample of adults gives more complicated results. This experiment was conducted via Time-sharing Experiments for the Social Sciences (TESS) using a Knowledge Networks internet sample. The field dates were October 22–26, 2004, with 1,048 completed surveys out of 1,648 fielded.<sup>4</sup> The survey instrument for this experiment was patterned after the one used with the student population. Assignment to the three-candidate (treatment) or the two-candidate (control) conditions was random, and the name ordering of the candidates in the questions was also randomly assigned. The Knowledge Networks format permitted us to prevent respondents from going back to change earlier answers after they had seen later questions. So in this experiment the responses to questions about following the presidential campaign, self-placement on the ideology scale and having decided for whom to vote are all strictly predetermined, and it was possible to ask all respondents to place Nader on the ideology scale without priming the control condition respondents by mentioning Nader's name. See Appendix 2 for a

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<sup>4</sup>Election day was November 2, 2004.

representation of the instrument.

Table 7 shows that in the national sample near election day the respondents' candidate placements' mostly do not satisfy the conditions for the two psychological principles to apply to Kerry. Only among liberals and extreme liberals did as many as half of the respondents place Nader left of Kerry. Indeed, among conservatives more than half the respondents placed Nader right of Kerry. Among extreme liberals, slightly liberal respondents, moderates and slightly conservative respondents more than 15 percent of respondents even placed Nader right of Bush.

\*\*\* Table 7 about here \*\*\*

A related consequence is that the votes for Nader are not concentrated among liberals. Nader received 3.9 percent of the votes in the treatment condition, and Table 8 shows that those votes are distributed among liberals and slightly liberal respondents in about the same way as they are among conservatives and slightly conservative respondents.<sup>5</sup>

\*\*\* Table 8 about here \*\*\*

We again use matching estimators to estimate average treatment effects for the candidate placement and vote choice variables. In addition to the items asking whether the respondent had decided for whom to vote and how closely the respondent had been following the presidential campaign, the covariates now include an indicator for which name order had been used with the respondent and a list of personal attributes for each respondent.<sup>6</sup> We also include a variable to indicate whether the respondent lives in a state where Nader was on the ballot in the 2004 election. The ATE estimates in Tables 9 and 10 are produced by direct matching on the covariates.<sup>7</sup> The self-placement categories for extreme liberals and liberals and for extreme conservatives and conservatives are combined

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<sup>5</sup>In both experimental conditions, all respondents answered the vote choice question.

<sup>6</sup>The personal attributes we included among the matching factors are party identification, geographic region, age category, dual income status, education, ethnicity, gender, head of household status, type of housing, income category, marital status, metropolitan area status, home ownership versus rental status and employment status. These variables are made available as part of the archival information Knowledge Networks provides about each respondent.

<sup>7</sup>Matching (with replacement) and standard error estimation is again done using the software implemented in Sekhon (2004).

in Table 9 because of the small numbers occurring in the extreme categories.

\*\*\* Tables 9 and 10 about here \*\*\*

Because Nader's ideological position so frequently does not correspond to the preconditions for the psychological theory, we should not say that the ATE estimates are surprising, but nonetheless they are striking. There are no significant average treatment effects among extreme liberals and liberals, but significant effects do occur among extreme conservatives and conservatives. In the latter group, including Nader in the choice set increases the vote for Kerry by 11 percent and causes Kerry to be placed on average one-half position further to the right. There is also a tendency for Bush to be placed somewhat further to the left when Nader is in the choice set, although this effect is of borderline significance. Table 10 shows that among slightly liberal respondents including Nader significantly increases the vote for Bush (by 13 percent), even while none of the candidate positions significantly changes. Among moderates there are no significant average treatment effects. Among slightly conservative respondents there is no significant ATE on the vote choice, but Bush and Nader are placed significantly further to the right when Nader is included in the choice set, while Kerry is placed to a marginally significant degree further to the left.

The changes in the distribution of Bush's margin of votes over Kerry all relate to a common pattern of changes in the structure of the vote choices when Nader is included in the choice set. In these data the frequency of votes for Nader is too small to allow the trinary choice models to be estimated with any precision,<sup>8</sup> so we are restricted to comparisons of the coefficients for a binary choice model based on a utility from choosing Bush defined by

$$u_{Bi} = a_0 + a_1|x_i - x_{Bi}| + a_2|x_i - x_{Ki}| + a_3|x_i - x_{Ni}|,$$

where  $x_{Ni}$  denotes Nader's placement. Table 11 shows that in almost every case where the

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<sup>8</sup>The Hessian is flat or singular for the coefficients in  $u_{Ni}$ .

binary model can be estimated for both the treatment and control groups, the coefficients for the spatial distance variables are of greater magnitude when Nader is included in the choice set than when Nader is excluded. The exceptions to this pattern are the coefficient for the distance from Bush among slightly liberal respondents and the coefficient for the distance from Nader among extreme conservatives and conservatives. In general, then, including Nader in the choice set sharpens the alignment between vote choices and spatial distances. This pattern of sharper alignments also occurs for the slightly conservative group, where the binary model cannot be estimated because the vote choices are quasiperfectly separated. The separation is induced by the increased polarization of the candidate placements that occur in this group when Nader is included.

\*\*\* Table 11 about here \*\*\*

The binary model suggests that Kerry's loss of votes among slightly liberal respondents when Nader is in the choice set results from a striking change in the focus of their evaluations in response to Nader's inclusion. When Nader is excluded, slightly liberal respondents are casting a vote that is substantially a negative referendum on Bush. The coefficient on the distance from Bush ( $\hat{a}_1 = -1.29$ ) dwarfs the coefficient on the distance from Kerry ( $\hat{a}_2 = .36$ ). But when Nader is included, the Kerry distance coefficient rises dramatically ( $\hat{a}_2 = 1.20$ ) and the Bush distance coefficient is slightly smaller ( $\hat{a}_1 = -.80$ ). With Nader included, slightly liberal respondents seem on average to be treating the vote choice as a truly comparative decision. Unfortunately for Kerry, when they compare him to Bush in a more balanced way, some of the slightly liberal respondents make a different decision.

## Discussion

The effects of Nader being on the ballot are indeed complicated. The consequences of his inclusion in 2004 are nowhere near as straightforward as the intuitive spatial story would suggest. Early in 2004, at least among the students in our experiment, a version of the

spatial story holds to some extent, but only among slightly liberal respondents, moderates and slightly conservative respondents. Most respondents see Nader to be left of Kerry, but only among the relative centrists is Nader's spatial position related to the vote choice. Indeed, for those respondents the EBA choice structure means that Nader's spatial position is not related to Bush's vote share at all. Instead, Kerry and Nader are treated as a kind of package, accepted or rejected together as an alternative to Bush. Someone who accepts the package then uses her spatial proximity to Nader to decide whether to support Kerry. The tradeoff contrast principle seems to apply to these centrist respondents: when Nader is included, they view Kerry as more centrist than they do otherwise. There is no support for the extremeness aversion prediction.

By the time of the general election, Nader's inclusion has effects that the intuitive spatial story does not capture at all. The fact that Nader is no longer seen as left of Kerry (nor right of Bush) by most respondents means that the two psychological principles also no longer apply. What Nader's inclusion seems mostly to do is to induce respondents to choose in a way that brings their votes into closer alignment with the spatial positions they attribute to the candidates. It is important to remember that those spatial positions are not predetermined, so it is as likely that respondents are shifting their reports of the positions in order to provide a stronger rationale for their votes as that they are changing their votes in order to match their ideological commitments. Indeed, among the slightly conservative respondents the pattern of shifting positions occurs to a significant extent. Whether we wish to credit the changes in choice structures we observe to changing votes or changing positions, one conclusion about the consequences of Nader being on the ballot is clear: Nader polarized.

## Appendix 1: Student Experiment Instrument

Have you decided who you will vote for in the coming election?

How closely have you been following the presidential campaign?

When it comes to politics, do you usually think of yourself as extremely liberal, liberal, slightly liberal, moderate or middle of the road, slightly conservative, conservative or extremely conservative.

PAGE 2 TAKE 1

{2 versions}

If the elections for U.S. President were held today, and the candidates were George W. Bush and John Kerry, which of these candidates would you vote for?  
[ROTATE NAMES]

PAGE 2 TAKE 2

{6 versions}

If the elections for U.S. President were held today, and the candidates were George W. Bush, John Kerry and Ralph Nader, which of these candidates would you vote for? [ROTATE NAMES]

PAGE 3 TAKE 1

{2 versions} [ROTATE NAMES]

On a scale from 1 to 7, where 1 is extremely liberal and 7 is extremely conservative, where would you place John Kerry?

On a scale from 1 to 7, where 1 is extremely liberal and 7 is extremely conservative, where would you place George W. Bush?

PAGE 3 TAKE 2

{6 versions} [ROTATE NAMES]

On a scale from 1 to 7, where 1 is extremely liberal and 7 is extremely conservative, where would you place John Kerry?

On a scale from 1 to 7, where 1 is extremely liberal and 7 is extremely conservative, where would you place George W. Bush?

On a scale from 1 to 7, where 1 is extremely liberal and 7 is extremely conservative, where would you place Ralph Nader?

## Appendix 2: National Experiment Instrument

[Respondents should NOT be able either to see future questions before they respond to the current one, or to change previous answers after they see new questions.]

Q1. How closely have you been following the presidential campaign?

Q2. When it comes to politics, do you usually think of yourself as Extremely liberal, Liberal, Slightly liberal, Moderate or middle of the road, Slightly conservative, Conservative, Extremely conservative.

Q3. Have you decided who you will vote for in the coming election?

[Insert noback here.]

[RANDOMLY ASSIGN ONE QUARTER of respondents to 4A1, ONE QUARTER to 4A2, ONE QUARTER to 4B1, and ONE QUARTER to 4B2.]

Q4A1. If the election for U.S. President were held today, and the candidates were George W. Bush and John Kerry, which of these candidates would you vote for? [Randomize order of responses 1-2 in condition A1.]

Q4A2. If the election for U.S. President were held today, and the candidates were John Kerry and George W. Bush, which of these candidates would you vote for? [Randomize order of responses 1-2 in condition A2.]

Q4B1. If the election for U.S. President were held today, and the candidates were George W. Bush, John Kerry and Ralph Nader, which of these candidates would you vote for? [Randomize order of responses 1-2-3 in condition B1.]

Q4B2. If the election for U.S. President were held today, and the candidates were John Kerry, George W. Bush and Ralph Nader, which of these candidates would you vote for? [Randomize order of responses 1-2-3 in condition B2.]

[Insert noback here.]

[Randomize order of Q5 and Q6.]

Q5. On a scale from 1 to 7, where 1 is extremely liberal and 7 is extremely conservative, where would you place George W. Bush?

Q6. On a scale from 1 to 7, where 1 is extremely liberal and 7 is extremely conservative, where would you place John Kerry?

[Insert noback here.]

Q7. On a scale from 1 to 7, where 1 is extremely liberal and 7 is extremely conservative, where would you place Ralph Nader?

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Table 1: Nader Placement Relative to Kerry and Bush by Self Placement, Student Experiment

	self placement						
	1	2	3	4	5	6	7
Nader < Kerry	1.0	.81	.79	.82	.77	.69	.50
Nader > Kerry	0.0	.14	.12	.06	.13	.10	0.0
Nader < Bush	1.0	.97	.93	.94	.98	.97	1.0
Nader > Bush	0.0	.01	.04	0.0	.02	0.0	0.0

Note: Proportion placing Nader left (right) of Kerry (Bush) in each self-placement category.

Table 2: Vote Distribution by Self Placement, Student Experiment

	self placement						
Treatment	1	2	3	4	5	6	7
Kerry	9	69	66	27	34	3	0
Bush	0	2	4	6	29	28	2
Nader	1	2	2	4	7	0	0
Control							
Kerry	12	75	73	30	16	6	1
Bush	0	2	3	11	25	31	1

Note: Number of votes for each candidate in each self-placement category.

Table 3: Average Treatment Effects, Student Experiment

Outcome	ATT <sup>a</sup>		ATE <sup>b</sup>		ATE <sup>c</sup>	
	Effect	SE	Effect	SE	Effect	SE
Kerry placement	.21	.08	.23	.08	.23	.08
Bush placement	-.03	.07	-.03	.07	-.03	.07
Vote for Bush	-.008	.030	-.001	.029	-.006	.029
Original <i>n</i>	278		564		564	
Matched <i>n</i> (wgt)	278		564		538	
Matched <i>n</i> (unwt)	3,693		10,992		10,908	

Note: Treatment is being presented with a three-candidate ballot. Control is being presented with a two-candidate ballot. <sup>a</sup> Direct matching. <sup>b</sup> Matching estimated propensity score. <sup>c</sup> Matching estimated propensity score with 0.01 standard deviation caliper.

Table 4: Average Treatment Effects by Self Placement, Student Experiment

Outcome	self ∈ {1, 2}		self ∈ {3, 4, 5}		self ∈ {6, 7}	
	Effect <sup>a</sup>	SE	Effect <sup>a</sup>	SE	Effect <sup>a</sup>	SE
Kerry placement	.09	.14	.27	.09	.37	.26
Bush placement	-.03	.12	-.07	.09	.20	.22
Vote for Bush	.004	.024	-.040	.043	.171	.081
Original <i>n</i>	169		323		72	
Matched <i>n</i> (wgt)	169		323		72	
Matched <i>n</i> (unwt)	3,482		3,406		471	

Note: Treatment is being presented with a three-candidate ballot. Control is being presented with a two-candidate ballot. <sup>a</sup> ATE, matching estimated propensity score.

Table 5: Vote Choice Structures by Candidate Options, Student Experiment

	two candidates <sup>a</sup>		three candidates <sup>b</sup>			
	Bush utility		Bush utility		Nader utility	
	Coeff.	SE	Coeff.	SE	Coeff.	SE
Intercept	-.85	.08	-.37	.43	-.90	.78
Kerry Distance	.81	.03	.89	.19	.24	.30
Bush Distance	-.86	.03	-1.19	.18	-.56	.21
Nader Distance					-.35	.27

Note: ATE samples, matching estimated propensity score. Original and matched weighted  $n$ : 557. Matched  $n$ , unweighted: 7,292. <sup>a</sup> Binary logit. <sup>b</sup> Trinomial logit.

Table 6: Choice Structures by Candidate Options and Self Placement, Student Experiment

		two candidates <sup>a</sup>		three candidates <sup>b</sup>			
		Bush utility		Bush utility		Nader utility	
		Coeff.	SE	Coeff.	SE	Coeff.	SE
Self $\in \{3, 5\}$	Intercept	-1.40	.20	-1.02	.53	-2.29	.94
	Kerry Distance	1.17	.08	.92	.24	.51	.30
	Bush Distance	-.98	.08	-.96	.21	-.17	.25
	Nader Distance					-.03	.25
Self = 4	Intercept	-.36	.33	.63	.79	2.20	1.85
	Kerry Distance	.13	.13	.08	.45	-.42	.60
	Bush Distance	-.53	.16	-1.45	.45	-.26	.58
	Nader Distance					-2.08	.76

Note: ATE samples, matching estimated propensity score. <sup>a</sup> Binary logit. <sup>b</sup> Self  $\in \{3, 5\}$ : trinomial logit; original and matched weighted  $n$ , 245; matched unweighted  $n$ , 2,676. Self = 4: hierarchical EBA (Kerry-Nader similar); original and matched weighted  $n$ , 74; matched unweighted  $n$ , 505.

Table 7: Nader Placement Relative to Kerry and Bush by Self Placement, National Experiment

	self placement						
	1	2	3	4	5	6	7
Nader < Kerry	.50	.55	.46	.36	.30	.13	.11
Nader > Kerry	.38	.32	.41	.38	.52	.63	.69
Nader < Bush	.69	.87	.76	.58	.74	.87	.88
Nader > Bush	.19	.07	.15	.20	.17	.08	.06

Note: Proportion placing Nader left (right) of Kerry (Bush) in each self-placement category.

Table 8: Vote Distribution by Self Placement, National Experiment

	self placement						
Treatment	1	2	3	4	5	6	7
Kerry	6	44	36	114	15	14	3
Bush	2	7	14	75	31	74	13
Nader	0	2	2	9	3	2	0
Control							
Kerry	13	61	60	103	26	7	3
Bush	3	4	8	76	46	97	16

Note: Number of votes for each candidate in each self-placement category.

Table 9: Average Treatment Effects by Self Placement, National Experiment

Outcome	self $\in \{1, 2\}$		self $\in \{6, 7\}$	
	Effect <sup>a</sup>	SE	Effect <sup>a</sup>	SE
Vote for Bush	.07	.05	-.11	.05
Kerry placement	.15	.23	.54	.21
Bush placement	-.08	.22	-.31	.18
Nader placement	.20	.29	-.04	.22
$n$ (unweighted)	140		227	
treated $n$ (unwt)	59		104	
Matched $n$ (unwt)	9,558		25,584	

Note: Treatment is being presented with a three-candidate ballot. Control is being presented with a two-candidate ballot. <sup>a</sup> TESS data; ATE, matched samples.

Table 10: Average Treatment Effects by Self Placement, National Experiment

Outcome	self = 3		self = 4		self = 5	
	Effect <sup>a</sup>	SE	Effect <sup>a</sup>	SE	Effect <sup>a</sup>	SE
Vote for Bush	.13	.07	-.03	.05	.03	.10
Kerry placement	-.03	.22	-.13	.16	-.53	.32
Bush placement	-.25	.28	-.10	.17	.56	.28
Nader placement	.15	.35	-.14	.18	.69	.33
<i>n</i> (unweighted)	118		368		118	
treated <i>n</i> (unwt)	50		189		46	
Matched <i>n</i> (unwt)	6,800		67,662		6,624	

Note: Treatment is being presented with a three-candidate ballot. Control is being presented with a two-candidate ballot. <sup>a</sup> TESS data; ATE, matched samples.

Table 11: Choice Structures by Candidate Options and Self Placement, National Experiment

		Treated <sup>a</sup>		Control <sup>a</sup>	
		Coeff.	SE	Coeff.	SE
Self ∈ {1, 2}	Intercept	1.04	.12	-.60	.12
	Kerry Distance	.66	.03	.06	.03
	Bush Distance	-1.22	.03	-.58	.02
	Nader Distance	.26	.02	.06	.03
Self = 3	Intercept	-.12	.12	.23	.26
	Kerry Distance	1.20	.04	.36	.07
	Bush Distance	-.80	.03	-1.29	.07
	Nader Distance	-.47	.04	-.06	.05
Self = 4	Intercept	-.42	.02	.02	.02
	Kerry Distance	1.16	.01	.85	.01
	Bush Distance	-1.35	.01	-.76	.01
	Nader Distance	-.28	.01	-.19	.01
Self = 5 <sup>b</sup>	Intercept			-.97	.08
	Kerry Distance			.97	.03
	Bush Distance			-.06	.03
	Nader Distance			-.25	.02
Self ∈ {6, 7}	Intercept	-2.71	.08	-1.16	.12
	Kerry Distance	1.49	.02	.53	.02
	Bush Distance	-.81	.03	-.24	.03
	Nader Distance	-.08	.02	.58	.02

Note: TESS data; samples matched for estimating ATE. <sup>a</sup> Binary logit for probability of voting for Bush instead of Kerry. <sup>b</sup> Treated group estimates are meaningless due to quasiperfect separation in the data, hence omitted.