

Caught in the Draft:

Vietnam Draft Lottery Status and Political Attitudes

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In 1969, the first Vietnam draft lottery assigned numbers to birth dates, determining which young men would be called to fight in Vietnam. We exploit this natural experiment to examine how draft vulnerability influenced opinions about the Vietnam War, party identification, political ideology, and attitudes toward salient political figures and issues of the day. Data analyzed come from the Jennings-Niemi Panel Study of Political Socialization, which surveyed high school seniors from the Class of 1965 both before and after the national draft lottery was instituted. Males holding low lottery numbers became more anti-war, more liberal, and more Democratic in their voting compared to those whose high numbers protected them from the draft. Trace effects are found even when the respondents were re-interviewed in the 1990s. Draft number effects typically exceed those for pre-adult party identification and are not mediated by military service or the acquisition of higher education.

## I. Introduction

Experimentation is often employed in the study of political attitude change. Typically, the experiment is conducted in a survey or laboratory setting. Researchers randomly assign respondents/subjects to either the experimental group receiving the stimulus or to the control group that does not. Post-treatment attitudes of the two groups are then compared to estimate the short-term effect of the treatment.

Rarely do we find field experiments or natural experiments outside the lab for the study of attitude change (Dunning 2008). The present study offers an exception. The natural experiment is the imposition of the draft lottery of 1969 during the Vietnam War. In December 1969, men of eligible age were randomly assigned draft numbers based on their birthday. Numbers were assigned from 1 to 366, with those with low numbers called first for induction. Thus, young men could find themselves facing the likelihood of being sent to Vietnam, escape altogether, or some ambiguous status in-between.

Vietnam draft lottery status has been used as an instrument before, most famously as an instrument for military service as it affects lifetime earnings and other socio-economic outcomes (Angrist 1990, 1991; Hearst and Newman 1988). Here, as explained further below, we treat lottery status as an instrument for vulnerability to being drafted into the military rather than as an instrument for military service itself. A random draw that determines the possibility of change that is life-altering or even life-threatening is the type of stimulus that could compel major changes in one's political orientation.

Consider the random draw from the draft lottery as an event that altered one's self-interest. Those who found themselves suddenly free from the draft had less reason to oppose an unpopular war. Those who found themselves vulnerable to serving in an unpopular war had more reason to oppose it. Thus, we have the obvious hypothesis that the lottery number influenced attitudes toward the Vietnam War among young draft-age men who had not yet served in the military. We test this hypothesis in this paper.

Potentially of even greater interest, Vietnam lottery status can serve as an instrument for estimating change in one attitude affecting other attitudes and behavior. The opportunity is present to test

whether change in war attitudes imposed exogenously by Vietnam lottery outcomes led to further attitudinal and behavioral adjustments. For instance, if a low draft number resulted in opposition to the war, did this opposition lead to voting for McGovern, the anti-war presidential candidate in 1972? Did the newly induced war opponents change other attitudes in other ways to conform to their “dovish” war stance, for instance by becoming more politically liberal? If so, were these changes short-lived, or were they long-lasting, so that the draw of a lottery number influenced their political views down the long road of a political lifetime?

The preceding might sound like an ideal research design. But to implement it one needs not only respondent lottery numbers but also data regarding attitudes and behavior subsequent to the draft lottery. Fortunately that data is at hand. The data for this study is the Jennings-Niemi Political Socialization Study. For this study, a national sample of high school seniors was interviewed in 1965. They were then subsequently interviewed in 1973. Then they were interviewed two more times, in 1982 and 1997, providing more than half of a political lifetime’s worth of attitudinal data and reports of voting behavior.

## **II. The Political Socialization Data Set**

The Political Socialization Panel Study was initiated by M. Kent Jennings and carried out by the University of Michigan's Survey Research Center and Center for Political Studies. The original core of the project consisted of interviews with a national sample of 1669 high school seniors from the graduating class of 1965, distributed across 97 public and non-public schools chosen with probability proportionate to size (Jennings and Niemi, 1974, Appendix). In January through April 1973, 1119 of the initial respondents were again interviewed in person, while an additional 229 who were too remotely located completed a self-administered questionnaire. The resulting *N* of 1348 represents an unadjusted retention rate of 80.8%. Surveys were completed with a total of 935 individuals across all four waves of the study, for a 4-wave unadjusted retention rate of 56%.<sup>1</sup> Almost all of our analysis works with data from the

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<sup>1</sup> In 1982 a mailback questionnaire was again used to obtain responses from remotely located individuals. In 1997, which introduced computer-assisted interviewing, about half of the respondents were

1965-1973 panel file (ICPSR study #7779). However, we also make use of the 4-wave panel in an examination of long-term draft lottery effects (study #4037).

Of course for the data from the Political Socialization study to be usable for studying these effects, we need respondent dates of birth. Fortunately these are available in the study's data base. Lottery numbers were ascertained by linking birth data to the corresponding number signifying priority for being called into the army. The study is also rich in outcome measures. As described in more detail below, we make use of questions ascertaining opinions on the Vietnam War and other political issues, attitudes toward the military, evaluations of presidential candidates and other prominent political figures, vote choice in the 1972 election, and additional measures of political involvement and attentiveness.

In some respects, the timing of the fieldwork for the Political Socialization Panel Study is also ideal for our purposes. This is because many in the class of 1965 were just then losing their educational (college) deferments around the time of the 1969 draft. Those that were still in school at the time knew that their draft lottery number would prevail when their four allotted years of deferment for their schooling had ended. Thus the 1969 draft lottery occurred at an acute moment for this particular age cohort.

A seeming handicap for our study is that the response measurement, in early 1973, occurred over three years after the draft. It is possible that draft lottery outcomes affected war attitudes in the short run but that these attitudinal shifts faded away by the time of the 1973 survey. Another handicap of sorts is that only about one-fourth of the subjects of the study are useful for our study. About one half are women, who were not subject to the draft. Of the men, about half again had already enlisted in the armed services by the time of the 1969 draft lottery. The yield for our study is a set of 390 usable respondents—men who had not served in the military as of 1969 and had been interviewed in both 1965 and 1973. We ask, did the draft numbers for these 390 men alter their political attitudes in 1973 (and beyond)?

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interviewed in person and half by phone.

### III. Background on the Draft and Draft Lottery<sup>2</sup>

As of the end of 1965, the armed forces were almost entirely manned by volunteers. That changed with the escalation of the Vietnam War in 1966, just as the Class of 1965 was reaching the age of draft eligibility (19). Over the next three years, callup, exemption, and deferral decisions were made by local draft boards operating loosely under federal guidelines. As Baskir and Strauss (1978) put it, “the four thousand draft boards developed four thousand very different policies” (p. 24). Deferments of many forms were in principle available, the most common of which involved the existence of dependents, especially children, and the college student deferment, which required satisfactory academic performance and progress toward the degree. Older men within the 19-26 year old age range were called up before younger, reducing the vulnerability to the draft faced by the class of 1965 in the war’s early years.

With the expansion of the draft during 1966-1968 came the draft resistance movement and the growth of dissatisfaction with draft procedures among those not opposed to the draft itself. Blue-ribbon commissions were set up to study Selective Service reform (e.g., Marshall 1967). Draft policies were tweaked through Executive Orders and new legislation. For example, in 1967 the deferment for graduate study was eliminated. The idea of a national draft lottery gained salience. The abolition of college student deferments was debated, in part as a response to the low SES, non-white bias of the draft. At the same time public opinion remained largely against the draft resisters and (at least until mid-1968) ambivalent about or in favor of the war.

Soon after taking office, in March of 1969, President Nixon sent to Congress his plan for reform of the draft, which called for a national lottery, a continuation of the college deferment, the creation of a one-year window of maximum vulnerability to the draft, and a shift to prioritizing younger over older men within the 19-26 year old range—with the important proviso that those with a deferment would have

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<sup>2</sup> This section draws upon the histories of the draft provided by Angrist 1991, Baskir and Straus 1978, Card and Lemieux 2001, Foley 2003, Marshall 1967, Morse 2006, and Rostker 2006.

their year of maximum vulnerability begin whenever their deferment ended, if ever it did.<sup>3</sup> By the end of the year the new system was in place. On December 1, 1969, on national television, lottery numbers were assigned to birth dates by picking birth date-stamped capsules from an urn and numbering them, sequentially, from 1 and 366. The resulting numbers were to apply to potential draftees born between 1944 and 1950, which of course included the Class of 1965.<sup>4</sup> Starting with the number 1, assigned to September 14, draft-eligible men would be called up to the extent required to fulfill military need. During the 1969-1972 period, there was a good deal of uncertainty about just how high in the 1-366 sequence the draft call would go. Lottery numbers 1 through 195 ended up being called.<sup>5</sup>

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<sup>3</sup> See Nixon's statement at [www.rand.org/pubs/monographs/MG265/images/webG0671.pdf](http://www.rand.org/pubs/monographs/MG265/images/webG0671.pdf).

<sup>4</sup> Statisticians later demonstrated that the lottery produced minor departures from what one would have expected from randomness, tied to the fact that the birth date capsules were put into the urn in calendar sequence and mixing them up did not sufficiently destroy the pattern (Rostker 2006). The procedure was changed in subsequent lotteries, which applied to those born after 1950. These minor departures from non-random assignment of lottery number to birth date would only produce a threat to causal inference for our study if there were systematic differences in political attributes depending upon whether one was born earlier or later in the calendar year.

<sup>5</sup> Local draft boards varied in the lottery numbers (or "random sequence numbers") they called depending on their induction requirements. In the first few post-lottery months, some local boards went very high in calling up men for induction, something that Director of the Selective Service Curtis Tarr rued as "contrary to the intent of the law" (Tarr 1981, p. 38) and which prompted the setting of national ceilings. The ceiling was set at 115 in April of 1970, 145 in May, 170 in June, and 195 for the rest of the calendar year. The ceiling in 1971 was set at 125. If, however, the number of someone losing their deferment had been called earlier in the year in their state but was no longer being called in the months after they became eligible for induction, then they were put into the eligible pool for the first three months of the following year (given "extended priority"). In 1972 the call again went as high as 125, with the extended priority

Thus, as 1969 came to a close, non-exempted members of the Class of 1965 faced what they could have seen coming some six months earlier—a new draft regime, where their vulnerability to the draft was largely dictated by their draft number unless they could obtain or maintain a deferment. For those who had already taken advantage of the student deferment, the time in that refuge was running out. Those newly seeking out the college refuge would find it short-lived, as student deferments were ended in 1971. Even sooner to disappear were the “fatherhood” deferments, which President Nixon abolished by Executive order in early 1970 (Sempel 1970). Lowering the stakes somewhat was the fact that forces were being gradually withdrawn from Vietnam and draft rates were on the decline. On the other hand, new draftees were increasingly sent to combat duty and casualty rates were high.

#### **IV. Military Service, the 1969 Draft Lottery, and the Class of 1965**

Of the 672 male respondents interviewed in the 1973 wave of the Political Socialization Panel Study, 56 percent (373 cases) had joined the military by the time of the interview. The majority of these 373 military veterans had joined before 1969, the year of their relevant draft lottery. Thus, the bulk of enlistments occurred before the lottery. But, as we will see the nature of the enlistees changes as of 1969.

A key difference between the pre-lottery and post-lottery enlistments was educational status. One useful measure of educational status is the identification of college-bound students from the respondents’ 1965 interviews. For the 1965 interviews, one question asked respondents whether their high school curriculum was college preparatory. Those who said yes (54 percent of the male students) were classified as college-bound. The advantage of this indicator is that it is exogenous to events post-1965. Of course we also have a measure of educational attainment as of the 1973 survey. But this measure is endogenous to lottery number assignment and to military service. The college-bound measure is an excellent sorting variable in the analysis that follows.

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group handled on a nation-wide rather than a state-wide basis. Those in the extended priority pool for a given year were called before anyone else in that year. See Tarr (1981), especially pages 38-40, 133.

Table 1 shows the educational aspirations (1965) and attainment (1973) of the 1965 graduation cohort. Prior to 1969, enlistments were drawn almost exclusively from those who were not college-bound. Later enlistments—following the lottery—were almost entirely from the college-bound. Similarly, few eventual college graduates (as of 1973) enlisted before 1969. Remarkably, virtually no non-college men entered military service in 1969 or later. While the non-college-bound were more likely to have military experience as of 1973, the stock of non-college-bound military recruits had become exhausted by 1969. By then, most of the non-college members of the class of 1965 who joined the military had already enlisted or been drafted. Those among the less educated who had not been swept into the military must have been largely ineligible for military service and thus largely unthreatened by the 1969 draft lottery.

The implication is that the effect of the 1969 draft lottery on the cohort of 1965 high school graduates was far greater among those who had entered college than on those without a college background. Prior to 1969, as long as members of the cohort were enrolled in college, they enjoyed the benefit of a military deferment. But these deferments required continued enrollment in good standing and ended with the earning of the four-year degree. Thus their deferments ended about the same time as the 1969 draft lottery. Their 1969 lottery number shaped their fate. This was true even for those still able to postpone their enlistment until the end of their student deferment. Those with a high number could go on with their lives without fear of a military call-up. Others were likely to be called; they had to decide whether to preemptively enlist, wait for their draft notice, evade, or resist. Still others saw themselves somewhere on the fence.

Tables 2a and 2b shows the effect of the lottery number on military service, controlling for educational aspiration and attainment. Those who entered post-lottery were mainly college educated (or, in 1965, college-bound) men with unlucky lottery numbers who were drafted or enlisted in anticipation of being drafted. The effect of lottery number on military service clearly increased with education level. At the same time, we note that (according to respondent recall in 1973) most who entered claimed to have enlisted voluntarily rather than via getting drafted. Many of these soldiers evidently enlisted to select from the menu of military fates rather than accept a likely draft into the army. It should also be noted that



among our most vulnerable group—college educated with adverse draft numbers who had previously escaped the military—net enlistment in 1969-1973 was “only” 45 percent.

A few 1973 “post-lottery” respondents reported having been drafted even though their lottery numbers were not called. Apart from the inevitable coding error or faulty recall, some of this seeming error represents respondents who actually joined the military just prior to the lottery. This is likely because of our decision to include those who entered the military in the lottery year, 1969, as post-lottery rather than pre-lottery.

Probably most military entrants in our sample who claimed to enter in 1969 actually entered post-lottery, perhaps in 1970 but recalled their entry date as 1969 in response to the salience of the 1969 lottery date. As evidence, one sees an increase among 1969 recruits compared to 1968 recruits in the percent who were college-bound and college-educated. Also, the reported 1969 recruits were almost twice as likely to be college educated if they held a lottery number that was called post-1969 (34 percent vs. 66 percent). There would be no difference if enlistment occurred prior to the lottery.

Our analysis from this point on is of males who, based on their 1973 interviews, either escaped military service or entered between 1969 and 1973. While including those who said they entered the military in 1969 undoubtedly adds a few cases where military service began before the lottery, the only cost is the addition of a slight amount of noise. There should be no bias, since respondents who enlisted before the lottery were unmotivated by the then unknown lottery numbers. Had we limited our analysis to respondents entering the military in 1970 and later, we would have lost many cases. We would also introduce potential selection bias if, for instance, respondents who entered the military in 1969 immediately after the lottery were omitted and these omitted respondents were different in important respects from respondents who joined later. For instance, early joiners after the lottery might have been more zealously pro-war while those who waited out their fate were more anti-war. If we were to limit our analysis by excluding those who entered the military in 1969, we would obtain similar results to what are reported below, although with the lower statistical power that comes with a lesser number of cases.

## V. The Political Psychology of the Draft Lottery Threat

The most straightforward basis on which to expect lottery status to affect attitudes toward the war is self-interest. Although self-interest effects have been notoriously elusive in public opinion research, the consensus is that strong self-interest effects are most likely when what is at stake is “1. visible, 2. tangible, 3. large, and 4. certain” (Citrin and Green 1990, p. 18; see also Chong, Citrin, and Conley 2001, Green and Gerkin 1989, Sears and Funk 1990). Those with low draft numbers were facing a situation that would meet these four criteria handsomely—a (relatively) high likelihood of being forced to abandon all personal plans and undertakings and to take part in a potentially life-threatening war. As one’s lottery number increased, one’s vulnerability decreased. The potency of the self-interest motive would have been enhanced by the fact that the risk of losses, rather than of gains, was at issue (Cacioppo and Gardner 1999, Mercer 2005).

Self-interest effects could have played out two ways. Those with lower lottery numbers were more likely to have been drafted or to enlist expecting callup, and thus to have directly paid the costs of serving in the war (while nevertheless living to provide survey responses in 1973). Still, simply facing the risk of being drafted, even if that possibility didn’t actually materialize, would have imposed direct and in many cases large costs upon draft-eligible men. Studies focused on the draft and draft resistance have documented the psychological, material, and opportunity costs young men faced as they attempted to elude the draft (e.g., Baskir and Straus 1978, Foley 2003). Stories from those made vulnerable to the draft via the lottery likewise testify as to its disruptive consequences.<sup>6</sup> Anxiety and fear were commonplace. Employment opportunities were limited (Frank 2007, Tarr 1981, p. 37). Future plans had to be put on hold, revised, or abandoned altogether (Mann and Dashiell 1975). Attempts to elude the draft took time, energy, and financial resources. Thus, even if a low draft number did not actually result in

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<sup>6</sup> The website [www.vietnamwardraftlottery.com](http://www.vietnamwardraftlottery.com) contains hundreds of stories on the personal consequences of the draft lottery offered by men subject to the 1969-1972 lotteries.

military service, the negative personal consequences following from an unlucky lottery draw should have fueled opposition to the draft and to the war.

A second argument for why lower draft numbers would prompt opposition to the Vietnam War emphasizes the direct role of emotions provoked by perceived vulnerability and threat. It takes as given that those with lower lottery numbers would feel more vulnerable and, hence, more fearful and anxious and than those with higher draft numbers. Those feelings, themselves, and any associated cognitions, could prompt aversive reactions to the draft and to the war.<sup>7</sup> On the other hand, studies based on interviews with draft-eligible men report that many felt very troubled and torn—*anxious about and fearful of being drawn into dangerous circumstances but feeling duty bound to serve their country too, and often conflicted in how they felt about the war* (Baskir and Strauss 1978).

A third, complementary argument emphasizes an indirect path by which emotions and self-interest may come to shape political views. Feelings of fear and anxiety direct attention to the threatening stimulus and prompt learning (e.g., Cacioppo and Gardner 1999, Markus, Neuman, and MacKuen 2000). Similarly, having a direct personal stake in an issue heightens the attention it receives (Krosnick 1990; Lau, Brown, and Sears 1978). Thus, the lottery should have prompted those who were most vulnerable to being drafted to pay greater attention to the war and the politics surrounding it. And what anyone would learn when paying attention to the war in the post-lottery period was that casualties were mounting, the war was going badly, and that the majority of the public and many political elites had turned against it (Hallin 1984, Mueller 1973, Schuman 1972). Thus, greater opposition to the war among low lottery number holders could have emerged as an indirect consequence of information-seeking sparked by vulnerability to the draft.

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<sup>7</sup> Some approaches to emotion view aversive reactions to threatening stimuli as non-cognitive, conditioned responses to negative feelings provoked by the stimuli, while others view the behavioral response as involving feelings and beliefs packaged together. For recent discussions of this issue see Dolan 2002, Izard 1991, and Huddy, Feldman and Cassese 2007.

Evidence that draft lottery status affected attitudes toward the Vietnam War would in one sense speak to a void in the literature and in another sense would challenge the received wisdom. Studies of opinions toward the Vietnam War have rarely considered draft status.<sup>8</sup> The only studies looking explicitly at draft number and attitudes have employed small convenience samples of college students holding deferments in the immediate post-lottery period. Longino (1973) found more negative attitudes toward the war among those with low lottery numbers, but not to a statistically significant extent (reaffirmed by Bergen's (2009) reanalysis), while Aspler (1972) found more disapproval of the draft. Yet, civilian attitudes toward (or related to) the war in Vietnam have been shown to be at best weakly related to self-interest indicators whether one has a family member or friend serving in Vietnam (Lau, Brown, and Sears 1978, Mueller 1973). Indeed, Lau, Brown, and Sears (1978) find "no evidence that the self-interested had distinctly self-serving attitudes toward the war" (p.479). As we will see, that will decidedly not be the case here.

## **VI. The Treatment Variable**

For the analysis that follows, we measure our treatment variable as lottery number, 1-366. This differs from Angrist (1990, 1991), who utilizes the binary treatment of whether the draft number was called or not. The distinction is that whereas Angrist was interested in creating an instrument for the presence or absence of military service, here we are primarily interested in the draft as an instrument for vulnerability to being called to military service.

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<sup>8</sup> Gartner, Wilkening, and Segura (1997) found that draft age males expressed more negative presidential approval ratings in the last three years of the war but not in the war's earlier years. Aggregate studies of presidential approval have considered draft rates (e.g., Mueller 1973, Morris 2006), and draftees have sometimes been singled out in individual-level studies of the effects of military service (e.g., Jennings and Markus 1977). An analysis of the first two waves of the Political Socialization Study found that Vietnam attitudes (not draft status) predicted change in party identification between 1965 and 1973 in the youth sample (Markus 1979).

## VII. Lottery Number and Vietnam Attitudes

The pivotal question this paper addresses is whether 1969 lottery numbers affected Vietnam attitudes in the 1973 survey. We use three measures of attitudes toward the war on the general dove versus hawk dimension. The first measure is the standard question of whether the war was a mistake. The measure has three possible scores: yes (dove), in-between, and no (hawk). The second is also a three-point measure, derived from open-ended responses (in 1973) regarding what should have been done. Respondents were first asked:

"DO YOU THINK THE GOVERNMENT HANDLED THE VIETNAM WAR AS WELL AS IT COULD HAVE?" 1=yes, 5=no, others missing

Those who denied that the government handled the war well were then asked for up to two answers to the following question.

"WHAT DO YOU THINK THE GOVERNMENT SHOULD HAVE DONE?"

First mentions were coded dovish (codes 20-39) or hawkish (1-19). If the first mention was neither a dove or a hawk response, we scored their second mention. Those who failed to offer either a dove or hawk response were coded as in-between. The minority who responded to the first question by agreeing that the government handled the war "as well as it could have" were coded as hawks. Third, we combined the two measures—taking the average of the closed-ended "mistake" responses and the manufactured "what should we have done?" responses. The composite index had 5 possible responses. For all three indices we scaled the variable so that the range was from 0 (dove) to 1 (hawk).

Table 3 shows the results of nine bivariate regressions. For each of the three measures, we regress the indicator on lottery number (rescaled to range from 0=lowest through 1=highest) for all draft-vulnerable respondents (males not in the military as of 1969), only the college-bound (based on the 1965 survey), and the non-college-bound. For all the draft-vulnerable respondents, each coefficient is in the expected positive direction and either statistically significant or close to it. Dividing by the college-bound variable shows that the effect is limited to the college-bound. In each instance, the coefficient is positive and quite significant for the college-bound. Using the combined index, the  $p$ -value is .002, suggesting

that the positive result could not have occurred by chance more than two times in 1,000 if the null hypothesis were true. For the non-college-bound, the coefficients are negative and non-significant.<sup>9</sup>

Of special interest is the size of the positive coefficients for the college-bound, which range from .20 to .28. The implication is that the difference between holding the lowest and highest lottery number is about 25 percent along the dove-hawk continuum. Thus, we see a major attitudinal shift lasting as long as 3+ years (from late 1969 to 1973) in attitudes toward the war, with individual fates determined by the luck of the draw.<sup>10</sup>

Figure 1 provides another illustration of the importance of lottery number for Vietnam attitudes among the college-bound. It depicts the lottery numbers of those expressing the most hawkish attitudes

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<sup>9</sup> Table 3 provides OLS coefficient estimates. Substantive results are comparable if an Ordered Probit model is fit instead, with *p*-values that are the same or smaller for the full sample and the college-bound.

<sup>10</sup> Although one might question whether the lottery number effect is best represented as strictly linear, this assumption holds up under statistical scrutiny. To check for violations of linearity, we performed the following test. We sorted lottery-vulnerable college-bound men by lottery number and then divided them into odds and evens, based on their number sequence. For each group we constructed a lowess estimator (bandwidth .8), to provide the best fitting curvilinear prediction of composite Vietnam attitudes. As expected, the two lowess curve took nonlinear forms, as they capitalized on local variation in how attitudes varied by lottery number. But out-of-sample tests confirmed that these departures from linearity were illusions based on chance variation. For even-numbered respondents, we substituted the lowess estimator from the lagged odd numbered observation; for odd-numbered respondents we substituted the lowess estimator from the next even-numbered respondent. When either substitute estimator was included with linear lottery number in a regression equation predicting Vietnam attitudes, only the coefficient for the linear number was significant. In fact, in each case, the substitute lowess estimator had the “wrong” sign. In other words, when the two sets of modestly wiggly lines were presented as deviations from the linear trend, they were unrelated to each other.

on the war. With one stray exception, the lottery numbers of hawks are decidedly tilted toward the middle and upper-end of the range.

From this point on we treat the effect on lottery number on Vietnam attitudes as a given. The next task is to see whether the lottery also affected corollary attitudes or whether attitude change was limited to views about the war itself.

### **VIII. Lottery Number and Vote Choice, Policy Attitudes, Ideology, and Partisanship**

When the lottery number affected men's Vietnam attitudes, did the alteration of views extend to related attitudes involving partisan choice, policy direction, political personalities, and vote choice? That is, did those with high numbers who became hawks also become (for instance) more Republican and conservative? Did those with low numbers, while becoming more dovish also turn more Democratic and liberal? We estimate these effects next. For dependent variables, we use the vote for president in 1972 (reported in 1973), relative Nixon-McGovern thermometer scores, a three-item ideology index, an 8-item policy issue index (left-right), plus 1973 party identification.<sup>11</sup>

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<sup>11</sup> Vote is a dummy variable indicating a choice for Nixon (1) vs. McGovern (0). The difference between the thermometer ratings of Nixon and McGovern was rescaled to range from 0 (100 for McGovern, 0 for Nixon) to 1 (100 for Nixon, 0 for McGovern). The ideology variable is an index combining 7-point liberal-conservative identification, feeling thermometer toward conservatives, and responses to a question about whether liberals have too much or too little influence in American society. Cases with more than two missing values were dropped from the index. The policy issue index averages the responses to questions on the legalization of marijuana, school prayer, government assistance to blacks, tightening criminal enforcement, level of influence questions regarding, "people on welfare" and "women," government job assistance, and women's role (equal with men at one pole of a 7-point scale vs. belong in the home at the other). Cases with 4 or more missing values were dropped from the index. Party Identification is measured with the standard seven-point scale. These latter three variables were also rescaled to range from 0 (liberal/Democratic) to 1 (conservative/Republican).

Table 4 shows the initial results. As with Table 3, Table 4 shows estimated effects three ways: for all draft-vulnerable cases, for college-bound only, and for the non-college-bound. The first column shows the probit equation predicting presidential vote choice in 1972 (as recalled in 1973).<sup>12</sup> With one prominent exception, they show positive and significant or near significant effects for all cases and especially for the college-bound. In no case do we find significant effects for the non-college-bound who, as we saw, were largely unaffected by the lottery and whose attitudes toward the war did not shift as a function of lottery numbers.<sup>13</sup>

The exception is party identification. In no specification does party identification respond to lottery number. The lottery may have affected men's attitudes toward the war and also their votes, ideological perspective, and attitudes on issues.<sup>14</sup> Yet a low lottery number did not cause young men to move toward the Democratic party. (We return to the draft and party identification in Section XII.)

Table 5 follows up with a closer look the lottery effect on these attitudes (plus the Vietnam attitude index) among the college-bound, adding two exogenous control variables from the 1965 interviews when the respondents were high school seniors. One is a four item issue index from the high school days. The other is the respondent's party identification while in high school. All variables are coded 0-1 where 0=liberal/Democrat/dove and 1=conservative/Republican/hawk.

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<sup>12</sup> For all probit equations, the reported pseudo-*R* squared is the McKelvey-Zavoina version, which estimates the percent of the variance explained in the underlying latent variable. See McKelvey and Zavoina (1975).

<sup>13</sup> Placebo tests involving women also turn out as expected, as reported in the note to Table 4. Lottery number has no predictive power among women, as it should not.

<sup>14</sup> Lottery number also bears a significant relationship to other attitudes beyond those shown in Table 4. For example, feeling thermometer ratings of Spiro Agnew were predicted to vary by 17 points on the 100-point scale among the college-bound ( $p=.017$ ,  $n=188$ ), and ratings of Ted Kennedy varied by 11 points ( $p=.043$ ,  $n=188$ ).



In general, the control variables boost the R-squared up to the .10-.20 range. The added controls generate slight declines in the standard errors for lottery number, which are in some instances offset by the lower Ns due to missing cases. Perhaps the most interesting thing about Table 5 is the importance of issue attitudes from the high school years. An index based on attitudes toward school prayer, racial segregation, the UN, plus tolerance of communists and atheists dominates party identification as a predictor of the attitudes eight years later. In fact, except for 1973 party identification, the respondent's 1965 party identification is statistically dominated by lottery score.<sup>15</sup> It is worth mulling this remarkable fact about these 25 and 26 year old men in 1973 who had a college-preparatory high school education. *With their exposure to the 1969 draft and with an early adulthood spent during the turmoil of the Vietnam War years, their lottery number was a stronger influence on their political outlook than their late-childhood party identification.*

For no dependent variable, was the effect clearer than for reported vote in 1972. The proper methodology for estimating the effects of course is probit. The probit equation predicting the vote reveals an average effect in terms of the probable vote of 40 percentage points varying as the differential from the lowest to highest lottery number.<sup>16</sup>

The effect can clearly be seen from Figure 2, which simulates the vote as a function (among college-bound) of their predicted vote from 1965 issue positions and partisanship combined with lottery number. The *x*-axis represents the prediction from probit's linear equation from issue attitudes and

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<sup>15</sup> The basis for this claim is that the coefficients are greater for lottery number than for partisanship when each is measured in 0-1 units based on range. Coefficients are also greater for lottery number when the variables are measured in standard deviation units (standardized regression coefficients).

<sup>16</sup> That is, the probable vote is estimated for each respondent two ways: with lottery number 1 and lottery number 366. The average difference is 40 percentage points. The average percentage point difference if every case is at the mean on 1965 party identification and issue attitudes is .44 points, which is the coefficient shown in the table.

partisanship, assuming a lottery number of 1. The y-axis is the probability of a vote for Nixon. The lower of the two curves represents the probability of a Nixon vote contingent on an unlucky lottery number of "1." The higher of the two curves represents the probability of a Nixon vote given a "366" lottery number. Within these two boundary conditions, the actual data are shown. The exact vote differential from lottery number depends on the x-axis; for any point on the x-axis, the distances of the actual observations from the two lines reflects the relative lottery number of the respondent.<sup>17</sup>

Those holding an adverse vs. a favorable lottery number tended to choose very differently in the presidential election of 1972. But lottery number had consequences for political participation that went well beyond the act of voting. Eligible men holding low lottery numbers were also much more likely than those with high numbers to engage in other anti-Nixon or pro-McGovern political acts, while the converse was true for pro-Nixon/anti-McGovern activity. The evidence on this point is found in Table 6. In the 1973 survey respondents were asked an extensive set of questions about the form, timing, and content of the political activity they had engaged in since 1965. From these questions we built two dummy

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<sup>17</sup> As an additional test for robustness of the findings, we subjected the findings of Table 5 to a set of nonparametric randomization tests (Edgington and Onghena, 2007). In 1,000 simulations for each equation of Table 5, lottery numbers are scrambled randomly and the regressions using these scrambled data are run 1,000 times. The false lottery number coefficients are centered at zero (the null hypothesis being true) with the distribution used to estimate nonparametric *p*-values. These *p*-values are generated as the percent of times the false lottery number coefficients are more extreme than the lottery-number coefficient using real data. With one very slight exception (political ideology), these *p*-values from the randomization tests are even smaller (more significant) than the estimates reported in Table 5. For instance, whereas the *p*-value generated by the OLS standard error for Vietnam attitude is .027, the randomization test shows a *p*-value of .003. Of the 1,000 simulations where the data generating function had the null hypothesis being true, the sample coefficient was larger than the observed value of .18 in only 3 instances.

variables: whether or not the individual engaged in an anti-Nixon or pro-McGovern act during the post-lottery period, and whether or not the individual engaged in a pro-Nixon or anti-McGovern act during that period. Possible forms of participation included (a) trying to influence someone's vote, (b) attending a meeting or rally, (c) wearing a button or displaying a bumper sticker or sign, (d) writing a letter to the editor, and (e) giving a campaign contribution. Table 6 shows the probit equations predicting each dependent variable on the basis of lottery number, controlling for party identification, and issue attitudes as of 1965.

When considering the likelihood of anti- Nixon/pro-McGovern involvement, lottery number effects are stunning. The effect of the difference between highest and lowest number on the probability of participating is .32, substantively large, highly statistically significant, and about 150% of the size of the coefficients on party ID and issue attitudes. The probability of a pro-Nixon/anti-McGovern act is associated with lottery number as well, this time with those holding safe, high lottery numbers more likely to act. This effect is smaller, however (.12), and fails to achieve statistical significance. Whether because of the greater effect of loss vs. gain, or because of a climate and opportunity structure that facilitated anti-Nixon action, losers in the draft lottery were more likely to be activated against Nixon than winners were to be activated on his behalf. The result, nevertheless, was a distinctive difference in the lottery numbers of those active in each partisan camp. The average lottery number among those who engaged in at least one anti-Nixon act in the post-lottery period was 153, while the average among those who engaged in at least one pro-Nixon act was 202.

### **IX. Attitudinal Dynamics**

Our lottery analysis provides an extraordinary window into the structure of attitudinal dynamics. By theory, the sequence is that lottery number affects Vietnam attitudes which in turn affect other attitudes like presidential candidate affect, issue attitudes, and ideology. With the assumption that the effect of lottery numbers on secondary attitudes is indirect via Vietnam attitudes, we can conduct a proper instrumental variable analysis with lottery status as the perfect instrument for Vietnam attitudes. The idea

is to estimate the effect of Vietnam attitude on secondary attitudes by using lottery number as the instrument for Vietnam attitude.

We present in Table 7 one example of leveraging lottery number as an instrumental variable analysis to infer attitudinal dynamics. The goal is to estimate the effect of Vietnam attitude (the composite dove/hawk scale) on relative thermometer scores for Nixon and McGovern, the two 1972 presidential candidates. First we estimate effects via a naïve OLS analysis, with a bivariate regression predicting relative thermometer scores (Nixon minus McGovern) from the composite Vietnam attitude, both measured in 1973. The analysis is limited to our college-bound sample subject to the 1969 lottery, who voted in 1972. Note the coefficient of .30 which suggests that a shift of a full range across the Vietnam scale (0 to 1) caused a movement equal to 30 percent of the range of the thermometer scale. Of course this estimate is without controls, without considering the possibility of reverse causation, and the potential for measurement error in the independent variable.

Next we use Vietnam lottery number as the instrument for Vietnam attitudes. We know this specification is plausible because lottery number predicts Vietnam attitudes and because it is plausible that the reason why lottery number could affect thermometer scores is via Vietnam attitudes. In effect the TSLS analysis replaces Vietnam attitudes in the equation with Vietnam attitudes predicted by the respondent's lottery number. This new independent variable corrects for spurious correlation, reverse correlation, and measurement error. The key assumption is that the causal pathway from lottery number to candidate attitude is all via Vietnam.

Note that the TSLS coefficient is over twice the original OLS coefficient. If the assumptions are valid, the difference of a full range on the Vietnam scale (e.g., total dove to total hawk) causes a movement of more than half the range on the candidate thermometer scale. This of course is an effect much larger than typically reported for issue effects on the vote in cross-sectional voting studies.

This exercise is further verification that the effect of the lottery number on the vote is surprisingly strong. If the effect is directly via Vietnam attitudes, an inference is that the OLS estimate is muffled by imperfect measurement of attitudes on the Vietnam dove-hawk continuum. Also, there may have been

unobserved confounding variables that worked to lower the correlation between Vietnam attitudes and the vote. (Their effect is nullified when using the random draw from the lottery as the instrument.) Finally, another possibility must be that the specification is flawed—that in fact there is a direct path from lottery number to candidate support that does not travel via Vietnam attitudes.

### **X. The Causal Model: A Further Look**

Although we have been assuming that the effects of lottery number on Vietnam attitudes are largely via the personal consequences of finding oneself relatively vulnerable to or safe from the draft, this is not the only possible causal mechanism. Besides creating uncertainty, disruption, and anxiety, the random lottery draw can work indirectly via other intervening variables. Clearly, the draft number increases the likelihood of military service, and military service can affect attitudes. One possibility is that the military service intervening variable works against the vulnerability hypothesis, with low numbers causing military service which causes hawkish views. But, the opposite is also possible—that unlucky numbers caused military service which caused alienation from the military and the war effort. In fact, we know the latter is more plausible, because (1): among those who served (1969 and later), the lower the lottery number the more dissatisfaction with their military service,<sup>18</sup> and (2) low lottery number has a strong adverse effect on feelings toward the military.<sup>19</sup> Thus, some of the effects we have observed for lottery number may be due to service itself rather than anticipation of military service.

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<sup>18</sup> Those who served in the military were asked if they were very satisfied, somewhat satisfied, somewhat dissatisfied, or very dissatisfied with their military service. With this variable scored 0-1 and lottery status used as a predictor, we obtain a coefficient of .33,  $p=.041$  ( $n=64$ ; as usual, the analysis excludes men who enlisted before 1969), in the direction of more dissatisfaction among low draft number holders.

<sup>19</sup> Among the college-bound eligible men, a regression of the feeling thermometer scores for “the military” on lottery number (scaled 0-1), yields a coefficient of .19,  $p<.001$  ( $n=290$ ), which suggests that individuals with the lowest lottery number rated the military almost twenty points more negatively than did those with the highest lottery number.

Besides military service, a second intervening variable is education level. For those with the opportunity to maintain an educational deferral, a low number could generate extra schooling which arguably would cause an increasingly dovish attitude.<sup>20</sup> On the other hand, for those without a deferment opportunity the prospect of military service could cause postponement or abandonment of educational attainment. Still another pathway could be from low lottery number to military service which—via the time obligation alone—delays and defers educational attainment. If this is the pattern, low numbers lead to hawkish views two ways—from military service and from the lack of further time in classrooms.

These patterns are shown in the diamond-shaped causal model of Figure 3. Note that a problem for estimating military and education effects is that unmeasured variables can cause both military service and attitudes or educational attainments and attitudes. However this should not be a problem for estimating the direct effect of lottery number on attitude independent of military service and education. Thus, we can estimate the direct effect of lottery number without bias by controlling for education level and military service. The only remaining problem—quite secondary for our purposes—is that the direct effects of military service and education on attitudes are subject to bias for the usual reasons present in non-experimental research.<sup>21</sup>

Table 8 shows the relevant regressions predicting composite Vietnam attitudes among the (1965) college-bound. Note that neither intervening variable appears to have much impact (although we can be less sure of these paths that are outside the boundaries of our natural experiment). The coefficient predicting Vietnam attitude directly from lottery number (and its standard errors) is essentially unchanged from our initial analysis from Table 4 without the intervening variables.<sup>22</sup>

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<sup>20</sup> Card and Lemieux (2001) argue that the student deferment incentive significantly boosted college enrollment rates among draft-eligible men.

<sup>21</sup> For one analysis of direct and indirect effects in experimental research, see Imai, Keele, and Yamamoto 2009.

<sup>22</sup> We also need to be on the alert for a possible interaction effect between military service and lottery

Finally, still one more potential intervening variable to consider is political awareness. As discussed earlier, the bad luck of drawing a low lottery number might have prompted political attentiveness in the post-draft period, a time when the war was going poorly, casualties were high, and a majority of the American public had turned against the war. Following the top-down logic of Zaller's (1992) model of opinion, that greater attentiveness would have fueled anti-war sentiment. But the evidence shows that this, too, fails to explain the effect of lottery number on Vietnam attitudes. Using level of political knowledge as a gauge of attentiveness, we did find greater opposition to the war among the most knowledgeable, but no significant differences in political knowledge by lottery number.<sup>23</sup> If level of political knowledge is added into the equation along with education and military service, as a potential intervening variable, the coefficient on lottery number remains essentially unchanged.

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number. The idea is that most of those with low draft numbers who serve are dragged into the service and hate it (and the war) while those who serve with high numbers are volunteers who are pro-military and pro-war. In short, this would be a military  $\times$  draft number interaction effect. We can test for this possibility by seeing whether the direct effect of the lottery number remain when those who actually serve the military are omitted. The answer is a decided yes. In fact when military recruits are omitted, the coefficient for lottery number predicting composite Vietnam attitude among the college-bound rises from .25 to .28, statistically significant at the .001. level. For college-bound with military service, the coefficient is only .10, not significant.

<sup>23</sup> We used a composite knowledge scale based on responses to a series of factual questions (v760 from the two wave panel study, ICPSR 7779), coded to range from 0-1. When we added that variable to the equation that generated Table 7, a strong knowledge "effect" was evident:  $b = -.45$ ,  $p < .001$  ( $n = 184$ , lower than that in Table 9 due to missing data on the knowledge variable). The more knowledgeable were more opposed to the war. But regressing knowledge on lottery number yielded an insignificant coefficient ( $b = -.05$ ,  $p = .22$ ,  $n = 184$ ). Adding measures of political interest or exposure to the mass media to the equation predicting attitudes toward the war also left the coefficient on lottery number untouched.

Thus, we reach an important result. The impact of lottery number is not via military service. It is not via a delay or acceleration of education. It is not via heightened exposure to the increasingly negative news about the war. The effect is driven by what is left over as a direct effect. We interpret this to be the psychological response to the threat of getting drafted at a time of life and under circumstances that make the threat of military service particularly disruptive and unpleasant.

### **XI. Long-Term Effects**

For our cohort of 1965 high school senior men, the timing of the crucial lottery numbers was December 1969. The observed political responses are from early 1973. Since we believe the intervening causal variable was trauma and disruption (or relief) induced by the lottery number, we observed causal impacts approximately three years after the initial stimulus. As political attitude studies go, this is a long duration. Rarely do we study attitudinal change over a span of years.

We also have the means to study the possibility of the persistence of the effect over the course of a political lifetime. We refer of course to the opportunity to examine responses from the third (1982) and fourth (1997) waves of this survey. Here we offer a brief assessment of long-term effects. Table 9 is our guide, based on 1965's college-bound respondents only.<sup>24</sup>

For each of the selected item shown in Table 9, the analysis is based on the constant set of respondents with responses in all three post-lottery waves. In general, effects appear to fade. This was quite clear for feelings toward the military, political ideology, and the composite issue index. The impact

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<sup>24</sup> The Vietnam “mistake” question was scored 0=yes, .5 =depends, both, 1=no. Evaluations of the military are feeling thermometer scores, scaled to range from 0 to 1. See footnote 11 for the description of the other 1973 variables. ). The relative candidate evaluations in later waves were for Reagan vs. Carter (1982) and Dole vs. Clinton (1997). The 1982 and 1997 ideology indexes substituted feeling thermometer scores for “liberals” (not available in 1973) for the evaluation of liberals’ influence question (not available in 1982 or 1997). The 1973 and 1982 composite issue attitude indexes included the exact same set of items, but the 1997 index excluded the component variable for the influence of “people on welfare” (which was not asked in that wave).



of lottery number on the vote (proxied in Table 10 by relative thermometer scores), that was so prominent in 1972, also dissipates by 1980.<sup>25</sup>

An exception however is with the central variable itself—Vietnam attitude. The “mistake” question was asked in each post-lottery wave. The lottery effect on responses to the question about Vietnam being a mistake maintains most of its initial magnitude into the 1990s. Even in 1997, 28 years after the precipitating event, the difference between the lowest and highest lottery number was about a quarter of the range of the dove-hawk scale.

It seems, then, that some “immediate” effects (e.g., at least three years in duration) faded later in life. But the central attitude of our study—attitude toward the Vietnam War remained shaped by the luck of the draw in 1969. And as we will see below, the draft lottery truly did have major short and long-term consequences for the trajectory of party ID.

## **XII. Draft Lottery Number and Party Identification Revisited**

So far, this paper has said little about lottery status’s impact on party identification. As we have seen, party identification is one key variable that does *not* appear responsive to lottery number in that there is no discernable tendency for Democratic identification to rise with lottery-induced draft vulnerability. An obvious interpretation would be that party identification is such a stable attitude that even the general rearrangement of attitudes and voting behavior caused by draft number is insufficient to affect party identifications. But, this obvious interpretation is not correct.

The impact of draft number on party identification in 1973 was that it spurred the most draft-vulnerable men to rethink their party identification. In other words, lottery number exerted a strong interaction effect on the continuity of partisanship. College-bound men with high (safe) numbers maintained a continuity of partisanship that was even greater than for college-bound women, who of course faced no direct draft threat. In short, the lottery did not cause men with “safe” numbers to

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<sup>25</sup> The relationship between lottery number and 1976 vote (as reported in 1982) was on the cusp of significance.

rearrange their partisan attitudes any more than it did for women. Meanwhile, the vulnerability induced by a low draft number virtually obliterates the correlation between 1965 and 1973 partisanship.

Tables 10-11 and Figure 4 tell the story. Table 10 presents the regression of 1973 partisanship (among draft-eligible, college-bound men) as a function of 1965 partisanship, lottery number, and the interaction of the two independent variables. As can be seen, all the action is in the highly significant interaction term: The higher (safer) the lottery number, the more party identification resembled their 1965 party identification. Figure 4 aids our understanding of this phenomenon by graphically depicting the estimated 1973 party ID for erstwhile (1965) strong Democrats and strong Republicans, as it depends on lottery number. Among those with very low numbers, party identification had virtually no continuity, as 1965's two sets of strong partisans became almost identical in their mean partisanship.

For men with safe lottery numbers the continuity of party identification was relatively unaffected by the draft. Although like all young voters at the time, they tended to move toward the independent category, their movement was similar to that of their college-bound female counterparts. This is depicted in Table 11, which divides college-bound men according to draft vulnerability and compares them to their female counterparts. Men with vulnerable numbers show evidence of totally rethinking their partisanship in response to the threat of the draft. Republicans in the group abandoned their party with unusual frequency, while even Democrats moved toward the independent category with slightly greater frequency than others. For those dealing with an adverse draft status, the Independent label became a convenient parking place for them to hold their partisan status.

Did the partisan response to draft number that is so evident in 1973 persists later in life or did it fade with time? The answer is that this interaction effect is one consequence of draft number that persisted through later years. Table 12 shows regression coefficients by three categories of draft vulnerability (among college-bound men) and for college-bound women. In this setup, the 1965-1973 stability coefficient—the 1973 on 1965 regression—increases with draft number, consistent with our discussion. When we substitute as the dependent variable the party identification from the 1982 and 1997 surveys, the coefficients for the vulnerable third continue to fade while those for the least vulnerable third

declines only modestly. (Interestingly, the female coefficients fade hardly at all, suggesting greater lifetime stability.)

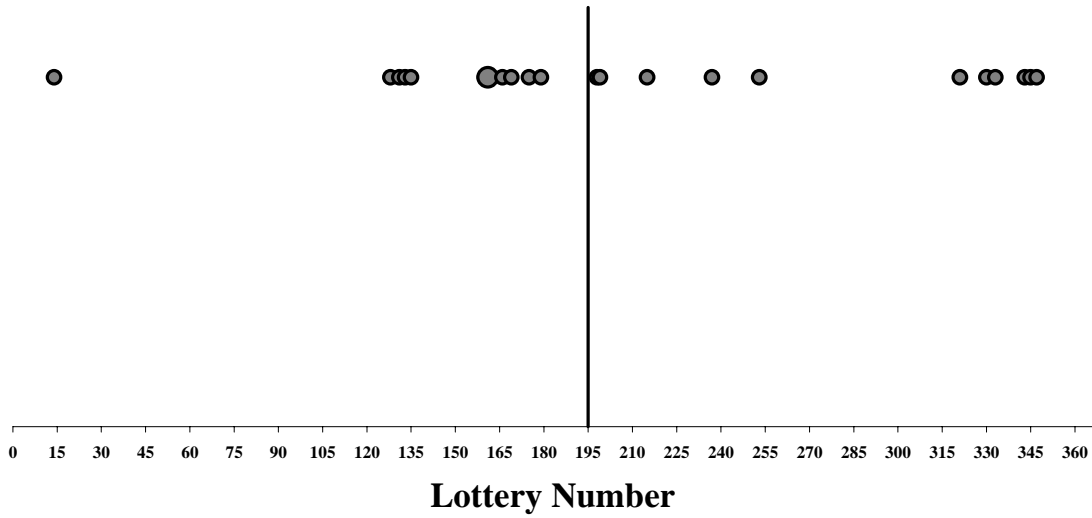
The table show similar patterns when we predict the respondents' reported vote choices in the most recent presidential elections to the three surveys (1972, 1980, and 1996). For those with a vulnerable draft number the erosion of childhood party identification already evident in the 1973 survey was complete by the 1997 survey. This is further evidence that the immediate disruption of their party identification by the draft lottery number persisted not just for 1973 but evidently for a lifetime.<sup>26</sup>

### **XIII. Conclusions**

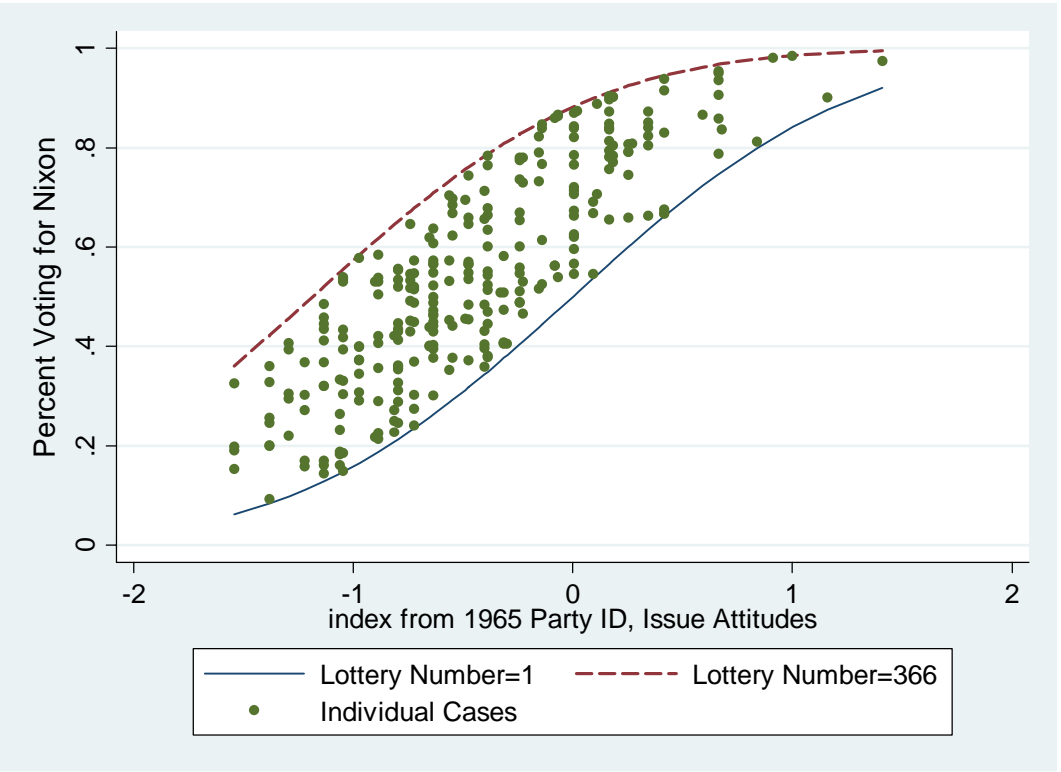
One general rule of political psychology is that political attitudes do not readily change. But theory suggests that under major threat—of a nature not normally seen in surveys or induced in experiments—people can undergo major change in political attitudes and behavior. Thanks to the availability of fortuitously timed survey data, this paper has been able to describe such an example. In 1969-70, a cohort of young, educated men, poised to seek their life's calling, faced instead the spectre of the Vietnam draft lottery. Some got lucky, drawing high numbers that secured them from military service. The unlucky faced the increased likelihood of risking their lives in a war many opposed. Equally important, those who drew numbers in the middle range faced at minimum a profound uncertainty and disruption of their lives. As we have described, this luck of the draw shaped attitudes toward the war and conventional party politics for a matter of years and, in some cases, evidently a lifetime.

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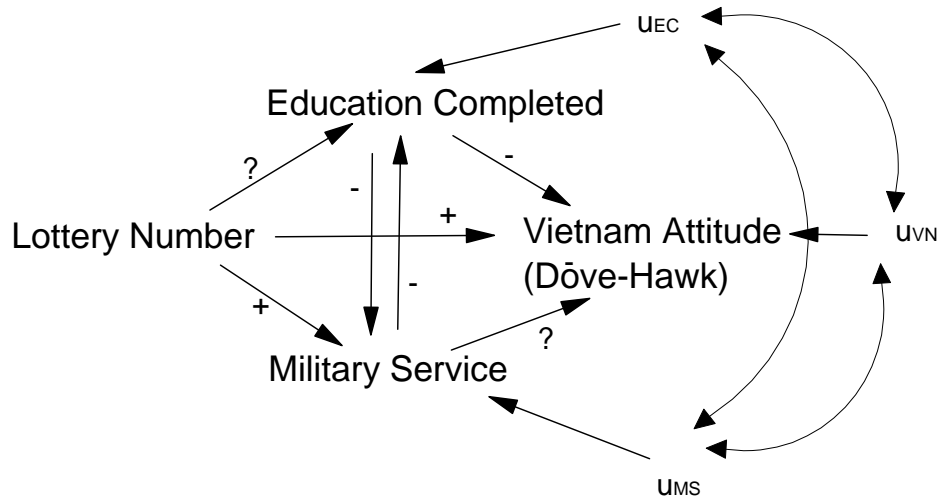
<sup>26</sup> If we regress 1983 or 1997 party identification on both 1965 and 1973 identification, the three lottery groups show similar strong coefficients for 1973 identification and decidedly non-significant coefficients for 1965 identification. For women, the 1965 identification continues to hold a slight tug.



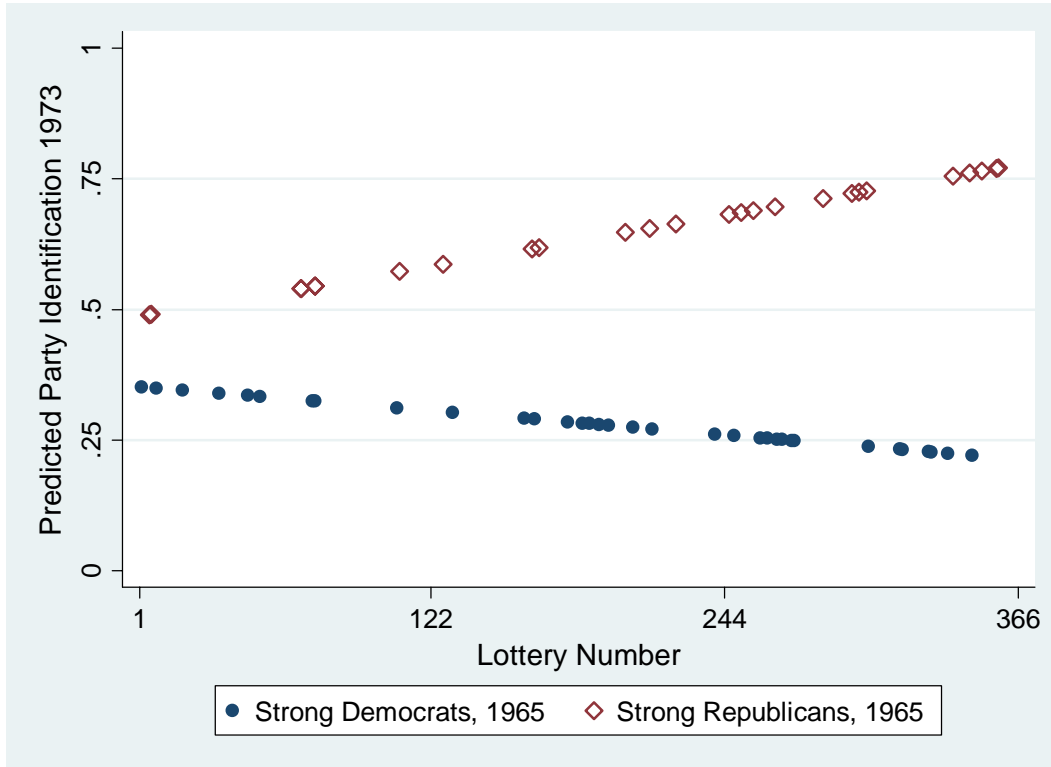
**Figure 1. Distribution of Lottery Numbers of Vietnam Hawks.** Hawks are defined as those scoring at the maximum “hawk” position on the Vietnam attitude index. Respondents are college-bound males (those whose 1965 high school curriculum was college preparatory) who had not served in the military as of 1969.



**Figure 2. Vote for President, 1972, among the College-Bound as a Function of Lottery Number and Index based on 1965 Party Identification and 1965 Issue Attitudes.** The index is based on the probit equation in Table 4. The index score on the  $x$ -axis is for lottery number 1. At any point on the  $x$  axis, the gap between the two lines represents the potential effect of the difference between lottery numbers 1 and 366. Simulating the vote for a 1 and 366 number for each case yields net proportions for Nixon at .34 if the lottery number =1 and .74 if the lottery number = 366. The actual vote within the college-bound sample was .54 for Nixon. “College-bound” are male respondents whose 1965 high school curriculum was college preparatory. Respondents who entered the military before 1969 are excluded from this sample.



**Figure 3. Causal Model of Pathways from Lottery Number to Vietnam Attitude.** The direct path represents the psychological response to one's draft number. Double-headed arrows represent unknown correlations among disturbance terms for endogenous variables.



**Figure 4. Predicted 1973 Party Identification by Lottery Number for Lottery Eligible College-Bound Men, among 1965 Strong Democrats and 1965 Strong Republicans.** Predictions are from table 10. Respondents are college-bound males (those whose 1965 high school curriculum was college preparatory) who had not served in the military as of 1969.

Table 1  
Education Levels of those Serving in the Military, by Date of Enlistment

Date of Enlistment:	% College-Bound (1965)	% College Educated (1973)	N
1965-1966	30	5	191
1967	42	12	50
1968	55	20	40
1969	73	67	52
1970	81	89	27
1971-1973	85	92	13

*Note:* “College-bound” are male respondents whose 1965 high school curriculum was college preparatory.



Table 2a  
Self-Reported Military Status Post-Lottery, by Lottery Status and College-Bound or Not

Status:	No Military Service	Drafted	Enlisted, Expecting Callup	Enlisted, Not Expecting Callup	N
College-Bound					
Lottery Number Called	66	12	17	5	136
Lottery Number Not Called	81	4	7	8	124
Not College-Bound					
Lottery Number Called	80	9	6	5	64
Lottery Number Not Called	88	8	2	3	66

Table 2b  
Self-Reported Military Status Post-Lottery, by Lottery Status and College Degree (1973)

Status:	No Military Service	Drafted	Enlisted, Expecting Callup	Enlisted, Not Expecting Callup	N
College Degree					
Lottery Number Called	55	13	22	9	112
Lottery Number Not Called	80	3	8	8	103
No College Degree					
Lottery Number Called	90	8	2	0	88
Lottery Number Not Called	86	7	2	5	87

*Note:* Cell entries are row percentages. “College-bound” are male respondents whose 1965 high school curriculum was college preparatory. Only male respondents without prior military service as of 1969 are included. Lottery numbers called are 1-195.

Table 3  
Effect of 1969 Lottery on Attitudes toward the Vietnam War, 1973

	Was Vietnam War a Mistake?	What Should We Have Done?	Composite Index
	(n=381)	(n=390)	(n=375)
	.17	.11	.14
	(.07)	(.07)	(.06)
All Cases	p=.022	p=.095	p=.019
	R <sup>2</sup> =.012	R <sup>2</sup> =.006	R <sup>2</sup> =.014
	(n=257)	(n=260)	(n=256)
	.28	.20	.24
	(.09)	(.08)	(.07)
College-Bound	p=.002	p=.022	p=.002
	R <sup>2</sup> =.033	R <sup>2</sup> =.020	R <sup>2</sup> =.040
	(n=124)	(n=130)	(n=118)
	-.05	-.07	-.07
	(.14)	(.13)	(.11)
Not College-Bound	p=.736	p=.585	p=.550
	R <sup>2</sup> =.001	R <sup>2</sup> =.002	R <sup>2</sup> =.004

*Note:* The dependent variables are scaled to run from 0 (Dove) to 1 (Hawk). Lottery number is rescaled from 1-366 to 0-1. Entries are OLS unstandardized coefficients. Robust SEs, which take into account the clustering (by school) in the data, are shown in parenthesis (see Nichols and Shaffer 2007). Cases are male respondents who had not served in the military as of 1969. “College-Bound” are those taking college preparatory courses in 1965. Placebo Test Results: Coefficients on lottery number for women across the three dependent variables are -.06 (p=.33), .01 (p=.86), and -.03 (p=.59).

Table 4  
Effect of 1969 Lottery on 1972 Vote Choice and Other Political Attitudes, 1973

	Vote Choice Nixon vs. McGovern (n=294)	Thermometer Rating of Nixon vs. McGovern (n=288)	Political Ideology Index (n=286)	Composite Issue Attitude Index (n=379)	Party Identification (n=387)
All Cases	.24 p=.032 Pseudo R <sup>2</sup> =.019	.08 (.04) p=.049 R <sup>2</sup> =.015	.08 (.04) P=.057 R <sup>2</sup> =.014	.09 (.04) p=.028 R <sup>2</sup> =.015	.04 (.04) p=.377 R <sup>2</sup> =.002
College-Bound	(n=211) .38 p=.004 Pseudo R <sup>2</sup> =.035	(n=187) .16 (.05) p=.004 R <sup>2</sup> =.058	(n=185) .12 (.06) P=.036 R <sup>2</sup> =.030	(n=252) .13 (.05) p=.023 R <sup>2</sup> =.031	(n=259) .05 (.06) p=.348 R <sup>2</sup> =.003
Not College-Bound	(n=83) -.11 p=.573 Pseudo R <sup>2</sup> =-.003	(n=101) -.08 (.06) p=.178 R <sup>2</sup> =.014	(n=101) -.01 (.05) p=.905 R <sup>2</sup> =.000	(n=127) .00 (.06) p=.945 R <sup>2</sup> =.000	(n=128) .01 (.08) p=.863 R <sup>2</sup> =.000

*Note:* Lottery number is rescaled from 1-366 to 0-1. Dependent variables are also scaled to range from 0-1. Vote Choice is a dummy variable scored 0=vote for McGovern and 1=vote for Nixon. Shown for that dependent variable is the estimated change in the probability of a Nixon vote as lottery number ranges from 1 to 366, along with the *p*-value of the test on the probit coefficient. Probit coefficients and robust-clustered standard errors for the three regressions, in turn, are -.62 (.29), -.99 (.35), and .28 (.50). Ideology, Issue Attitudes, and Party ID range from liberal/Democratic (0) to conservative/Republican (1). Entries for these dependent variables are OLS unstandardized coefficients with robust SEs in parenthesis. Cases are male respondents who had not served in the military as of 1969. “College-Bound” are those taking college preparatory courses in 1965. Placebo Test Results: Coefficients on lottery number for women across the dependent variables are .11 (p=.22), -.04 (p=.13) -.04 (p=.14), -.04 (p=.21), and -.05 (p=.06). Probit pseudo-R<sup>2</sup>s are McKelvey-Zavoina estimates of the proportion of the variance in the latent variable that is explained.

Table 5  
A Multivariate Analysis of 1972 Vote Choice, Presidential Candidate Evaluations, and Issue Attitudes  
College-Bound Only

	Vietnam Attitude Index	Vote Choice Nixon vs. McGovern	Rating of Nixon vs. McGovern	Composite Issue Attitude Index	Political Ideology Index	Party Identification
	(n=197)	(n=163)	(n=163)	(n=198)	(n=146)	(n=200)
Lottery Number	.18 (.08) p=.027	.44 p=.005	.15 (.05) p=.003	.13 (.06) p=.042	.15 (.06) p=.020	.03 (.06) p=.624
Party ID as of 1965	-.02 (.07) p=.750	.36 p=.001	.05 (.03) p=.074	.02 (.04) p=.696	.03 (.04) p=.518	.31 (.08) p=.000
Issue Attitudes as of 1965	.57 (.12) p=.000 R <sup>2</sup> =.133	.63 p=.000 Pseudo R <sup>2</sup> =.151	.33 (.07) p=.000 R <sup>2</sup> =.254	.36 (.07) p=.000 R <sup>2</sup> =.156	.33 (.07) p=.000 R <sup>2</sup> =.137	.37 (.04) p=.000 R <sup>2</sup> =.269

*Note:* Lottery number is rescaled from 1-366 to 0-1. The dependent variables are scaled to run from 0 (liberal/Democratic) to 1 (conservative/Republican). The Vote Choice equation was estimated with Probit. Shown for that dependent variable is the estimated change in the probability of a Nixon vote if the X in question changed from 0-1, holding the other two Xs at their means. The *p*-value is from the test on the probit coefficient. Probit coefficients and robust-clustered standard errors for the three predictors, in turn, are -1.18 (.42), -1.99 (.55), and -.96 (.27). Entries shown for the other dependent variables are unstandardized coefficients from OLS, with robust clustered SEs in parenthesis. Cases are college-bound (those whose 1965 high school curriculum was college preparatory) male respondents who had not served in the military as of 1969. Probit pseudo-R<sup>2</sup>s are McKelvey-Zavoina estimates of the proportion of the variance in the latent variable that is explained.

Table 6  
The Effect of Lottery Number on Partisan Political Activity  
College-bound Only

	Anti-Nixon or Pro-McGovern Participation	Pro-Nixon or Anti-McGovern Participation
	(n=258)	(n=258)
Lottery Number	-.32 P=.001	.12 p=.190
Party ID as of 1965	-.22 p=.003	.03 p=.732
Issue Attitudes as of 1965	-.19 p=.073	.18 p=.119
	Pseudo R <sup>2</sup> =.141	Pseudo R <sup>2</sup> =.032

*Note:* Lottery number is rescaled from 1-366 to 0-1. The dependent variables are binary. In the first column, the variable is scored 1 if the respondent participated in an anti-Nixon/pro-McGovern activity. In the second column, the variable is scored 1 if the respondent participated in a pro-Nixon/anti-McGovern activity. In each case, possible activities included: trying to influence someone's vote, attending a meeting or rally, wearing a button or displaying a bumper sticker or sign, writing a letter to the editor, or giving money. Equations were estimated with Probit. Shown for each dependent variable is the estimated change in the probability of the dependent variable if the X in question changed from 0-1, holding the other two Xs at their means. The *p*-value is from the test on the probit coefficient. Probit coefficients and robust-clustered standard errors for the three predictors, in turn, are: Anti-Nixon— -.99 (.28), -.70 (.23), and -.69 (.39); Pro-Nixon: .38 (.29), .10 (.29), .63(.41). Cases are college-bound (those whose 1965 high school curriculum was college preparatory) male respondents who had not served in the military as of 1969. Probit pseudo-R<sup>2</sup>s are McKelvey-Zavoina estimates of the proportion of the variance in the latent variable that is explained.

Table 7

Estimation of Effect of Vietnam Attitudes on Relative Thermometer Scores for Nixon and McGovern

	OLS	TOLS
Coefficient	.30	.62
Standard Error	(.03)	(.21)
Significance	.000	.005

*Note:* Independent variable is composite 1973 Vietnam dove-hawk index. TOLS analysis uses lottery number as an instrument for Vietnam attitude. All results for college-bound (those whose 1965 high school curriculum was college preparatory) males who did not enter military service prior to 1969. Standard errors are clustered standard errors. Variables are coded using the 0-1 range. N=187.

Table 8  
 Predicting Composite Vietnam Attitudes  
 from Lottery Number, Actual Military Service, and Educational Attainment, 1973.

	Vietnam Attitude Index
	(n=256)
Lottery Number	.25 (.07) p=.001
Military Service (1=Yes, 0=No)	.04 (.04) p=.312
Educational Attainment, 1973 (1=College degree, 0= Less)	-.13 (.10) p=.191
	R <sup>2</sup> =.048

*Note:* All results for college-bound (those whose 1965 high school curriculum was college preparatory) males who did not enter military service prior to 1969. Standard errors are clustered standard errors. All variables are scaled 0-1.

Table 9  
 Long-Term Effects of 1969 Lottery on Political Attitudes?  
 College-Bound (in 1965) Only

	1973	1982	1997
Was Vietnam War a Mistake? (n=180)	.27 (.10) p=.010 R <sup>2</sup> =.034	.19 (.10) p=.052 R <sup>2</sup> =.018	.25 (.09) p=.005 R <sup>2</sup> =.032
Feelings Toward the Military (n=137)	.19 (.06) p=.002 R <sup>2</sup> =.066	.07 (.06) p=.235 R <sup>2</sup> =.009	.01 (.06) p=.852 R <sup>2</sup> =.000
Rating of Republican vs. Democratic Presidential Candidates (n=186)	.14 (.05) p=.004 R <sup>2</sup> =.062	.01 (.06) p=.861 R <sup>2</sup> =.000	.03 (.05) p=.551 R <sup>2</sup> =.002
Political Ideology Index (n=180)	.11 (.05) p=.034 R <sup>2</sup> =.022	.02 (.06) p=.729 R <sup>2</sup> =.001	-.02 (.06) p=.715 R <sup>2</sup> =.001
Composite Issue Attitude Index (n=180)	.12 (.06) p=.044 R <sup>2</sup> =.028	.05 (.06) p=.397 R <sup>2</sup> =.005	.04 (.05) p=.414 R <sup>2</sup> =.004

*Note:* Data are from the 4-wave youth panel file. The dependent variables are scaled to run from 0 to 1, as described in footnote 23. Cases are college-bound (those whose 1965 high school curriculum was college preparatory) male respondents who had not served in the military as of 1969. Entries shown are unstandardized coefficients from OLS. Robust SEs, which take into account the clustering (by school) in the data, are shown in parenthesis.



Table 10

Explaining Party Identification of Lottery-Eligible College-Bound Men in 1973  
from 1965 Party Identification, Lottery Number, and their Interaction

	b	standard error	p-value
	(n=294)	(n=288)	(n=387)
Party Identification, 1965	.133	.113	.240
Lottery Number	-.139	.087	.160
Party ID x Lottery Number	.429	.173	.016
Intercept	.352	.056	.000

*Note:* N=259, adjusted R-squared=.204. The additive variables are scaled to run from 0 to 1, as described in the notes to the previous tables. Cases are college-bound (taking college preparatory classes in 1965) male respondents who had not served in the military as of 1969. Entries shown are unstandardized coefficients from OLS. Robust SEs, which take into account the clustering (by school) in the data, are shown in parenthesis. The 0.352 intercept indicates the mean 1973 party ID among respondents with the lowest lottery number who were strong Democrats in 1965. The -0.139 coefficient for Lottery Number implies that among strong Democrats as of 1965, those with high lottery numbers were slightly more Democratic than low lottery numbers in 1973, but that difference is not statistically significant.

Table 11

1973 Party Identification by 1965 Party Identification by Lottery Number among Eligible College-Bound Men with College-bound Women as a Control

1973 PID:	Men with Lottery Number in the Lowest Third			Men with Lottery Number in the Highest Third			Women		
	1965 PID:			1965 PID:			1965 PID:		
	D	I	R	D	I	R	D	I	R
Democrat	38	21	19	62	12	13	63	24	18
Independent	52	68	57	35	69	42	27	52	38
Republican	10	12	24	3	19	46	9	24	44
(N)	(21)	(34)	(21)	(34)	(26)	(24)	(130)	(99)	(77)

*Note:* Men and women included in the analysis were all college-bound in 1965 (taking college preparatory courses). Men who entered military service before 1969 are excluded. Entries are column percents, summing to 100%. The Democrat and Republican categories include “strong” and “weak” partisans, while the Independent category includes partisan leaners as well as pure Independents. “Low” Lottery Numbers are the most vulnerable to the draft. Results for middle third of lottery numbers are not shown.

Table 12

Predicting Party Identification and Presidential Voting from 1965 Party Identification among Men by Lottery Number and for Women

	Men, Sorted by Draft Lottery Number			Women
	Low (1-122)	Medium (123-244)	High (245-366)	
<i>Regression Coefficient (OLS)</i>				
Party ID in 1973	.21	.34	.49	.43
Party ID in 1982	.25	.28	.51	.43
Party ID in 1997	.02	.08	.28	.32
<i>Marginal Effect (Probit)</i>				
Vote for President 1972	-.05	.33	.55	.38
Vote for President 1980	.11	.09	.61	.30
Vote for President 1996	-.08	-.06	.38	.30

*Note:* Men and women included in the analysis were all college-bound in 1965 (taking college preparatory courses). Men who entered military service before 1969 are excluded. Marginal effects from probit represent the estimated differential in the probability of a Republican vote by strong Democrats versus strong Republicans. The 1973 data analysis is based on the two-wave panel. The analysis from later waves is based on the four-wave panel. Respondents were 26, 35, and 50 years old in 1973, 1982, and 1996, respectively. Minimum cell entry = 42 cases.

## References

- Angrist, J. 1991. "The Draft Lottery and Voluntary Enlistment in the Vietnam Era." *Journal of the American Statistical Association*, 86 (415), 584-595.
- Angrist, J. 1990. "Lifetime Earnings and the Vietnam Era Draft Lottery: Evidence from Social Security Administrative Records." *The American Economic Review*, 80 (3), 313-336.
- Apsler, R. 1972. "Effects of the Draft Lottery and a Laboratory Analogue on Attitudes." *Journal of Personality and Social Psychology*, 24: 262-272.
- Baskir, L. & Strauss, W. 1978. *Chance and Circumstance: the Draft, the War, and Vietnam Generation*. New York: Alfred A. Knopf.
- Bergen, D. 2009. "The Draft Lottery and Attitudes Toward the Vietnam War." *Public Opinion Quarterly*, 73: 379-384.
- Cacioppo, J. T. & Gardner, W. L. 1999. "Emotion." *Annual Review of Psychology*, 50: 191-214.
- Card, D. & Lemieux, T. 2001. "Going to College to Avoid the Draft: The Unintended Legacy of the Vietnam War." *The American Economic Review*, 91 (2), 97-102
- Citrin, J. & Green, D. P. 1990. "The Self-Interest Motive in American Public Opinion." *Research in Micropolitics*, 3: 1 - 28.
- Chong, D., Citrin J., & Conley P. 2001. "When Self-Interest Matters." *Political Psychology*, 22 (3): 541-570.
- Dolan, R. J. 2002. "Emotion, Cognition, and Behavior." *Science*, 298: 1191-1194.
- Dunning, T. 2008. "Improving Causal Inference: Strengths and Limitations of Natural Experiments." *Political Research Quarterly*, 61 (2), 282-293.
- Edgington, E. S. and P. Onghena. 2007. *Randomization Tests*. Boca Raton, Taylor and Francis Group. 4<sup>th</sup> ed.
- Foley, Michael S. 2003. *Confronting the War Machine: Draft Resistance During the Vietnam War*. Chapel Hill, NC: University of North Carolina Press.
- Frank, D. H. 2007. "As Luck Would Have It: The Effect of the Vietnam Draft Lottery on Long-Term Career Outcomes." INSEAD Faculty & Research Working Paper.
- Gartner, S., Segura, G., & Wilkening, M. 1997. "All politics are local: Local losses and individual attitudes toward the Vietnam War." *Journal of Conflict Resolution*, 41(5), 669-694.
- Green, D. P. & Gerkin, A. E. 1989. "Self-Interest and Public Opinion toward Smoking Restrictions and Cigarette Taxes." *Public Opinion Quarterly*, 53: 1-16.
- Hallin, D. C. 1984. "The Media, the War in Vietnam, and Political Support: A Critique of the Thesis of an Oppositional Media." *Journal of Politics*, 46 (1), 2-24.

- Hearst, N. & Newman, T. B. 1988. "Proving Cause and Effect in Traumatic Stress: The Draft Lottery as a Natural Experiment." *Journal of Traumatic Stress*, 1 (2), 173-180.
- Huddy, L., Feldman, S. & Cassese, E. 2007. "On the Distinct Political Effects of Anxiety and Anger." In *The Affect Effect*, eds. W. Russell Neuman, George E. Marcus, Ann N. Crigler, and Michael MacKuen. Chicago: University of Chicago Press, pp. 124-151.
- Imai, K., Keele, L., & Yamamoto, T. 2009. "Identification, Inference, and Sensitivity Analysis for Causal Mediation Effects." Unpublished paper.
- Izard, C.E. 2009. "Emotion Theory and Research: Highlights, Unanswered Questions, and Emerging Issues." *Annual Review of Psychology*, 60: 1-25.
- Jennings, M. K. & Niemi, R. G. 1974. *The Political Character of Adolescence: The Influence of Families and Schools*. Princeton: Princeton University Press.
- Jennings, M. K. & Markus, G. B. 1977. "The Effect of Military Service on Political Attitudes: A Panel Study." *American Political Science Review*, 71 (1): 131-147.
- Longino, C. F., Jr. 1973. "Draft Lottery Numbers and Student Opposition to War." *Sociology of Education*, 46: 499-506.
- Krosnick, J. A. 1990. "Government policy and citizen passion: A study of issue publics in contemporary America." *Political Behavior*, 12 (1): 59-92.
- Lau, R. R., Brown T.A., & Sears, D. O. 1978. "Self-Interest and Civilians' Attitudes Toward the Vietnam War." *The Public Opinion Quarterly*, (42) (4): 464-483.
- McKelvey, R.D. and W. Zavoina. 1975. "A Statistical Model for the Analysis of Ordinal Level Dependent Variables." *Journal of Mathematical Sociology* 4: 103-120. Reprinted as Chapter 8 in *Positive Changes in Political Science: The Legacy of Richard D. McKelvey's Most Influential Writings*, (John H. Aldrich, James E. Alt, and Arthur Lupia, eds). pp. 143-164. Ann Arbor: University of Michigan Press, 2007.
- Marcus, G. E., Neuman, W. R., & MacKuen, M. 2000. *Affective Intelligence and Political Judgment*. Chicago: University of Chicago Press.
- Mann, L. & Dashiell, T. C. 1975. "Reactions to the Draft Lottery: A Test of Conflict Theory." *Human Relations*, 28 (2): 155-173.
- Markus, G. B. 1979. "The Political Environment and the Dynamics of Public Attitudes: A Panel Study." *American Journal of Political Science*, 23: 338-59.
- Marshall, B. 1967. "In Pursuit of Equity: Who Serves When Not All Serve?" Report of the National Advisory Commission on Selective Service. Washington, DC: U. S. GPO.
- Mercer, J. 2005. "Prospect Theory and Political Science." *Annual Review of Political Science*, 8: 1-21.
- Morris, B. E. 2006. *The Effects of the Draft on U.S. Presidential Approval Ratings During the Vietnam War, 1954-1975*. Ph.D. Dissertation. University of Alabama.

- Mueller, J. 1973. *War, Presidents and Public Opinion*. New York: John Wiley and Sons.
- Nichols, A. & Shaffer, M. E. 2007. "Clustered Standard Errors in Stata." United Kingdom Stata Users' Group Meeting 2007. #07. Stata Users Group.
- Rostker, B. 2006. *I Want You! The Evolution of the All-Volunteer Force*. Santa Monica, CA: The Rand Corporation.
- Schuman, H. 1972. "Two Sources of Antiwar Sentiment in America." *American Journal of Sociology*, 78: 513-36.
- Sears, David O. and Carolyn L. Funk. 1990. "Self-Interest in Americans' Political Opinions." In *Beyond Self-Interest*, ed. Jane J. Mansbridge. Chicago: University of Chicago Press.
- Sempel, R. B. Jr. 1970. "Nixon Abolishes Draft Deferment for Fatherhood." *New York Times*, April 23.
- Tarr, C. W. 1981. *By the Numbers: The Reform of the Selective Service System 1970-1972*. Washington DC: National Defense University Press.
- Zaller, John. 1992. *The Nature and Origins of Mass Opinion*. Cambridge,UK: Cambridge University Press.