

# Replication Data for:

## Weather, Risk, and Voting: an Experimental Analysis of the Effect of Weather on Vote Choice

In the sections that follow, I report the experimental procedures and the experimental task (section A.1), the mathematical quiz (section A.2), the PANAS-X form (section A.3), and the the biographical/political questionnaire (section A.4). Section A.5 reports the statistics for the weather and the subjects. Section A.6 reports two control checks to investigate whether the results are sensitive to a specific experimental session, and whether the presence of a contextualized frame significantly affects the decisions of the participants.

### **A.1. Experimental procedures**

The experimental subjects were students and University employees who had enrolled in the e-recruit subject pool voluntarily by completing a form online indicating their interest in participating in experiments. Participation was solicited by e-mail. Subjects were only

told that they would participate in an “experiment about decision making under uncertainty” without any reference to the effect of weather. No exclusion criteria was applied and all experimental subjects who signed up were allowed to participate in one session of the experiment. No participant was allowed to participate more than once. Recruitment was

The experiment was conducted by paper and pencil in a classroom of the Kenan-Flagler Business School at the University of North Carolina at Chapel Hill. The classroom had amphitheater-style seating and large windows that allowed for visual exposure to the outside weather conditions. The same classroom was used in all experimental sessions, and all sessions were run at the same time of the day (from 2:00 p.m. to 3:30 p.m., approximately).

Upon arrival, subjects were given a consent form and a unique subject number, which identified them during the experiment, and they were assigned to separate workplaces, spaced far enough apart that subjects could not observe what other subjects were doing.

Subjects were asked to complete 20 sets of decision problems, representing 20 different elections between two candidates. The experiment required each participant to cast a vote for one of the two candidates in each election. Instructions were given to the subjects and were read aloud. There was no time limit for reading the instructions, and subjects had the opportunity to ask questions in private. A monitor was present to answer questions and to ensure that the subjects did not communicate with each other. After the subjects made their decisions, experimental personnel went to each subject individually to randomly determine his/her payoff by a fair throw of a twenty-sided die (to select one of the twenty elections) and a coin toss (to select the winning candidate).

Following the decision-making task, subjects were asked to complete a questionnaire

about biographical information and political attitudes. Subjects were paid in private after completing this questionnaire.

Beginning with the sessions in August 2012, subjects were also asked to complete a PANAS-X form and a mathematical quiz. Both forms (first the PANAS-X and then the mathematical quiz) were administered to the subjects immediately after the subjects made their decisions in the 20 sets of elections and before calculating their payoffs.

In the sections that follow, I report the scripts of the experimental task (section A.1), the mathematical quiz (section A.2), the PANAS-X form (section A.3), and the the biographical/political questionnaire (section A.4). Section A.5 reports the statistics for the weather and the subjects. Section A.6 reports two control checks to investigate whether the results are sensitive to a specific experimental session, and whether the presence of a contextualized frame significantly affects the decisions of the participants.

## Experimental task

**Background:** Suppose there is a continent consisting of five nations, Alpha, Beta, Gamma, Delta, and Epsilon. The nations all have very similar systems of government and economics, are members of a continental common market, and are therefore expected to produce very similar standards of living and rates of inflation. Imagine you are a citizen of Alpha, which is about to hold its presidential election between the incumbent Mr. I and the challenger Mr. C. The two candidates have similar policy preferences and they differ from each other primarily in their expected performance once elected (i.e., capability of implementing the policies). Mr. I's performance has been observed and measured through the realized standard of living index (SLI). The SLI measures the goods and services consumed (directly or indirectly) by the average citizen yearly. It is expressed in dollars per capita so that the higher the SLI the higher the level of economic prosperity. The performance of Mr. C. is unknown and can only be forecasted by looking at his past experience and expertise. The expected performance of Mr. C. has been studied by Alpha's two leading experts, who are of equal expertise and are impartial as to the result of the election. After studying the past performance and experience of Mr. C, each expert makes a forecast. The forecast consists of a prediction about the expected standard of living index (SLI) in the case that Mr. C wins the election.

	Projected SLI in Dollars per Capita
	Mr. C
Expert 1	\$66,000
Expert 2	\$42,000

**Instructions:** You are a citizen of Alpha; you are asked to cast your vote for Mr. C or Mr. I. The projected SLI per capita in the case that Mr. I wins the election and the projected SLI per capita of the other four nations will be specified in 20 different scenarios in the following 8 decision sheets. Suppose that your vote is decisive and that whoever you vote for will win the election. The SLI produced by the winner of the election has a 50% chance of being equal to the forecast of Expert 1 and a 50% chance of being equal to the forecast of Expert 2. Before you make your choice, please let me explain how this choice will affect your earnings for this part of the experiment. Here are a 20-sided die and a coin that will be used to determine payoffs. After you have made all of your choices, first we will roll the die to select one of the 20 scenarios to be used, and second we will toss the coin to determine what the realization of SLI is. If the coin lands heads up, the SLI is equal to the forecast of Expert 1; if it lands heads down, the SLI is equal to the forecast of Expert 2. Even though you will make twenty decisions, only one of these will end up affecting your earnings, but you will not know in advance which decision will be used. Obviously, each decision has an equal chance of being used in the end. Earnings in experimental points will be converted at a rate of \$1000 SLI = 20 cents. You will be paid all earnings in cash when we finish. Please look at the questions on the attached decision sheets. You will now have to cast a vote, in each of the possible scenarios, either for Mr. C or Mr. I. Please do not talk with anyone while doing this; raise your hand if you have a question.

The following tables describe the forecasts made by each expert for each possible scenario:

1. The SLI to be expected if Mr. C wins the election,
2. The SLI to be expected if Mr. I wins the election, and
3. The average SLI of the four other nations Beta, Gamma, Delta, and Epsilon.

Scenario #1	Projected SLI in Dollars per Capita		
	Mr. C	Mr. I	Other Four Nations
Expert 1	\$66,000	\$42,000	\$42,000
Expert 2	\$42,000	\$42,000	\$42,000

On the basis of the information provided, whom would you vote for? (check one)

I would vote for Mr. C.
  I would vote for Mr. I.

Nine scenarios follow, with payoffs changing according to table 1 in the main text. After the tenth scenario, this additional instruction was displayed to the subjects:

In the next 10 scenarios, the projected SLI per capita of Mr. I and the other four nations changes.

Scenario #11	Projected SLI in Dollars per Capita		
	Mr. C	Mr. I	Other Four Nations
Expert 1	\$66,000	\$42,000	\$66,000
Expert 2	\$42,000	\$42,000	\$66,000

On the basis of the information provided, whom would you vote for? (check one)

I would vote for Mr. C.
  I would vote for Mr. I.

Once again, nine scenarios follow with payoffs changing according to table 1 in the main text.

## A.2. Mathematical quiz

Please answer the 20 following questions. When you are done answering, we will collect the sheets and reward you \$0.25 for each correct answer, and \$0 for each wrong answer that you provided. You can earn up to \$5.00 from this part of the experiment.

1. What is the average of 1 and 3?
2. What is the average of 2 and 6?
3. Compute the ratio of the answers to question 2 and question 1.
4. Please calculate  $0.5 \times 8$ :
5. Please calculate  $(0.8 \times 1 + 0.2 \times 6)$ :
6. If you have a 50% probability of winning \$1, and a 50% probability of winning \$3: how large is the difference between the two possible outcomes?
7. If you have a 50% probability of winning \$2, and a 50% probability of winning \$6: how large is the difference between the two possible outcomes?
8. Compute the ratio of the answers that you provided for question 7 and question 6.
9. Suppose that a flip of a fair coin gives you a win of \$1 if it lands heads up and \$3 if it lands heads down. If you flip the coin over and over, keeping track of the results, what is the average of all the wins?
10. Suppose that a flip of a fair coin gives you a win of \$2 if it lands heads up and \$6 if it lands heads down. If you flip the coin over and over, keeping track of the results, what is the average of all the wins?
11. Please calculate  $0.5x(3 - 1)^2$ :
12. Please calculate  $0.8x(1) + 0.2x(16)$ :
13. If you have a 40% probability of winning \$1, and a 60% probability of winning \$6: what is your average win?
14. If you have a 60% probability of winning \$2, and a 40% probability of winning \$7: what is your average win?
15. Compute the ratio of the answers that you provided in the two previous questions.
16. Please calculate  $4^2/8$ :
17. If you have a 40% probability of winning \$1, and a 60% probability of winning \$6: how large is the spread between the two possible outcomes?
18. If you have a 60% probability of winning \$2, and a 40% probability of winning \$7: how large is the spread between the two possible outcomes?
19. Compute the ratio of the answers that you provided in the two previous questions.
20. Please calculate  $0.8x(1^2) + 0.2x(4^2)$ :

### A.3. PANAS-X form

This scale consists of a number of words and phrases that describe different feelings and emotions. Read each item and then mark the appropriate answer in the space next to that word. Indicate to what extent you have felt this way today. Use the following scale to record your answers:

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>very slightly or not at all</b>	<b>a little</b>	<b>moderately</b>	<b>quite a bit</b>	<b>extremely</b>

_____ cheerful	_____ sad	_____ active	_____ angry at self
_____ disgusted	_____ calm	_____ guilty	_____ enthusiastic
_____ attentive	_____ afraid	_____ joyful	_____ downhearted
_____ bashful	_____ tired	_____ nervous	_____ sheepish
_____ sluggish	_____ amazed	_____ lonely	_____ distressed
_____ daring	_____ shaky	_____ sleepy	_____ blameworthy
_____ surprised	_____ happy	_____ excited	_____ determined
_____ strong	_____ timid	_____ hostile	_____ frightened
_____ scornful	_____ alone	_____ proud	_____ astonished
_____ relaxed	_____ alert	_____ jittery	_____ interested
_____ irritable	_____ upset	_____ lively	_____ loathing
_____ delighted	_____ angry	_____ ashamed	_____ confident
_____ inspired	_____ bold	_____ at ease	_____ energetic
_____ fearless	_____ blue	_____ scared	_____ concentrating
_____ disgusted with self	_____ shy	_____ drowsy	_____ dissatisfied with self

#### General Dimension Scales

Negative Affect: afraid, scared, nervous, jittery, irritable, hostile, guilty, ashamed, upset, distressed

Positive Affect: active, alert, attentive, determined, enthusiastic, excited, inspired, interested, proud, strong

## A.4. Questionnaire

1. In what year were you born?
2. What is your gender? Male (1) or Female (2)
3. Which racial or ethnic group do you most identify yourself with?
  - (a) White/Caucasian
  - (b) Black or African American
  - (c) Hispanic/Latino
  - (d) American Indian and Native Alaskan
  - (e) Asian
  - (f) Native Hawaiian or Other Pacific Islander
  - (g) Multiracial
4. What is your marital status?
  - (a) Married
  - (b) Single
  - (c) Divorced
  - (d) Widowed
  - (e) Other
5. How would you best describe your current employment situation?
  - (a) Full-time employment outside of school
  - (b) Part-time employment outside of school
  - (c) Student only
  - (d) Work at school research assistantship
  - (e) Other part-time work at school
6. What is your major?
7. In what year are you classified in the current semester?
  - (a) Freshman
  - (b) Sophomore
  - (c) Junior
  - (d) Senior
  - (e) Master's student
  - (f) Law student



- (g) Doctoral student
  - (h) Faculty or other non-student
8. Please indicate the category that best describes your personal income or endowment from all sources before all taxes in 2010.
- (a) \$0–\$5,000
  - (b) \$6,000–\$15,000
  - (c) \$16,000–\$30,000
  - (d) \$31,000–\$45,000
  - (e) \$46,000–\$60,000
  - (f) \$60,000+
9. Please indicate the category that best describes your household/family income from all sources before all taxes in 2010.
- (a) \$0–\$40,000
  - (b) \$40,001–\$80,000
  - (c) \$80,001–\$120,000
  - (d) \$120,001–\$160,000
  - (e) \$160,001–\$200,000
  - (f) \$200,000+
10. How many people are in your household? (yourself and those who share your income and expenses)
11. Please circle the highest education level achieved by either of your parents/guardians?
- (a) Some high school
  - (b) High school diploma
  - (c) Some college
  - (d) Bachelor’s degree
  - (e) Master’s or professional degree
  - (f) Doctorate or post-doctorate
12. In what country were you born?
13. In what country have you lived the longest?
14. How interested are you in information about what’s going on in government and politics? From 1 (uninterested) to 7 (very interested).
15. How much can people like you affect what the government does? From 1 (no effect) to 7 (large effect).
16. On the following scale, please describe your political leaning from 1 (most liberal) to 7 (most conservative.)

17. Do you support, oppose, or neither support nor oppose the Tea Party movement? From 1 (oppose) to 7 (support), with 4 (neutral).
18. How much of the time do you think you can trust the federal government in Washington DC to do what is right: just about always, most of the time, or only some of the time? From 1 (never) to 7 (always).
19. On the following scale, please circle the number representing the US political party you most agree with. (1 = agree completely with Democrats, 7 = agree completely with Republicans)
20. Did you vote in the last presidential election?
21. If you did vote, which candidate did you vote for?
  - (a) Democratic
  - (b) Republican
  - (c) Other

In questions 22–24, please list the percent chance that you will vote in the following elections. The percent chance can be thought of as the number of chances out of 100. For example, numbers like 2 and 5 percent may be “almost no chance,” 20 percent or so may mean “not much chance,” a 45- or 55-percent chance may be a “pretty even chance,” 80 percent or so may mean a “very good chance,” and a 95- or 98-percent chance may be “almost certain.”

22. What is the percent chance that you will vote in the legislative elections this November?
23. What is the percent chance that you will vote in the 2012 presidential primary?
24. What is the percent chance that you will vote in the 2012 presidential election?
25. Overall would you say the economic stimulus was good for the economy, bad for the economy, or neither good nor bad for the economy? From 1 (mostly bad) to 7 (mostly good), with 4 (neither good nor bad).
26. So far as you and your family are concerned, how worried are you about your current financial situation? From 1 (Not at all worried) to 7 (Extremely worried).
27. Now thinking about the economy in the country as a whole, would you say that as compared to one year ago, the nation’s economy is now better, about the same, or worse? From 1 (much worse) to 7 (much better), with 4 (about the same).
28. What about 12 months from now? Do you think the economy, in the country as a whole, will be better, about the same, or worse in 12 months? From 1 (much worse) to 7 (much better), with 4 (about the same).
29. Do you play lotteries? How often?
  - (a) Once a week or more
  - (b) Once a month
  - (c) Once a year
  - (d) Never

30. Do you gamble? How often?
- (a) Once a week or more
  - (b) Once a month
  - (c) Once a year
  - (d) Never
31. Do you think of yourself as a religious person? Yes (1) or No (2)
32. Do you attend religious services?
- (a) Never
  - (b) Only for special occasions (weddings, etc.)
  - (c) Once or twice per year
  - (d) Once a month
  - (e) Every other week
  - (f) Once a week
  - (g) More than once a week
33. If yes, what religion do you observe?
- (a) Christianity
  - (b) Judaism
  - (c) Islam
  - (d) Buddhism
  - (e) Hinduism
  - (f) Unaffiliated (Atheist or Agnostic)
34. Describe your health, from 1 (poor) to 7 (very good), with 4 (fair).
35. How happy do you feel today?
- (a) Depressed
  - (b) Unhappy
  - (c) Not too happy
  - (d) Ok
  - (e) Fairly happy
  - (f) Pretty happy
  - (g) Very happy
36. How do you feel about the weather today?
- (a) Terrible
  - (b) Yucky

- (c) Poor
- (d) Fair
- (e) Nice
- (f) Good
- (g) Awesome

37. Do you think the weather is going to be poorer or better in the next few weeks? From 1 (much poorer) to 7 (much better), with 4 (same).

## A.5. Experimental statistics

In table A.1 I report the weather statistics for each day in which an experimental session was run (each column describes one experimental session). The first panel reports the date and the number of subjects participating in the experimental session. Subjects have been randomly allocated with one exception: all subjects registered for the experimental sessions ran in the first week of December 2011 have been allocated to participate in the good weather treatment because of classroom unavailability issues. To balance the sample, I allocated all the subjects registered for the following sessions of experiments (January 2012) to the bad weather treatment (the results are robust to excluding both sessions). The second panel reports the sky conditions from sunrise (approximately 7 a.m.) to the time the experiment ended (4 p.m.). The last row in this panel reports the percentage of time the sky was relatively more clear (clear, scattered cloudy, or partly cloudy) than overcast (mostly cloudy, overcast, light rain, rain, thunderstorm). The third panel presents the daily average, minimum, and maximum temperatures. The fourth panel presents the daily average, minimum, and maximum humidity, along with the dew point. The fifth panel presents the daily barometric pressure and rainfall.

TABLE A.1: Actual weather statistics

<b>Experimental sessions</b>																		
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>	<b>17</b>	<b>18</b>
Month	12	01	02	02	08	08	08	09	09	09	09	09	09	09	09	09	01	01
Day	01	23	06	16	16	22	23	04	05	06	07	10	17	18	19	21	28	30
Year	2011	2012	2012	2012	2012	2012	2012	2012	2012	2012	2012	2012	2012	2012	2012	2012	2013	2013
<i>N</i>	10	11	23	6	15	3	4	6	10	5	9	4	10	3	8	6	20	13
<b>Sky conditions (minutes of each sky condition from 7 a.m. to 4 p.m.)</b>																		
<i>Clear</i>	540	0	0	60	240	0	278	0	0	0	0	360	0	0	0	480	0	0
<i>Scatt.Cl.</i>	0	0	180	0	120	0	0	47	0	11	74	60	0	0	0	0	0	0
<i>Part.Cl.</i>	0	0	240	60	0	0	120	136	0	117	182	0	0	0	0	0	0	0
<i>Most.Cl.</i>	0	0	120	180	60	198	142	133	282	203	92	120	18	0	120	60	67	60
<i>Overcast</i>	0	463	0	111	120	282	0	224	258	180	192	0	424	166	360	0	473	480
<i>Li.Rain</i>	0	77	0	121	0	60	0	0	0	0	0	0	98	202	60	0	0	0
<i>Rain</i>	0	0	0	8	0	0	0	0	0	0	0	0	0	103	0	0	0	0
<i>T.Storm</i>	0	0	0	0	0	0	0	0	0	29	0	0	0	69	0	0	0	0
<i>%Clear</i>	100%	0%	78%	22%	67%	0%	74%	34%	0%	24%	47%	78%	0%	0%	0%	89%	0%	0%
<b>Temperature</b>																		
<i>Ave</i>	44	43	39	49	78	72	75	80	78	77	66	70	72	63	68	42	67	77
<i>Min</i>	30	35	32	43	68	66	66	72	73	70	70	55	62	68	55	55	33	61
<i>Max</i>	54	52	46	55	88	78	84	88	86	88	86	78	79	77	80	50	72	72
<b>Humidity</b>																		
<i>Dew</i>	27	42	33	44	64	68	65	70	70	71	68	53	63	69	58	59	35	70
<i>Ave</i>	63	94	76	80	68	85	75	82	79	86	82	63	87	90	77	77	72	77
<i>Min</i>	30	87	52	51	43	69	46	49	61	62	55	39	66	82	53	50	54	65
<i>Max</i>	89	100	93	97	90	93	93	93	91	97	97	87	97	97	96	96	86	90
<b>Barometric pressure and precipitation</b>																		
<i>Press</i>	30.3	30.1	30.2	30.1	30.0	30.1	30.1	30.0	29.9	29.9	29.9	30.1	30.1	29.8	30.0	30.0	30.4	29.7
<i>Rain</i>	0	0.03	0	0.31	0	0	0	0.23	0	2.61	0	0	0.04	1.63	0.10	0	0.01	0.23

Notes. In this table I report the actual weather statistics for the days on which experimental sessions were run.

In table A.2 I report the characteristics of the subjects participating in the good and bad weather sessions, as self-reported in the biographical/political questionnaires. Good and bad weather are defined in terms of objective weather: good weather sessions are those run on days in which the sky was relatively more clear than overcast; bad weather sessions are those during which the sky was relatively more overcast. Good-weather and bad-weather session subjects appear to be very similar across all characteristics, suggesting that the randomization was successful in producing a balanced sample. The only notable difference seems to be the vote choice of the participants who turned out in the 2008 presidential election, although the subjects appear similar in terms of partisanship. The difference between partisanship and past vote choice might be due to the fact that most of the subjects were ineligible to vote in 2008 (and thus did not answer that question). When all participants' party preferences are included, the difference in party preferences between the good and bad weather treatments disappears.

In table A.3 I report a balance test that assesses whether the subjects who participated in the good and bad weather sessions share similar characteristics. The table reports the results of two regression analyses of the weather treatment (in terms of objective weather) on the subjects' characteristics: one in which the dependent variable is dichotomous (as in Table A.2) and one in which it is continuous. Each row reports the estimated coefficient for the associated covariate, with the number in square brackets representing the  $p$  value of the null hypothesis that the estimated coefficient is equal to zero. The last two rows reports the value of the F-test of overall significance and the associated P-value of the null hypothesis that the fits of the intercept-only model and the model with the covariates are equal.

TABLE A.2: Biographical characteristics

	Bad weather participants							Good weather participants						
	1	2	3	4	5	6	7	1	2	3	4	5	6	7
<b>Birth year</b> 1=(,70], 2=(70, 80], 3=(80, 90], 4=[91, 5=92, 6=93, 7=[94,95]	7.62	7.62	18.10	20.95	20.00	19.05	6.67	4.92	4.92	32.79	24.59	14.75	13.11	4.92
<b>Gender</b> 1=Male, 2=Female	32.38	66.62						31.15	68.85					
<b>Race</b> 1=White, 2=Black, 3=Hispanic, 4=Native Am., 5=Asian, 6=Pacific, 7=Other	50.48	21.90	6.67	0.00	17.14	0.95	2.86	55.74	26.23	0.00	0.00	14.75	0.00	3.28
<b>Marital status</b> 1=Married, 2=Single, 3=Divorced, 4=Widow, 5=Other	5.71	91.43	1.90	0.95	2.86			11.48	86.89	0.00	0.00	1.64		
<b>Employment</b> (1=Full-time outside, 2=Part-time outside, 3=Student, 4=Research assistant, 5=Other Part-time at school)	07.62	19.05	55.24	4.76	13.33			11.48	31.15	40.98	4.92	11.48		
<b>Major</b> 1=Natural Sc, 2=Humanities, 3=Social Sc, 4=Other	36.19	3.81	39.05	20.95				36.07	3.28	44.26	16.39			
<b>School year</b> 1=Fr, 2=So, 3=Jr, 4=Sr, 5=Grad, 6=Law, 7=Other	13.33	21.90	22.86	20.00	09.52	0.95	11.43	11.48	19.67	22.95	21.31	13.11	0.00	11.48
<b>Personal income</b> 1=[0-5], 2=(5-15], 3=(15-30], 4=(30-45], 5=(45-60], 6=(60-)	58.65	19.23	10.58	5.77	0.96	4.81	0.00	59.02	18.03	11.48	4.92	1.64	4.92	0.00
<b>Family income</b> 1=[0-40], 2=(40-80], 3=(80-120], 4=(120-160], 5=(160-200], 6=(200+)	30.48	24.76	23.81	8.57	5.71	6.67	0.00	26.23	24.59	22.95	6.56	13.11	6.56	0.00
<b>Family size</b> Actual size; 7=7 or more	11.38	15.24	17.14	31.43	19.05	2.86	1.90	13.11	13.11	9.84	40.98	16.39	3.28	3.28
<b>Parents' education</b> 1=some HS, 2=HS, 3=Some college, 4=College, 5=Master, 6=Doctorate	2.86	5.71	22.86	33.33	28.57	6.67		0.00	6.67	18.33	35.00	28.33	11.67	
<b>Area of birth</b> 1=North America, 2=South America, 3=Europe, 4=Asia, 5=Australia, 6=Africa	79.05	5.71	7.62	4.76	0.00	2.86		88.52	1.64	1.64	0.00	1.64	0.00	
<b>Area in which lived longest</b> 1=North America, 2=South America, 3=Europe, 4=Asia, 5=Australia, 6=Africa	90.48	2.86	3.81	0.95	0.00	1.90		95.08	0.00	1.64	0.00	0.00	0.00	
<b>Interest in politics</b> 1=Uninterested...7=Very interested	1.90	12.38	11.43	15.24	24.76	16.19	18.10	1.64	8.20	19.67	9.84	26.23	18.03	16.39
<b>Effectiveness of political participation</b> 1=No effect,...7=Large effect	1.90	15.24	15.24	27.62	21.90	11.43	6.67	0.00	16.39	22.95	9.84	34.43	9.84	6.56
<b>Political leaning</b> 1=Most liberal,...7=Most conservative	9.52	26.67	20.95	25.71	10.48	5.71	0.95	4.92	22.95	29.51	22.95	9.84	8.20	1.64
<b>Support for Tea Party movement</b> 1=Support,...7=Oppose	23.08	11.54	12.50	44.23	05.77	1.92	0.96	19.67	8.20	9.84	49.18	13.11	0.00	0.00
<b>Trust in federal government</b> 1=Never,...7=Always	2.86	13.33	27.62	33.33	18.10	4.76	0.00	14.75	14.75	18.03	27.87	19.67	1.64	3.28
<b>Partisan leaning</b> 1=Agree w/ Democrats, 10=Agree w/ Republicans	13.33	31.43	15.24	23.81	9.52	3.81	2.86	8.11	33.33	16.67	23.33	8.33	6.67	3.33
<b>Turnout in 2008 presidential election</b> 1=Yes, 2=No	46.15	53.85						36.07	63.93					

Vote in last presidential election 1=Democratic, 2=Republican, 3=Other	68.00	28.00	4.00							82.61	8.70	8.60				
Chance of voting in next legislative election 1=[0,20], 2=(20,40], 3=(40,60], 4=(60,80], 5=(80,100]	87.00	4.00	2.00	2.00	5.00					62.30	3.28	3.28	9.84	21.31		
Chance of voting in 2012 presidential. primary 1=[0,20], 2=(20,40], 3=(40,60], 4=(60,80], 5=(80,100]	76.00	0.00	6.00	8.00	10.00					51.11	6.67	8.89	4.44	28.89		
Chance of voting in 2012 presidential election 1=[0,20], 2=(20,40], 3=(40,60], 4=(60,80], 5=(80,100]	15.38	0.96	2.88	6.73	74.04					11.48	3.28	4.92	1.64	78.69		
Effectiveness of stimulus 1=Mostly bad,....,7=Mostly good	2.94	4.90	5.88	22.55	39.22	19.61	4.90			1.64	9.84	14.75	29.51	31.15	13.11	0.00
Concern over economy	8.74	18.45	23.30	6.80	18.45	17.48	6.80			3.28	14.75	9.84	13.11	32.79	16.39	9.84
1=Not at all,....,7=Extremely																
Economy compared to last year 1=Much worse,....,7=Much better	0.97	3.88	10.68	24.27	40.78	14.56	4.85			3.28	8.20	21.31	27.87	31.15	6.56	1.64
Economy trajectory (next year) 1=Much worse,....,7=Much better	0.00	1.96	8.82	24.51	40.20	21.57	2.94			1.64	3.28	18.03	19.67	44.26	9.84	3.28
Play lotteries 1=Once/week, 2=Once/mo, 3=Once/yr, 4=Never	1.94	5.83	30.10	62.14						0.00	1.64	19.67	78.69			
Gamble 1=Once/week, 2=Once/mo, 3=Once/yr, 4=Never	0.97	2.91	21.36	74.76						0.00	3.28	19.67	77.05			
Religiousness 1=Yes, 2=No	44.66	55.34								54.10	45.90					
Religious services attendance 1=Never, 2=Special occ, 3=Once/yr, 4=Once/mo, 5=Every oth wk, 6=Once/week, 7=More than once/week	26.21	19.42	11.65	13.59	8.74	11.65	8.74			19.67	18.03	11.48	14.75	9.84	19.67	6.56
Religious faith 1=Christianity, 2=Judaism, 3=Islam, 4=Buddism, 5=Hinduism, 6=Unaffiliated, 7=NA	56.70	3.09	0.00	2.06	1.03	34.02	3.09			74.55	1.82	0.00	1.82	1.82	2.00	0.00
Health 1=Poor,....,7=Very good	0.00	0.00	1.94	4.85	19.42	46.60	27.18			0.00	0.00	3.28	3.28	13.11	47.54	32.79
Happiness 1=Unhappy,....,7=Very happy	0.95	0.95	5.71	18.10	28.57	39.05	6.67			3.28	0.00	1.64	9.84	27.87	44.26	13.11
Today's weather assessment 1=Terrible,....,7=Awesome	4.76	13.33	22.86	20.00	15.24	20.95	02.86			1.64	6.56	13.11	19.67	16.39	24.59	18.03
Next week's forecasted weather 1=Much poorer,....,7=Much better	0.95	4.76	6.67	13.33	29.52	32.38	12.38			0.00	1.64	8.20	27.87	19.67	36.07	06.56

Notes. In this table I report the answers to the biographical/political questionnaire for subjects in good and bad weather sessions.



TABLE A.3: Balance test

	Weather dichotomous		Weather continuous	
Constant	2.60	[0.78]	2.76	[0.70]
Birth year	0.06	[0.55]	0.05	[0.51]
Gender	0.46	[0.71]	0.29	[0.76]
Race	0.13	[0.79]	0.15	[0.69]
Marital status	-1.86	[0.60]	-1.60	[0.56]
Employment	-0.52	[0.52]	-0.42	[0.50]
Major	0.02	[0.59]	0.01	[0.63]
School year	0.16	[0.49]	0.12	[0.48]
Personal income	-0.26	[0.59]	-0.20	[0.59]
Family income	0.02	[0.97]	-0.04	[0.91]
Family size	-0.05	[0.92]	-0.05	[0.89]
Parents' education	-0.26	[0.68]	-0.12	[0.79]
Area of birth (continent)	0.34	[0.45]	0.23	[0.48]
Living area (continent)	-0.01	[0.95]	0.03	[0.83]
Interest in politics	-0.19	[0.70]	-0.11	[0.76]
Effectiveness of political participation	-0.02	[0.97]	-0.05	[0.89]
Political leaning	-0.26	[0.61]	-0.24	[0.55]
Tea Party support	-0.15	[0.78]	-0.17	[0.68]
Trust in government	0.21	[0.65]	0.18	[0.61]
Partisan leaning	0.29	[0.70]	0.26	[0.64]
Turnout in last presidential election	4.39	[0.54]	3.79	[0.50]
Vote in last presidential election	-0.02	[0.57]	-0.01	[0.54]
Chance of voting in next legislative election	0.02	[0.48]	0.01	[0.59]
Chance of voting in next presidential primary	0.01	[0.62]	0.01	[0.59]
Chance of voting in next presidential election	-0.01	[0.85]	-0.01	[0.73]
Effectiveness of stimulus	-0.46	[0.52]	-0.42	[0.47]
Concern over economy	-0.11	[0.81]	-0.12	[0.74]
Economy compared to last year	0.01	[0.98]	0.12	[0.80]
Economy trajectory	0.27	[0.75]	0.06	[0.93]
Play lotteries	-1.76	[0.55]	-1.56	[0.50]
Play gambles	0.82	[0.57]	0.68	[0.54]
Religiousness	-0.88	[0.54]	-0.65	[0.54]
Religious services attendance	-0.41	[0.49]	-0.30	[0.49]
Religious faith	0.12	[0.61]	0.06	[0.72]
Health	-0.10	[0.87]	0.02	[0.97]
Happiness	-0.18	[0.80]	-0.22	[0.70]
Today's weather	0.44	[0.44]	0.37	[0.41]
Next weeks weather	0.05	[0.92]	0.07	[0.85]
N	6165		6165	
<i>F</i> test	0.488		0.486	
<i>p</i> value	0.839		0.840	

Notes - This table reports the results of two regression analyses of the weather treatment on the subjects' characteristics. The Weather dichotomous columns report the estimated coefficients of the explanatory variables and the *p* value of the null hypothesis that the estimated coefficient is equal to zero when the dependent variable is dichotomous (good or bad weather). The Weather continuous columns report the estimated coefficients and the *p* value of the null hypothesis that the estimated coefficient is equal to zero when the dependent variable is continuous (measured as the percentage of clear sky). The last two rows report the values of the *F* test of overall significance and the associated *p* of the null hypothesis that the fits of the intercept-only model and the model with the covariates are equal.

## A.6. Robustness checks

In table A.4 I report the results of a manipulation design to investigate whether the contextualized frame significantly affects the decisions of the participants. To test the effect of the context, I ran four experimental sessions in which I varied the task’s framing. An abstract frame in which the two candidates were called “Candidate X” and “Candidate Y” was used in two sessions (on April 24 and May 28, 2013), while the contextualized frame was used in two sessions ran the day after (April 25 and May 29, 2013). The results in table A.4 show no significant difference between the two framing treatments (  $p$  values of 0.60 for the observations pooled across prospect treatments). The prospect effect is significant at conventional levels ( $p$  value 0.02).

TABLE A.4: Average frequencies of votes for risk-free candidate

	<b>Contextualized treatment (Incumbent and Challenger)</b>	<b>Context-free treatment (Candidates “X” and “Y”)</b>	<b><math>p</math> value (Context)</b>
Positive prospect			
Avg. no. of votes	4.96	4.79	
Std. dev.	(0.35)	(0.25)	[0.697]
$N$	23	24	
Negative Prospect			
Avg. no. of votes	5.69	5.46	
Std. dev.	(0.37)	(0.26)	[0.593]
$N$	23	24	
Pooled			
Avg. no. of votes	10.65	10.25	
Std. dev.	(0.66)	(0.45)	[0.607]
$N$	23	24	
$p$ values (Prospects)		[0.023]	

Notes - In this table I report the average number of votes for the risk-free candidate, the standard deviation of the mean, and the number of observations across the ten elections for each prospect and each framing treatment, as well as for the observations pooled across prospects. The rightmost row reports the  $p$  value of the Welch test for the null hypothesis that the means in the positive and negative prospect treatments are equal. The last column reports the  $p$  value of the Welch test for the null hypothesis that the means in the contextualized and context-free treatments are equal.

In table A.5 I report the results of a sensitivity analysis. To assess whether the results are sensitive to observations from certain sessions, we estimate the effect of weather on vote choice with different subsets of the sample, each one excluding observations from one of the eighteen experimental sessions. The first panel presents the results of the sensitivity analysis using the subjective weather measure. The weather effect remains significant at the 1% level when I drop the observations from any of the experimental sessions. The second and third panels present the results using the objective weather and relative precipitation measures, respectively. The weather effect remains significant at the 5% level or less when the observations from any of the experimental sessions are dropped. The fourth panel presents the results using the absolute precipitation measure. In this case, the weather effect is still significant, but in a few cases the significance level drops to the 10% level.

TABLE A.5: Session sensitivity analysis

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
<b>Subjective weather</b>																		
$v_B$	12.56 (0.34)	12.68 (0.37)	12.68 (0.33)	12.40 (0.35)	12.55 (0.33)	12.44 (0.33)	12.55 (0.33)	12.55 (0.33)	12.55 (0.33)	12.56 (0.34)	12.58 (0.34)	12.55 (0.33)	12.54 (0.34)	12.49 (0.35)	12.56 (0.34)	12.55 (0.33)	12.67 (0.38)	12.53 (0.34)
$v_G$	10.89 (0.44)	10.86 (0.42)	10.63 (0.44)	10.86 (0.42)	10.88 (0.47)	10.86 (0.42)	10.88 (0.43)	10.86 (0.44)	10.96 (0.44)	10.84 (0.42)	10.67 (0.45)	11.08 (0.41)	11.05 (0.41)	10.86 (0.42)	10.76 (0.44)	11.06 (0.41)	10.76 (0.43)	10.66 (0.46)
$n_B$	55	47	44	50	56	54	56	56	56	54	55	56	53	53	55	56	43	53
$n_G$	73	76	70	77	65	77	73	72	72	76	69	73	75	77	71	72	74	68
$pval$	[.003]	[.001]	[.000]	[.005]	[.004]	[.003]	[.002]	[.002]	[.004]	[.002]	[.001]	[.006]	[.006]	[.003]	[.002]	[.005]	[.001]	[.001]
<b>Objective weather</b>																		
$v_B$	12.10 (0.29)	12.08 (0.31)	12.10 (0.29)	11.99 (0.30)	12.10 (0.29)	12.05 (0.29)	12.10 (0.29)	12.14 (0.30)	12.15 (0.29)	12.09 (0.30)	12.07 (0.31)	12.10 (0.29)	12.37 (0.27)	12.05 (0.29)	12.13 (0.30)	12.10 (0.29)	12.05 (0.33)	12.10 (0.31)
$v_G$	10.58 (0.54)	10.55 (0.46)	9.82 (0.57)	10.55 (0.46)	10.53 (0.57)	10.55 (0.46)	10.55 (0.47)	10.55 (0.46)	10.55 (0.46)	10.55 (0.46)	10.55 (0.46)	10.81 (0.45)	10.55 (0.46)	10.55 (0.46)	10.55 (0.46)	10.77 (0.45)	10.55 (0.46)	10.55 (0.46)
$n_B$	104	93	104	98	104	101	104	98	94	99	95	104	94	101	96	104	84	91
$n_G$	52	62	39	62	47	62	58	62	62	62	62	58	62	62	62	56	62	62
$pval$	[.014]	[.007]	[.001]	[.009]	[.016]	[.007]	[.006]	[.004]	[.004]	[.006]	[.007]	[.018]	[.001]	[.007]	[.005]	[.014]	[.009]	[.010]
<b>Relative precipitation</b>																		
$v_B$	12.73 (0.43)	12.73 (0.43)	12.73 (0.43)	12.48 (0.48)	12.73 (0.43)	12.73 (0.43)	12.73 (0.43)	13.04 (0.44)	12.73 (0.43)	12.82 (0.48)	12.73 (0.43)	12.73 (0.43)	12.73 (0.43)	12.63 (0.47)	12.73 (0.43)	12.73 (0.43)	12.73 (0.43)	12.65 (0.52)
$v_G$	11.28 (0.31)	11.12 (0.31)	11.10 (0.32)	11.22 (0.30)	11.30 (0.32)	11.16 (0.30)	11.24 (0.30)	11.22 (0.30)	11.19 (0.31)	11.22 (0.30)	11.14 (0.31)	11.36 (0.29)	11.36 (0.30)	11.22 (0.30)	11.18 (0.31)	11.35 (0.29)	11.03 (0.33)	11.22 (0.30)
$n_B$	33	33	33	27	33	33	33	27	33	28	33	33	33	30	33	33	33	20
$n_G$	123	122	110	133	118	130	129	133	123	133	124	129	123	133	125	127	113	133
$pval$	[.008]	[.003]	[.003]	[.028]	[.008]	[.003]	[.005]	[.001]	[.004]	[.006]	[.003]	[.009]	[.010]	[.012]	[.004]	[.009]	[.002]	[.020]
<b>Absolute precipitation</b>																		
$v_B$	12.07 (0.32)	12.04 (0.35)	12.07 (0.32)	11.93 (0.34)	12.07 (0.32)	12.07 (0.32)	12.07 (0.32)	12.13 (0.33)	12.07 (0.32)	12.06 (0.34)	12.07 (0.32)	12.07 (0.32)	12.43 (0.29)	12.01 (0.33)	12.11 (0.34)	12.07 (0.32)	12.00 (0.39)	11.93 (0.35)
$v_G$	11.05 (0.43)	10.98 (0.39)	10.67 (0.45)	10.98 (0.39)	11.06 (0.45)	10.88 (0.39)	11.00 (0.39)	10.98 (0.39)	10.89 (0.41)	10.98 (0.39)	10.81 (0.42)	11.19 (0.38)	10.98 (0.39)	10.98 (0.39)	10.98 (0.39)	11.17 (0.38)	10.98 (0.39)	10.98 (0.39)
$n_B$	82	71	82	76	82	82	82	76	82	77	82	82	72	79	74	82	62	69
$n_G$	74	84	61	84	69	81	80	84	74	84	75	80	84	84	84	78	84	84
$pval$	[.058]	[.043]	[.013]	[.062]	[.067]	[.019]	[.035]	[.024]	[.025]	[.035]	[.018]	[.075]	[.003]	[.043]	[.029]	[.068]	[.063]	[.070]

Notes. This table reports the mean, the standard deviation of the mean, the number of observations, and the  $p$  value of the Welch test (testing the null hypothesis that the means are equal) for 18 different subsets of the data. Each subset drops the observations from one experimental session.