Online Supplemental Appendix

for

Partisan Perceptual Bias and the Information Environment

Table of Contents

Coding Instrument for Partisan Relevance Coding

INSTRUCTIONS: For each question, you will make two judgments. The first concerns whether the question makes reference to the Democratic or Republican parties, broadly construed. The second concerns whether the information in the question has positive or negative implications for the partisan actor referenced in the question. You should code the question stem and correct answer as a *unit*. For example, if the question asked whether President Clinton proposed gun safety locks as a part of a gun control initiative and the answer is yes, code the gist of the factual information (i.e., that Clinton proposed gun safety locks as a part of his gun control policy).

Referent

1a. Does the question make an explicit reference to a partisan group or actor (e.g., the president)? For example, does the question ask about an action taken by Republicans or Democrats?

1 = It mainly concerns Republicans
0 = No partisan group is mentioned (or question refers to both parties)
-1=It mainly concerns Democrats

If answer is "No partisan group":

1b. Does the question make an implicit partisan reference—i.e., does it refer to a group, symbol, issue, or policy that is associated with one of the two parties? This association can be determined either historically (e.g., party platforms) or through contemporary news accounts (e.g., Bush's war on terror).

You may want to consult Table 1, which provides a list of issues and problems that historically have been associated with two parties (Petrocik 1996; Egan 2009). Examples of groups/objects/symbols that are associated with the Democratic party: African Americans, low income people, unions, reproductive freedom, Social Security, Medicare, Medicaid, campaign finance reform, means testing, and patient's rights. Examples of groups/objects/symbols that are associated with the Republican party: business and industry, free market, individualism, tort reform, and the sanctity of life.

1 = It mainly concerns Republicans
0 = No partisan group is mentioned (or question refers to both parties)
-1=It mainly concerns Democrats

Note: The explicit reference trumps the implicit reference. For example, an item about President Bush's proposal on Social Security was be coded in the "Republican" category.

Implications

2. Does the factual information presented in the question have positive or negative implications for the party named in 1a or 1b?

A question has *negative* implications if it casts doubt upon the performance of the party named in 1a or 1b, or if it reveals behavior that is unexpected or contrary to partisan reputation (Petrocik 1996).

In this instance, one might expect that for supporters of the party named in 1a or 1b, there is a tension between accepting the information and what one might prefer to see (in terms of partisan worldview/political priors).

A question has *positive* implications for the party if there is a positive evaluation of party performance (either implicit or explicit). Similarly, a question has positive implications for the party named in 1a or 1b if it: reveals behavior that is consistent with partisan reputation, describes the status quo as being consistent with party goals, or conveys non-negative information about party standard bearers.

A score of "0" is appropriate if the information conveyed by the question is neutral with respect to the partisan referent or if there is any ambiguity as to whether the information has positive or negative implications for the party.

1 = positive implications for party
0 = neither/not applicable
-1 = negative implications for party

Other coding protocol:

<u>"People and Player" Questions</u>
"People and player" questions (e.g., "Can you tell me the name of the current Secretary of State?") are included in the dataset. Depending on whether the question explicitly or implicitly mentions a partisan political actor (see next), the item will be coded under 1a or 1b.

<u>Open-ended Questions</u>
If the question is open-ended and the partisan referent is mentioned in the stem, the item should be coded under 1a (e.g., "From what you have seen or heard in the news, which Cabinet position did Bush nominate Former Wisconsin Governor Tommy Thompson to fill? Was it Attorney General, Secretary of Health and Human Services, or Secretary of the Interior?").

If the question is open-ended and the partisan referent appears in the response, the item should be coded under 1b (e.g., "Next I would like to ask you about some things that have been in the news. Not everyone will have heard about them…Can you tell me the name of the current vice president of the U.S.? Answer: Dick Cheney).

This protocol concerns the first stage of coding. Open-ended questions may be coded as having positive, negative, or no implications for the party referent.

Intercoder Reliability:

Agreement between coders was high (kappa for explicit mention was 1.0; kappa for implicit mention was .94; kappa for positive or negative implications was .89). Additionally, a third coder unfamiliar with the project was asked to code a random third of the questions. This person's ratings were in agreement with the original scores 84% of the time (with kappa ranging from .73 to .81).

Appendix Table 1. Issue Reputations of the Two Major Parties

Problem Better Handled by Democrats

1. *Social Welfare Issues*
   - (a) Developing policies that are fair to all
   - (b) Protecting Social Security
   - (c) Better public school education
   - (d) Improving education
   - (e) Helping the middle class
   - (f) Helping the elderly
   - (g) Helping the poor
   - (h) Improving health care
   - (i) Racial disparities in health care

2. *Military/Defense Issues*
   - (a) Keeping U.S. out of war

3. *Economic Issues*
   - (a) Solving farm problems
   - (b) Reducing unemployment

4. *Social Issues and Other*
   - (a) Protecting the environment
   - (b) Campaign finance reform*
   - (c) Patients rights*
   - (d) Gun control*
   - (e) AIDS/HIV*
   - (f) Contraception/Reproductive freedoms[§]
   - (g) Tougher malpractice laws[§]
   - (h) Legalization of Marijuana[§]

Problem Better Handled by Republicans

5. *Military/Defense Issues*
   - (a) Reaching nuclear arms agreements
   - (b) Dealing with the Soviet Union
   - (c) Dealing with international terrorism
   - (d) Maintaining strong defense
   - (e) National defense
   - (f) Increasing U.S. influence
   - (g) Conducting foreign policy
   - (h) Nuclear war

6. *Economic Issues*
   - (a) Reducing deficit
   - (b) Holding down taxes
   - (c) Tax policy
   - (d) Controlling government spending
   - (e) Controlling inflation
   - (f) American industry
   - (g) Economy
   - (h) Promoting growth and prosperity
   - (i) Dealing with foreign imports

7. *Social Issues and Other*
   - (a) Promoting moral values
   - (b) Reducing drug problem
   - (c) Crime

Note: Categorizations based on Petrocik (1996) and Egan (2009), unless otherwise noted.
*Categorization based on party issue handling question (source: Roper Center for Public Opinion Research)
[§] Party issue handling inferred from public preferences on topic (source: Roper Center for Public Opinion Research)

Appendix Table 2. Surveys and Question Topics

Dates of Survey	Number of Questions	Survey Questions	Question Topics
December 2-5, 1993	2	26, 27	Clinton national health care reform
February 22-24, 1997	4	6a-6d	Clinton health care coverage proposals
May 15-18, 1997	12	4AF1-4KF2	Identification of politicians and people
June 18-August 11, 1997	3	18-20	Party majority, facts, and business leader identification
June 18-22, 1997	8	3a-3d, 7a-7d	Budget agreement and tobacco settlement
August 7-10, 1997	5	11a-11e	Congressional actions on Medicare
June 12-18, 1998	4	8a-8d	Social Security commission
August 6-20, 1998	2	7, 8	Patient's rights legislation
December 8-13,1998	2	11, 12	Herbal remedies
February 19-25, 1999	10	2, 4, 5a-5d, 6a-6d	Medicare commision, Clinton proposals on Medicare and Social Security
March 24-30, 1999	5	8, 9, 10, 11, 12	Foreign policy (Iraq, Kosovo, China, Bosnia, Haiti)
April 10-22, 1999	3	4a-4c	Medical marijuana
June 11-16, 1999	7	4a-4e, 5, 6	Senate gun control measures, vitamin price fixing
December 3-13, 1999	4	15, 16a-16c	Medical malpractice and hospital errors
February 4-8, 2000	11	7a-7e, 13a-13e, 14	Clinton Medicare proposals, Human Papilloma Virus
March 15-20, 2000	2	10, 11	Presidential election nominees
March 31-April 3, 2000	4	5a-5d	Clinton gun control measures
May 26-June 4, 2000	3	7a-7c	Bush Social Security proposals
June 14-28, 2000	4	51, 52, 53, 54	Candidate policy positions
August 2-6, 2000	2	5, 6	AIDS developments/facts
Sept. 29-Oct. 2, 2000	2	5, 6	Health insurance and health condition facts
Nov. 29-Dec. 3, 2000	4	3a-3d	FDA warnings
January 25-28, 2001	2	5a-5b	Bush cabinent selections
March 8-May 20, 2001	4	8a-8d	Racial composition of U.S.
April 18-22, 2001	9	Q15F1-Q21aF2	Bush tax cuts, campaign finance, carbon dioxide, budget, environment
August 2-5, 2001	4	6a-6d	RU-486
Aug. 21-Sept. 5, 2001	3	a25/b30-a27/b32	China spy plane, Kyoto, Russia
February 8-10, 2002	3	12a-12c	Weapons of mass destruction (Iran, Iraq, North Korea)
April 19-May 12, 2002	4	39aF1-39cF3, 39e	Identification of leaders
July 18-20, 2002	3	11, 12, 13	HIV/AIDS prevention/transmission
December 6-10, 2002	4	4a-4d	Human Papilloma Virus (HPV)
January 3-6, 2003	8	8a-8b, 9a-9b, 20a-20d	Iraq and North Korean WMD capabilities; Iraq policy and developments
June 24-July 8, 2003	2	29a-29b	Islam background facts
June 25-28, 2004	4	26a-26d	Hussein and Iraq
February 16-17, 2004	3	28a-28c	Patriot Act
April 1-5, 2004	4	5, 10, 11, 12	Medicare prescription drug bill
June 4-8, 2004	2	10, 11	Medicare discount card
July 7-17, 2005	2	45, 46	Islam facts
October 12-24, 2005	17	16-18, 42aF1A-42mF2B	Foreign policy leaders, policy, and nuclear weapons
April 6-11, 2006	10	24, 25, 35a-37a	Medicare drug plan and racial health disparities
April 27-May 22, 2006	3	52, 53, 54	Party majority and identification of leaders
June 8-19, 2006	8	3a-3d, 13, 14, 38, 40	Cervical cancer and Medicare
August 9-13, 2006	3	17aF1-17cF1	Identification of people and politicians

Appendix Table 3. Model Coefficients for Figure 2 of Study 1

	Probit Estimates		
	coeff.	(s.e.)	z
Dem. X DemPos. X News	-.0010	(.0006)	-1.81
Dem. X DemNeg. X News	.0001	(.0005)	0.12
Rep. X RepPos. X News	-.0003	(.0001)	-2.51
Rep. X RepNeg. X News	-.0062	(.0007)	-8.82
Dem. X Democratic Positive	.1784	(.0202)	8.85
Dem. X Democratic Negative	.0097	(.0225)	0.43
Rep. X Republican Positive	.1366	(.0197)	6.92
Rep. X Republican Negative	.1726	(.0369)	4.68
Democratic Positive X News	.0051	(.0003)	15.95
Republican Positive X News	-.0001	(.0001)	-2.52
Democratic Negative X News	.0000	(.0003)	0.15
Republican Negative X News	.0018	(.0006)	2.94
Democrat X News	.0000	(.0001)	0.10
Republican X News	.0004	(.0001)	4.80
Democratic Positive Topic	-.0796	(.0157)	-5.07
Democratic Negative Topic	-.1083	(.0161)	-6.73
Republican Positive Topic	-.0284	(.0139)	-2.04
Republican Negative Topic	-.1962	(.0247)	-7.95
Democrat	.0201	(.0112)	1.79
Republican	.0069	(.0103)	0.68
News Stories	.0011	(.0001)	15.74
Education	.6159	(.0142)	43.27
Income	.2267	(.0151)	15.01
Age	.3701	(.0161)	22.95
Black	-.0517	(.0124)	-4.19
Female	-.1761	(.0070)	-25.13
AJPS 2009 Data	.2510	(.0471)	5.33
Number of cases		229,493	

Note : The dependent variable for the probit analysis is coded as 1=correct, 0=otherwise. The model includes fixed effects for each survey; the fixed effects terms have been suppressed for presentation purposes. The robust standard errors are clustered to account for repeated obsevations on the same individual. The numerous multiplicative terms make coefficient interpretation difficult; see the text of the paper for predicted probabilities in order to discern effect directions and sizes (e.g., Brambor et al. 2006).

Appendix Table 4. Descriptive Information, Coding Ranges, and Type of Data

	N	Mean	S.D.	Coding Range Minimum	Coding Range Maximum	Type of Data
Individual-Level Variables						
Democrat	229,493	.32	.47	0	1	Dichotomous
Republican	229,493	.29	.45	0	1	Dichotomous
Education	229,493	.58	.27	0	1	Ordinal
Income	229,493	.57	.29	0	1	Ordinal
Age	229,493	.37	.23	0	1	Ratio/Interval
Black	229,493	.10	.30	0	1	Dichotomous
Female	229,493	.53	.50	0	1	Dichotomous
AJPS 2009 Study	229,493	.44	.50	0	1	Dichotomous
Aggregate-Level Variables						
Correct Stories	205	44.19	97.89	0	762	Ratio/Interval
Democratic-Positive Stories	51	17.22	26.55	0	141	Ratio/Interval
Democratic-Negative Stories	29	21.21	39.62	0	171	Ratio/Interval
Republican-Positive Stories	38	117.00	167.05	0	762	Ratio/Interval
Republican-Negative Stories	12	44.25	50.07	0	160	Ratio/Interval
Nonpartisan-Neutral Stories	75	34.12	84.72	0	640	Ratio/Interval

Most of the variables in the model for Study 1 are interactions (multiplicative terms between aggregate-level and individual-level variables) or fixed effect terms (dummy variable indicators for respondents in a particular survey). Appendix Table 2 reports the number of cases, means, standard deviations, minimums, maximums, and level of data for the constituent terms of the interactions as well as for the other demographic variables. For the dichotomous individual-level variables, the coding is as follows for Democrat (1=Democrat, 0=not a Democrat), Republican (1=Republican, 0=Not a Republican), Black (1=black, 0=not black), and Female (1=female, 0=male). Education and Income are ordinal (0=8th grade or less, 1=post-grad or more for education and 0=$10K or less, 1=$100K or more in household income) while age is an interval variable ranging from 18 (=0) to 97 (=1). Missing responses for the demographic variables (education, income, age, race, and gender) were imputed and the imputed values may lie outside the original coding range (i.e., beyond 1 or below 0). For constructing the predicted probabilities, we used the mean value for individual-level characteristics, except for Democrat or Republican which were set to zero or 1 depending upon the scenario (e.g., for studying how Democrats respond, Democrat=1 and Republican=0, and vice versa). For setting the aggregate-level story count variables in the predicted probabilities, we used values two standard deviations above or below the mean of the aggregate-level story counts (but never below zero since it is not possible empirically to observe a negative media story count) to represent the high and low coverage situations.

Protocol and Question Wording for Experiment (Study 2)

Adult subjects were invited to participate in a study "that examines people's political attitudes and behaviors. As we note in the text, the experiment was part of a larger study whose participants were drawn randomly from a list of registered voters in Leon County, Florida. The invitation was a letter sent through the U.S. mail. In exchange for their participation, subjects received $30. Out of 6,000 people who were invited to participate in the study, 417 showed up. Although the response rate (7%) is low, we can characterize who participated using the background information from the voter file (reported later in this Online Appendix.)

The question wording for the four factual items is presented below.

The federal government loaned money to banks under the bank bailout program known as TARP, the Troubled Asset Relief Program. How much of that money has been paid back to the government?

Less than half of it
More than half of it <CORRECT>
None of it

In the past few years, have people in the U.S. bought more foreign goods than we have sold overseas, or have we sold more than we have bought, or has it pretty much balanced out?

Bought more foreign goods than sold <CORRECT>
Sold more overseas than bought
Balanced out

The new U.S. Congress convened in January. Do the Republicans have a majority in…

The U.S. House of Representatives <CORRECT>
The U.S. Senate
Both the U.S. House and the U.S. Senate

On which of these activities does the U.S. government currently spend the most money? Is it…

Medicare
Interest on the national debt
National defense <CORRECT>

Treatment Wording for Experiment (Study 2)
(Treatment stories were excerpted from actual media reports.)

Treatment Group 1: Democratic Positive

The Hated Bank Bailout is about to Turn a Profit

To the surprise of many, the Treasury Department now estimates that the $245 billion that bought shares in banks is likely to return a profit in the range of $20 billion. An additional $165 billion that went to non-bank institutions, or was used more generally to encourage lending, might yet keep the overall effort from turning a profit. But don't count on it. Each report on these programs seems to get progressively better. The unavoidable fact is that the bailout, aka the TARP (for Troubled Asset Relief Program) has been an astonishing success, and its once-noisy critics are suddenly silent, as well they should be.

Treatment Group 2: Democratic Negative

Rising Trade Deficit Could Drag Down U.S. Recovery

The trade deficit unexpectedly rose, as imports accelerated ahead of rising exports. The U.S. economy is picking up and sucking in imports, helping boost economies around the world. But it's not something that's going to be a sustainable way of achieving global growth according to economists. In one month last year the U.S. had $152.3 billion in exports. But imports rose that same month by $5.5 billion to $194.5 billion. That left a deficit of $42.3 billion, which means Americans are buying more goods than were sold to foreign countries. The rising trade deficit is a concern for policymakers and administration officials.

Treatment Group 3: Republican Positive

Republicans Win House Majority, Make Senate Gains

Riding a wave of voter frustration over the economy and the federal government itself, the Republican Party won a majority in the U.S. House of Representatives last fall with victories on a scale not seen since the end of the New Deal. The GOP did not seize power in the U.S. Senate, with wins by Democratic Leader Harry Reid and a handful of others relegating Republicans to minority status for at least another two years. But they came close enough that neither party can be steamrolled by the other in the next Congress. Now leaders must make decisions worth hundreds of billions of dollars.

Treatment Group 4: Republican Negative

Spending on Defense More than Medicare or Debt Interest

As policymakers and citizens weigh key decisions, it is instructive to examine what the government does. In 2010, some 20 percent of the budget, or $715 billion, will pay for defense, including supporting operations in Iraq and Afghanistan, which is expected to total $172 billion in 2010. In contrast, Medicare, the government's health care program for around 46 million people who are over the age of 65 or have disabilities is expected to cost $468 billion. Finally, the federal government must make regular interest payments on the money it has borrowed to finance past deficits. In 2010, these interest payments will claim $209 billion.

Control Group (Placebo Story)

Winter Weather Could Mean a Nationwide Blood Donation Shortage

Winter storms across the U.S. have shutdown highways and caused power outages. And those winter roadblocks have also put a strain on blood donations. The American Red Cross has had to cancel 750 blood drives nationwide, which has led to a shortfall of more than 28,000 blood donations since the beginning of the year. As of right now, the need is not urgent, but blood only lasts for 42 days. The current supply in some areas will expire over the next two months. And with blood drives held throughout the week, donating is a simple process that takes less than an hour out of your day.

Appendix Table 5. Descriptive Statistics on Experimental Sample

	Group Means (Standard Errors in Paretheses)		
	Column A	Column B	Column C
	County Voters (n =171,165)	Invited (n =6,000)	Laboratory (n =417)
Female	.54	.57	.60
	(.00)	(.01)	(.02)
Black	.27	.30	.25
	(.00)	(.01)	(.01)
Hispanic	.03	.03	.03
	(.00)	(.00)	(.15)
Age	44.23	43.93	45.71
	(.04)	(.21)	(.75)
Democrat	.56	.59	.58
	(.00)	(.01)	(.02)
Republican	.28	.25	.25
	(.00)	(.01)	(.02)
Voted 2010	.59	.59	.83
	(.00)	(.00)	(.02)
Voted 2010 Primary	.34	.33	.57
	(.00)	(.01)	(.02)
Voted 2008	.78	.80	.89
	(.00)	(.01)	(.02)
Voted 2008 Primary	.27	.25	.43
	(.00)	(.01)	(.02)

Appendix Table 6. Check of Randomization into Experimental Conditions

	Treatment Condition Assignment (Relvative to Omitted Control Group)			
	Democratic Positive	Democratic Negative	Republican Positive	Republican Negative
Female	-.17	-.34	-.78 **	-.47
	(.36)	(.34)	(.35)	(.34)
Black	-1.12 **	-.86 **	.04	-.14
	(.43)	(.42)	(.41)	(.40)
Hispanic	-1.02	-1.73	-1.43	.09
	(.91)	(1.15)	(1.18)	(.76)
Age	.00	.00	.03 **	.00
	(.01)	(.01)	(.01)	(.01)
Democrat	.60	.03	.55	.85 *
	(.47)	(.44)	(.51)	(.51)
Republican	-.52	-.72	.24	.41
	(.52)	(.49)	(.54)	(.54)
Voted 2010	-.47	-.54	-1.07 **	-.49
	(.54)	(.53)	(.54)	(.58)
Voted 2010 Primary	-.40	-.49	-.23	-.43
	(.46)	(.46)	(.48)	(.45)
Voted 2008	.43	.52	1.11	.58
	(.74)	(.77)	(.93)	(.83)
Voted 2008 Primary	.54	.40	-.07	.32
	(.41)	(.41)	(.41)	(.39)
Voted 2008 Presidential Pri.	-.10	.52	.18	.67
	(.45)	(.46)	(.46)	(.46)
Constant	.25	.17	-1.59	-.83
	(.90)	(.92)	(1.08)	(.98)
Log-Likelihood		-623.75		
Model X^2 *p*-value		.04		
Number of Obs.		417		

Note: The columns contain multinomial logit estimates predicting treatment assignment relative to the omitted control condition. Coefficients for terms denoting missing data for demographics and participation are suppressed for presentation purposes. Standard errors are in parentheses. ** $p < .05$, * $p < .10$ (two-tailed)

Appendix Table 7. Mean Outcomes by Experimental Condition

	Democratic Positive	Democratic Negative	Republican Positive	Republican Negative
Treatment	.58	.91	.86	.39
	(.07)	(.04)	(.08)	(.10)
Control	.34	.79	.70	.48
	(.03)	(.04)	(.05)	(.10)
Difference	.23	.13	.16	-.09
	(.08)	(.03)	(.11)	(.14)
| *t* |	3.09 ***	1.89 **	1.46 *	.63
df	239	140	102	48

Note: Cell entries are mean proportion correct (1=correct; 0=incorrect) for each partisan group with standard errors in parentheses. For example, the first column compares levels knowledge for the Democratic-Positive fact among Democrats in the treatment condition with knowledge of this fact among Democrats in the control group.

*** $p < .05$; ** $p < .10$; * $p < .15$ (one-tailed).

Appendix Table 8. Probit Coefficients from Study 2 Experiment

	Democratic Positive	Democratic Negative	Republican Positive	Republican Negative
Treatment Group Indicator	.85 (.22) **	.50 (.34)	.73 (.44) *	-.26 (.37)
Age	-.01 (.01)	-.01 (.01)	.00 (.01)	-.02 (.02)
Black	-.05 (.19)	-.60 (.32) *	-	-
Hispanic	.08 (.83)	-	.49 (.84)	-
Female	-.64 (.20) **	-1.26 (.54) **	-.98 (.32) **	.18 (.37)
2010 Voter (General)	.01 (.30)	1.22 (.46) **	.56 (.74)	-
2010 Voter (Primary)	.53 (.26) **	.61 (.44)	.80 (.47) *	.33 (.51)
2008 Voter (General)	-.38 (.50)	-0.8 0.65	-1.02 (.79)	.41 (.72)
2008 Voter (Primary)	.36 (.24)	-.52 (.40)	.06 (.33)	-.16 (.39)
2008 Voter (Pres. Primary)	.41 (.26)	-.79 (.47)	.42 (.48)	-.30 (.52)
Constant	-.11 (.57)	2.71 (.94) **	.61 (.88)	.32 (.85)
N	241	142	104	50

Note: Estimates are probit coefficents from model predicting knowledge of partisan relevant facts (standard errors in adjacent column). For Democratic-Positive and Democratic-Negative facts, the coefficent is on the indicator for Democratic subjects in the treatment condition. For Republican-Positive and Republican-Negative facts, the coefficient is on the indicator for Republican subjects in the treatment condition. See text for model details. When there were not enough respondents to estimate particular variables (e.g., too few Black Republicans or Hispanic Democrats) the table displays a dash(-).

** $p < .05$; * $p < .10$ (two-tailed)