

The Consequences of International Comparisons for Public Support of K–12 Education: Evidence From a National Survey Experiment

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Candidates for public office in the United States frequently justify their positions on education policy priorities by stating the need to strengthen the nation's economic competitiveness against new global challengers. In this article, the authors investigate the consequences of this form of policy motivation for attitudes toward and support of public schooling in the United States. Using a national survey experiment where a two-question prime on international competitiveness is randomized across respondents, the authors test for differential responses to attitude items that have been included regularly since the 1970s in the Phi Delta Kappa/Gallup Poll and the General Social Survey. The results suggest that framing educational policy with the goal of enhancing international competitiveness lowers subjective assessments of the quality of local schooling without increasing interest in additional spending to improve the nation's education system.

Keywords: educational policy; educational reform; experimental design; experimental research; globalization; policy; politics; regression analyses; sociology

Candidates for public office in the United States frequently justify their positions on education policy priorities by stating the need to strengthen the nation's economic competitiveness. For example, the opening paragraphs of the Obama–Biden 2012 and Romney 2012 education issue pages both begin in similar fashion:

Understanding that America has to out-educate the rest of the world to be competitive in the global economy, President Obama has made education a national priority.¹

Mitt Romney believes that the long-term strategy for getting America's economy back on track is ensuring a world class education for American students. Global competitiveness begins in the classroom.²

Policy motivation of this form is often supported by assertions that the United States is not the world leader in education

that it once was. In their most extended form, these comparative claims are supported by references to international differences in educational performance, including the recent findings that students in the United States now, on average, perform substantially below students in a number of Asian countries, including Japan, South Korea, and the regions of China where assessments have occurred (see Fleischman, Hopstock, Pelczar, & Shelley, 2011).³ These findings—often conveyed by scholars of educational reform (e.g., Darling-Hammond, 2010; Moe & Chubb, 2009)—appear to have convinced many policy proponents that the United States has fallen behind crucial international competitors in preparing its youth for the workforce and for higher education.

In this article, we investigate the consequences of this form of policy motivation for attitudes toward and support of public schooling. Using a national survey experiment where exposure to international competitiveness framing is randomized across respondents, we test for differential responses to items drawn from the Phi Delta Kappa/Gallup Poll (PDK/GP) and the General Social Survey (GSS) on the perceived quality of local public schools and desired spending levels for the nation's education system. Before presenting the experimental design and results, we offer brief background material from existing public opinion research and the literature on framing and priming that motivates our research design.

Public Opinion on the Nation's Schools

The most frequently cited public opinion data on the perceived quality of public schooling in the United States is the annual PDK/GP. Since 1974, national samples of respondents have been asked, "Students are often given the grades A, B, C, D, and FAIL to denote the quality of their work. Suppose the public schools themselves in your community were graded in the same way. What grade would you give the public schools here?" A second question elicits equivalent grades for "public schools in the nation as a whole."

Figure 1 reports the percentage of PDK/GP respondents who award grades of C, D, or FAIL to the public schools in their communities, as published annually since 1974 in *Phi Delta*

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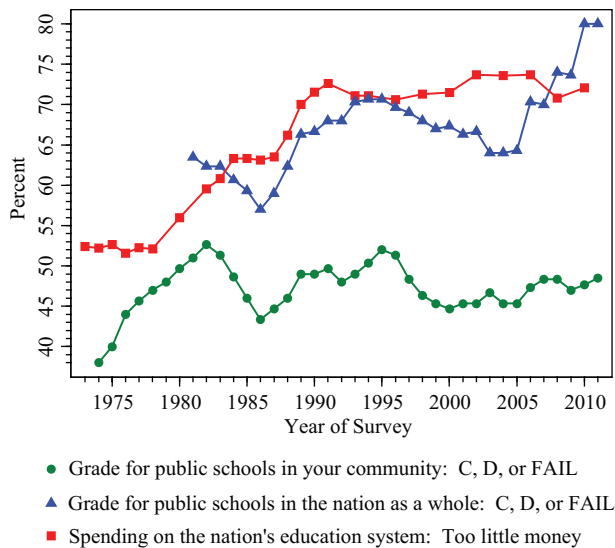


FIGURE 1. Grades of C, D, or FAIL awarded to local and national schools (*Phi Delta Kappal/Gallup Poll, 1974–2011, 3-year moving averages*) and opinions on whether too little money is spent on improving the nation's education system (*General Social Survey, 1973–2010, 3-year moving averages*).

Kappan (e.g., Bushaw & Lopez, 2011).⁴ Across all years, nearly half of PDK/GP respondents award grades of C, D, or FAIL to their local schools, and the annual rate fluctuates around similar values (partly because of routine sampling error). It is possible that this lack of a discernible trend is misleading because “grade inflation” has migrated to the response categories of the PDK/GP questions. If so, then the same nominal grade in 2011 may be a more negative assessment than it would have been in 1974.⁵

Figure 1 also shows that, in every year, respondents on average have awarded lower grades to schools “in the nation as a whole.” And, in recent years, the rate of awarding C, D, or FAIL has increased to nearly 80%. Here again, underlying quality ratings of public schools may have declined more than is suggested by Figure 1 because grade inflation may have migrated to these response categories as well.

Extant poll results also show that national samples of residents of the United States have supported increases in funding to public schools over the same time period. Here, the most widely analyzed public opinion data are from the GSS, from a battery of questions on spending priorities for the nation. GSS respondents are told, “We are faced with many problems in this country, none of which can be solved easily or inexpensively.” They are then asked if we are “spending too much money, too little money, or about the right amount” to improve the nation's education system. In addition to the PDK/GP results just summarized, Figure 1 presents the trend in the percentage of respondents who answer “too little money.” Since 1973, the percentage of respondents who would appear to support increasing expenditures has increased by approximately 20 percentage points to levels that now exceed 70%.⁶ Over the same time period, spending on schools has increased substantially on a per-pupil basis (see Hanushek, 2006; Snyder & Dillow, 2011).

The Literature on Framing Effects

Following the foundational study of media effects on public opinion by Iyengar and Kinder (1987), the assessment of public opinion responses to alternative issue motivation and persuasion strategies has developed into a substantial body of scholarly work on framing (see Chong & Druckman, 2007, 2011, for reviews).⁷ However, we have not found any literature that examines framing effects of any type on public support for education, as elicited in national surveys and polls.⁸ We also have not found any studies that investigate the effects of international competitiveness framing for any domain of policy—although there are studies in the literature that use international affairs primes to assess support for leaders (e.g., Tomz, 2007) and for alternative forms of defense policy (e.g., de Vreese & Kandyla, 2009). As a result, it is unknown whether the long-running PDK/GP and GSS data series just cited are susceptible to framing effects in general or to international competitiveness framing effects in particular.

Research Question

In this article, we seek to answer a two-part question: Do international competitiveness frames (a) affect public opinion about the quality of local schooling in the United States, as measured in the PDK/GP, or (b) alter support for spending additional resources to improve the nation's public schools, as measured in the GSS? To answer this question, we utilize a split-ballot randomization design within a national sample, in pursuit of conclusions that are high on both internal and external validity.

The broader goal of the article is to improve our understanding of the latent public opinion that is reflected in the PDK/GP and the GSS. To the extent that public opinion on education is shaped by political discourse that uses international competitiveness persuasion strategies, electoral support for candidates with alternative policy positions may shift in ways that are consequential for reform efforts. Left-leaning politicians often use international competitiveness appeals to justify broad-based increases in the nation's investment in public education (with particular proposals in support of K–12 instruction, for investment in teachers, and, increasingly, to expand access to higher education). Right-leaning politicians often use the international competitiveness appeal to support targeted incentives that they propose can catalyze educational reforms—most recently for budget reallocations that provide incentive pay for teachers, for the establishment of charter schools, and for school vouchers for disadvantaged students.

Method

Survey Data

The 2011 Cornell National Social Survey (CNSS) includes 1,000 adults, age 18 to 93, who reside in the continental United States. The sample was provided by Marketing Systems Group as a random-digit-dial list of telephone numbers drawn from telephone exchanges in the continental United States (including cell phones but excluding known nonhousehold numbers). This design ensures that every household with a phone has an equal chance of being contacted. Within contacted households, one respondent from each household was selected using a “most recent birthday” selection rule.

Telephone data collection by the Survey Research Institute at Cornell University began on September 10, 2011, and was completed by December 10, 2011. All interviews were conducted in English using a computer-assisted telephone-interviewing software system. The cooperation and response rates were 62.4% and 24.1%, respectively, using the calculation methods endorsed by the American Association for Public Opinion Research.

Additional detail on the CNSS is available at sri.cornell.edu/sri/cnss.cfm. The supplementary appendix (available on the journal website) provides descriptive statistics for the CNSS sample in Table S3, calculated for the specific covariates that are used in subsequent models in this article. The descriptive statistics demonstrate that the CNSS generated a national sample with typical distributions across demographic characteristics.

Experimental Design

The interviews, which averaged 19 minutes in length, began with a module on attitudes toward public education. A randomly selected 47.1% of respondents were allocated to the treatment group. The treatment respondents then began the survey with two priming questions:

Prime 1: Which of the following countries is the largest economic threat to the United States?

- China
- Germany
- Japan
- Russia
- Other country offered
- Do not know

Prime 2: In comparison to {insert country from last question [or China if “Do not know”]}, how much is our public education system losing ground?

- None
- A little bit
- Some
- Quite a bit
- A great deal
- Do not know

All treatment and control respondents were then asked a PDK/GP item in use since 1974:

PDK/GP: Students are often given the grades A, B, C, D, and FAIL to denote the quality of their work. Suppose the public schools themselves in your community were graded in the same way. What grade would you give the public schools here?

- A
- B
- C
- D
- Fail
- Do not know

They were later asked a replicating core item in use for the GSS since 1973:

GSS: We are faced with many problems in this country, none of which can be solved easily or inexpensively. In order to improve the nation’s education system, are we: spending too

Table 1
Coefficients From Ordered Logit Models for the Grades That Respondents Give to Public Schools in Their Communities

	Model 1	Model 2	Model 3
Treatment	-0.28 (0.12) $p = .02$	-0.28 (0.12) $p = .02$	-0.31 (0.12) $p = .01$
Have kids in public school in the community	-	0.38 (0.14)	0.37 (0.15)
Additional covariates	No	No	Yes
<i>N</i>	928	928	928
Chi-square (<i>df</i>)	5.5 (1)	12.0 (2)	42.1 (15)

Note. Data are from the 2011 Cornell National Social Survey. The highest response category is A, and the lowest response category is FAIL. Robust standard errors are in parentheses, and the p value for the treatment effect is from a two-tailed test with null hypothesis of zero. For Model 1, the cut-points are -3.13, -1.91, -0.51, and 1.25 (and the cut-points are similar for the remaining models). For Model 3, the 13 additional covariates are described in the main text. All models are weighted by the inverse probability of providing a response of A through FAIL, as estimated by a supplementary logit model (i.e., 928 of 1,000 respondents; see Table S2 in the supplementary appendix, which is available on the authors’ personal websites).

- much money, too little money, or about the right amount?
- Spending too much money
- Too little money
- About the right amount
- Do not know

Raw response frequencies for all survey questions in the 2011 CNSS public education module are provided in the supplementary appendix.⁹

Results

Table 1 presents coefficients from ordinal logit models of responses to the PDK/GP question on grades for local schools. The coefficient for the priming treatment indicator variable in Model 1 is -0.28. The associated standard error is 0.12, and the p value is .02 for a two-tailed test with a null hypothesis of zero. Predicted response probabilities from this model are presented in Table 2. These values indicate that the treatment prompted 6.8% of respondents to switch from awarding grades of A or B to awarding grades of C, D, or FAIL to their local schools.

Returning to Table 1, Model 2 then adjusts for one crucial variable frequently discussed in the PDK/GP results: whether respondents have children currently enrolled in the public schools in their communities (25% of the CNSS sample). Consistent with PDK/GP results, these respondents on average award better grades to their local schools. The treatment coefficient does not change, however, because the proportion of such respondents is balanced (subject to chance variability) across the treatment and control groups.

Table 2
Predicted Response Probabilities and Marginal Differences for Model 1 From Table 1

	Control Condition	Treatment Condition	
	Probability	Probability	Difference From Control
A	.222	.177	-.045 (.019)
B	.402	.379	-.023 (.010)
C	.247	.280	.033 (.014)
D	.087	.108	.022 (.010)
Fail	.042	.055	.013 (.006)

Note. Data are from the 2011 Cornell National Social Survey. Robust standard errors are in parentheses.

Model 3 then adds 13 covariates for gender, race, age, residential characteristics, socioeconomic status, self-reported party affiliation, self-reported conservative-liberal ideology, and attitudes toward engagement in world affairs (see Table S3 in the supplementary appendix for descriptive statistics for these covariates). These additional covariates are collectively predictive, and yet because they are balanced across the treatment (again, subject to chance variability) their inclusion does not shift the point estimate of the treatment to any substantial degree.

Tables 3 and 4 present analogous results for the GSS question on preferences for spending levels, reordering response categories from the question to enable ordinal logits of the same structure. The coefficient for the treatment in Model 1 in Table 3 is -0.30 with a standard error of 0.13 and a p value of .02 for a two-tailed test with a null hypothesis of zero. Corresponding predicted response probabilities are then presented in Table 4. These values indicate that the treatment prompted 7.2% of respondents to switch away from “too little money” to “about the right amount” or “spending too much money.”

Returning to Table 3, Model 2 shows that respondents with children in the local schools are more likely to state that “too little money” is being spent on improving schools in the nation. Model 3 includes the 13 additional covariates. Although these variables do not alter the treatment coefficient to any substantial degree because of the randomization design, they are nonetheless strong predictors of spending priorities. As expected, those who identify as conservative and as Republican are much less likely to support increasing expenditures on schooling.¹⁰

The findings reported in Tables 1 through 4 offer two straightforward conclusions. The two-question international competitiveness prime causes respondents in a nationally representative survey to (a) lower subjective assessments of the quality of local schooling and (b) decrease support for additional spending to improve the nation’s education system. The number of respondents who are shifted by the treatment is modest, at 6.8% and 7.2%, respectively, and these estimated effects are subject to

Table 3
Coefficients From Ordered Logit Models for the Preferences Respondents Express for Spending Additional Money to Improve the Nation’s Education System

	Model 1	Model 2	Model 3
Treatment	-0.30 (0.13) $p = .02$	-0.30 (0.13) $p = .02$	-0.35 (0.14) $p = .01$
Have kids in public school in the community	–	0.22 (0.14)	0.22 (0.16)
Additional covariates	No	No	Yes
N	968	968	968
Chi-square (<i>df</i>)	5.5 (1)	8.0 (2)	153.0 (15)

Note. Data are from the 2011 Cornell National Social Survey. The highest response category is “too little money,” and the lowest response category is “too much money” with “about the right amount” coded as the middle category. Robust standard errors are in parentheses, and the p value for the treatment effect is from a two-tailed test with null hypothesis of zero. For Model 1, the cut-points are -1.76 and -0.502 (and the cut-points are similar for the remaining models). For Model 3, the 13 additional covariates are described in the main text. All models are weighted by the inverse probability of providing a response of “too little money,” “too much money,” or “about the right amount” (i.e., 968 of 1,000 respondents; see Table S2 in the supplementary appendix, which is available on the authors’ personal websites).

Table 4
Predicted Response Probabilities and Marginal Differences for Model 1 From Table 3

	Control Condition	Treatment Condition	
	Probability	Probability	Difference From Control
Too little money	.623	.551	-.072 (.031)
About the right amount	.230	.260	.031 (.013)
Too much money	.147	.189	.041 (.018)

Note. Data are from the 2011 Cornell National Social Survey. Robust standard errors are in parentheses.

expected sampling errors in either direction of approximately 3%.¹¹ Yet potential shifts of the electorate within an expected interval of 4% to 10% are sizable and more than enough to alter the outcome of hypothetical elections for local school board seats and funding levies.

Discussion

In this section, we (a) discuss the experimental results with reference to the broader political science and public opinion literature

on framing and priming, (b) interpret the results using a related survey response literature on context effects, and (c) offer implications of the results for policy advocates.

Our experiment differs in three ways from the most common designs of framing experiments in political science, and each difference strengthens the credibility of our findings. First, we use a national sample rather than a convenience sample. Although defenses of conclusions based on nonrandom collections of student respondents contain many convincing points (see Druckman & Kam, 2011), none of these defenses deny that, all else equal, random samples of respondents from national sampling frames strengthen external validity. In fact, Mutz (2011) concludes, “By simultaneously ensuring internal validity and maximizing the capacity for external validity, population-based experiments may be unmatched in their ability to advance social scientific knowledge” (p. 157).

Second, in contrast to many framing experiments that use structured vignettes or information-rich questions to shape respondents’ perceptions, our design introduces a treatment that is closer to what Sniderman (2011) would label a “facilitative” rather than a “manipulative” design.¹² Using language that would be familiar to respondents who follow political debates, the two questions that comprise our treatment prompt respondents to report two opinions—first in selecting the source of an economic threat and second in expressing an opinion on a potential institutional correlate of that threat. Neither question offers any direct information on international comparisons, either for relative economic growth or quality of educational institutions. Rather, the response categories for the questions are designed to trigger the retrieval of information on international comparisons that respondents may have received before they participated in the experiment.

Third, our control condition is a genuine baseline, in contrast to classic manipulative framing experiments that use contrasting frames. For our experiment, the control respondents proceed directly to the questions that generate our outcomes. The alternative and more typical strategy would have been to offer a prime that pushed respondents in an opposite direction. For example, for our study, a contrastive treatment that primes support for teachers could pose a pair of questions such as (a) “Do you know any public school teachers personally—in your family, in your neighborhood, in any organizations to which you belong, or elsewhere?” and (b) “How much do public school teachers contribute to the development of the children of your community?” Had our study used such an alternative treatment, we would surely have generated a larger treatment effect for quality ratings of local schools but, at the same time, sacrificed the ability to attribute any particular piece of the effect to international competitiveness framing alone.

By what process does the treatment effect emerge? Here, the survey response literature is helpful. The first question is on economic threat and does not reference the education system of any country. The second question introduces education as a domain of questioning, but it does not imply that all subsequent questions will be on education. This second question, however, generates what is known in the survey response literature as a “context effect” on responses to subsequent questions (see Schwarz & Sudman, 1992). The findings of the literature

on context effects suggest that treatment group respondents who express the opinion that public schools in the United States are losing ground are compelled to offer school performance grades that are consistent with this belief in subsequent questions. Tourangeau, Rips, and Rasinski (2000) would classify this context effect as an assimilation effect, which operates by facilitating the retrieval of information, stored as personal beliefs, that promote consistency of responses to later questions.

Our experiment, like most experiments of this type, does not uncover the specific stored beliefs that are retrieved and thereby made more salient when subsequent questions are considered. We assume, but cannot verify, that the respondents are retrieving personal beliefs shaped by the statements of political elites (candidates for election, authoritative feature journalists, op-ed columnists, etc.) that public schools in the United States are performing below expectations and falling behind the schools of our international competitors. If this assumption is valid, then our results imply that each time that framing of this form is introduced into political and reform discourse, on balance members of the electorate will lower their evaluations of the quality of schooling without forming the position that more resources should be devoted to increasing the flagging performance they have just been convinced may now exist.

Finally, what are the broader implications of our findings? On the one hand, it is undeniable that this treatment effect emerges in a time-delimited survey context. Political preferences and voting decisions are shaped over longer periods of time and in response to many competing and inconsistent pieces of information. On the other hand, an abundance of evidence is consistent with an alternative position: Voters can be swayed by issue motivation strategies because they lack the time and interest to carefully sift through the contradictory information that they receive (see discussions of alternative positions in Hutchings & Piston, 2011, and Nelson, 2011).

If the latter characterization of the formation of voter preferences has some validity, then our findings provide clear implications for those concerned with support for one of the nation’s most important public institutions, whether they are politicians, reform-minded education researchers, or practitioners charged by their communities with stewardship of their local schools. If one aspires to build support for increasing expenditures on public schooling, framing this policy goal as crucial for international competitiveness will be counterproductive. Although the public is likely to become concerned (or be reminded of its preexisting concerns) about the quality of public schooling, these concerns will not then lead the public to also support proposals to increase resources for education. However, if one wants to build support for reforms to schools that do not require any additional resources, then framing policy choices using international competitiveness concerns may be effective.

NOTES

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¹Retrieved June 12, 2012, from <http://www.barackobama.com/record/education>.

²Retrieved June 12, 2012, from mittromney.com/issues/education.

³To some extent, these comparisons are overdrawn. In the latest Program for International Student Assessment (PISA) in 2009, 15-year-olds from the United States scored higher than the Organization for Economic Cooperation and Development (OECD) average in reading, just below the OECD average in mathematics, and close to the OECD average in science (see Fleischman et al., 2011). The United States remains consistently ahead of some major nations (Italy and Spain) and rotates positions depending on subject area with some of its closest allies in the OECD (France, Germany, and the United Kingdom).

⁴The raw data are presented in a supplementary appendix that is available on the journal website. The results for the nation's schools are not reported in *Phi Delta Kappan* until 1981, even though the annual reports imply that the question has been asked since 1974 as well.

⁵The increase in the awarding of C, D, or FAIL in the early years of the time series for local schools coincides with a decline in the number of respondents who select "don't know." Although this early trend may indicate that respondents were more willing to grade schools from the 1980s onward, it is also possible that this early trend is a feature of measurement. Survey agencies and interviewer teams within them differ in the amount of effort that they expend in convincing individuals to select responses other than "don't know."

⁶Analyzing the same General Social Survey (GSS) responses to this question, Plutzer and Berkman (2005) and Fullerton and Dixon (2010) argue that this increase is mostly a result of cohort replacement. Bushaw and Lopez (2011) present a similar result from the Phi Delta Kappa/Gallup Poll (PDK/GP), although they do not consider the cohort replacement explanation. They report that the percentage of respondents who select "lack of financial support/funding/money" as one of the "biggest problems that the public schools of your community must deal with" has increased from 15% to 36% from 2001 to 2011.

⁷The conceptual distinctions between the terms *frames* and *primes* have been a matter of discussion and debate because (a) the empirical research is dominated by scholars of political science and communications but (b) the literature builds on prior work from diverse disciplinary origins, including the survey response literature that emphasizes context effects in response behavior (e.g., Schuman & Presser, 1981) as well as the psychological literature on how subtle forms of priming may interact with information processing and retrieval (see Entman, 1993, for an early review and Druckman, Kuklinski, & Sigelman, 2009, for a later review). In this article, we make no fine distinction between frames and primes. We situate our study as one that is designed to uncover framing effects, although we will typically refer to our treatment questions as *primes*.

⁸Rasinski (1989), however, considers question wording changes for the GSS spending variable that we analyze, and his study is similar to a framing experiment, although not presented as such. He finds that response distributions do not change substantially when the wording is switched from "to improve the nation's schools" to "education" on an alternative randomized treatment ballot.

⁹For the first priming question, 381 of the 471 treatment respondents selected China. Only 72 respondents selected another country, whereas 15 selected "don't know" and 3 refused to answer. The 18 respondents who selected "don't know" or who refused to answer the first priming question were given the default for the second priming question, which used China as the reference country. Overall, the differences between these groups were minor. The 381 respondents who selected China were slightly more likely to state that the education system in the United States was losing ground. On the same outcome, the

18 respondents who answered "don't know" or refused to answer were indistinguishable from those who selected a country other than China.

¹⁰Tables S4 and S5 in the supplementary appendix show that the same basic treatment effect holds for a second PDK/GP question (on the nation's schools) and for a second GSS question (on confidence in the "the people running the education system in the United States"). However, the effects are smaller in size, suggesting that the framing treatment shifts 4.1% and 3.7% of respondents, respectively, toward more negative assessments of the quality of the nation's schools and the performance of leaders.

¹¹We caution against interpretations that fall prey to the fallacy of homogeneity, which would be to assume that the same group of respondents moves in response to the treatment for both of the outcome questions.

¹²Sniderman (2011:108) writes, "Manipulative designs aim to get people to do what they are not predisposed to do," whereas "facilitative designs involve a directional force in the form of a relevant reason to do what people are already predisposed to do."

REFERENCES

- Bushaw, W. J., & Lopez, S. J. (2011). Betting on teachers: The 43rd annual Phi Delta Kappa/Gallup Poll of the Public's Attitudes Toward the Public Schools. *Phi Delta Kappan*, 93(1), 8–26.
- Chong, D., & Druckman, J. N. (2007). Framing theory. *Annual Review of Political Science*, 10, 103–126.
- Chong, D., & Druckman, J. N. (2011). Public–elite interactions: Puzzles in search of researchers. In R. Y. Shapiro & L. R. Jacobs (Eds.), *The Oxford handbook of American public opinion and the media* (pp. 170–188). New York, NY: Oxford University Press.
- Darling-Hammond, L. (2010). *The flat world and education: How America's commitment to equity will determine our future*. New York, NY: Teachers College Press.
- de Vreese, C. H., & Kandyla, A. (2009). News framing and public support for a common foreign and security policy. *Journal of Common Market Studies*, 47, 453–481.
- Druckman, J. N., & Kam, C. D. (2011). Students as experimental participants: A defense of the "narrow data base." In J. N. Druckman, D. P. Green, J. H. Kuklinski, & A. Lupia (Eds.), *Cambridge handbook of experimental political science* (pp. 41–57). New York, NY: Cambridge University Press.
- Druckman, J. N., Kuklinski, J. H., & Sigelman, L. (2009). The unmet potential of interdisciplinary research: Political psychological approaches to voting and public opinion. *Political Behavior*, 31, 485–510.
- Entman, R. M. (1993). Framing: Toward clarification of a fractured paradigm. *Journal of Communication*, 43, 51–58.
- Fleischman, H. L., Hopstock, P. J., Pelczar, M. P., & Shelley, B. E. (2011). *Highlights from PISA 2009: Performance of U.S. 15-year-old students in reading, mathematics, and science literacy in an international context* (NCES 2011-004). Washington, DC: National Center for Education Statistics, Institute for Education Sciences, U.S. Department of Education.
- Fullerton, A. S., & Dixon, J. C. (2010). Generational conflict or methodological artifact? Reconsidering the relationship between age and policy attitudes in the U.S., 1984–2008. *Public Opinion Quarterly*, 74, 643–673.
- Hanushek, E. A. (2006). School resources. In E. A. Hanushek & F. Welch (Eds.), *Handbook of the economics of education* (Vol. 2, pp. 865–908). Amsterdam, the Netherlands: North Holland.
- Hutchings, V., & Piston, S. (2011). Knowledge, sophistication, and issue publics. In R. Y. Shapiro & L. R. Jacobs (Eds.), *The Oxford handbook of American public opinion and the media* (pp. 571–585). New York, NY: Oxford University Press.

- Iyengar, S., & Kinder, D. R. (1987). *News that matters: Television and American opinion*. Chicago, IL: University of Chicago Press.
- Moe, T. M., & Chubb, J. E. (2009). *Liberating learning: Technology, politics, and the future of American education*. San Francisco, CA: Jossey-Bass.
- Mutz, D. C. (2011). *Population-based survey experiments*. Princeton, NJ: Princeton University Press.
- Nelson, T. E. (2011). Issue framing. In R. Y. Shapiro & L. R. Jacobs (Eds.), *The Oxford handbook of American public opinion and the media* (pp. 189–203). New York, NY: Oxford University Press.
- Plutzer, E., & Berkman, M. (2005). The graying of America and support for funding the nation's schools. *Public Opinion Quarterly*, 69, 66–86.
- Rasinski, K. A. (1989). The effect of question wording on public support for government spending. *Public Opinion Quarterly*, 53, 388–394.
- Schuman, H., & Presser, S. (1981). *Questions and answers in attitude surveys: Experiments on question form, wording, and context*. New York, NY: Academic Press.
- Schwarz, N., & Sudman, S. (Eds.). (1992). *Context effects in social and psychological research*. New York, NY: Springer-Verlag.
- Sniderman, P. M. (2011). The logic and design of the survey experiment: An autobiography of a methodological innovation. In J. N. Druckman, D. P. Green, J. H. Kuklinski, & A. Lupia (Eds.), *Cambridge handbook of experimental political science* (pp. 102–114). New York, NY: Cambridge University Press.
- Snyder, T. D., & Dillow, S. A. (2011). *Digest of education statistics 2010* (NCES 2011-015). Washington, DC: National Center for Education Statistics, Institute for Education Sciences, U.S. Department of Education.
- Tomz, M. (2007). Domestic audience costs in international relations: An experimental approach. *International Organization*, 61, 821–840.
- Tourangeau, R., Rips, L. J., & Rasinski, K. A. (2000). *The psychology of survey response*. New York, NY: Cambridge University Press.

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