THE AMERICAN PUBLIC'S DEFENSE SPENDING PREFERENCES IN THE POST–COLD WAR ERA

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Abstract The end of the Cold War and the dissolution of the Soviet Union have produced marked changes in the defense spending preferences of politically informed Americans, but relatively little change among the 60 percent or so of the public least informed about politics. The overall level of defense spending preferred by well-informed citizens is significantly lower than during the Cold War and significantly less related to ideology and isolationism. Willingness to use force in the international arena remains the primary determinant of defense spending preferences among both well-informed and relatively uninformed citizens. Willingness to use force is in turn primarily related to basic social and cultural values, including trust in people and symbolic patriotism.

How do the policy preferences of ordinary citizens change in response to dramatic political events? The end of the Cold War with the Soviet Union—and of the Soviet Union itself—provides a remarkable opportunity to examine the dynamics of opinion change in the face of fundamental changes in the context and political underpinnings of U.S. defense policy. My aims here are to identify the most important determinants of defense spending preferences in the post–Cold War period and to examine how the determinants of defense spending preferences have changed since the early 1980s.

Some previous analysts have used aggregated time series data to

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examine the determinants of defense spending preferences and the impact of preferences on policy outcomes (e.g., Russett 1972; Hartley and Russett 1992; Bartels 1992). Others have used cross-sectional data from opinion surveys to explore the structure of individual foreign policy attitudes, including attitudes toward defense spending (e.g., Modigliani 1972; Hurwitz and Peffley 1987; Eichenberg 1989; Wittkopf 1990). The present research synthesizes these two perspectives, using individual-level data from a series of surveys conducted over a decade to explore how dramatic changes in the policy environment have affected the structure of individual attitudes toward defense spending.

The findings reported here speak to three distinct issues regarding the nature and impact of public opinion. First, they provide some new evidence about the bases and sophistication of mass opinion regarding issues of defense and foreign policy (Almond 1950; Gamson and Modigliani 1966; Shapiro and Page 1988; Page and Shapiro 1992). Second, they shed some light on general theoretical questions about the dynamics of mass opinion change (Converse 1962; Page and Shapiro 1992; Zaller 1992). Finally, they provide some basis for speculation about the likely impact of public opinion on the politics of defense policy in the post–Cold War era (Bartels 1992; Murray 1993; Russett, Hartley, and Murray 1994).

The Determinants of Defense Spending Preferences in 1992

I begin with an analysis of defense spending preferences in the general public based on data from the 1992 American National Election Study (NES) survey. The 1992 NES survey is an especially useful data source in two respects. First, it includes an unusually wide variety of questions about foreign policy and related attitudes, including questions about defense spending preferences, isolationism, willingness to use force, and America's role in the world.[1] Second, since the 1990 American National Election Study was conducted in the shadow of the Persian Gulf War, the 1992 study is the first to portray the American public's defense spending preferences in a more nearly "normal" post–Cold War period.[2]

1. These questions were included in part because the 1992 study served as the third wave of a two-year panel study of the political consequences of the Persian Gulf War.
2. Interviewing for the 1990 NES survey spanned the period from early November, just after President Bush announced a massive increase in the number of U.S. military personnel in the Gulf, to late December, when Bush was near achieving United Nations and congressional support for the use of force to oust Saddam Hussein from Kuwait. The most recent survey of the Chicago Council on Foreign Relations was likewise conducted in late 1990 (Wittkopf 1993).

Table 1 displays parameter estimates for a variety of regression models relating defense spending preferences (measured on a scale running from −1 for respondents who wanted to "spend much less money for defense" to +1 for respondents who felt that "defense spending should be greatly increased") to a series of explanatory variables measuring respondents' political and foreign policy attitudes. The explanatory variables in the first column of table 1 include general political ideology, attitudes toward Russia, willingness to use force, isolationism, and economic stakes in the Pentagon budget.[3] To facilitate comparability, all of these variables (except economic stakes) are also recoded to vary between −1 and +1.[4]

The parameter estimates in the first column of table 1 indicate that each of these variables had a notable impact on defense spending preferences, with conservatives, isolationists, people who advocated a tough posture toward Russia during the Cold War, and people whose states were net beneficiaries from Pentagon spending favoring more Pentagon spending, other things being equal. However, the magnitudes of the various parameter estimates clearly suggest that the dominant factor in producing support for defense spending in 1992 was a general willingness "to use military force to solve international problems."

The remaining columns of table 1 display parameter estimates for a variety of alternative regression specifications in which the determinants of defense spending preferences included in the first column are omitted one at a time. The parameter estimates produced by these alternative specifications provide further evidence of the importance of willingness to use force; it is the dominant determinant of defense spending preferences in every specification, regardless of which other variables are included in the analysis. The estimated effect of attitudes toward Russia is also quite stable across specifications, albeit of much smaller magnitude, while the estimated effect of isolationism increases

3. The Appendix contains more detailed information about question wording, data, and estimation, including explanations of the "jackknifed instrumental variables" and "jackknifed auxiliary instrumental variables" parameter estimates and of the "selection bias" coefficients included in table 1 and subsequent tables.

4. Economic stakes in the defense establishment are measured by Pentagon spending in each respondent's state (minus federal tax revenues spent on defense) in thousands of dollars per capita. The measure was constructed from various editions of *The Almanac of American Politics,* which reports levels of Pentagon spending and total federal taxation by state and year. My estimate of each survey respondent's net economic stake in the Pentagon budget is based on total defense expenditures in the respondent's state (in thousands of 1990 dollars per capita) minus the tax burden attributable to defense (measured by the federal tax burden in the respondent's state, also in thousands of 1990 dollars per capita, multiplied by the fraction of total federal revenues spent on defense). To allow for dissemination of information about these economic stakes I used the data reported in the current edition of *The Almanac of American Politics* for each election year; e.g., survey respondents in the 1992 election study were matched with 1990 data reported in *The Almanac of American Politics 1992.*

Table 1. Determinants of Defense Spending Preferences, 1992

	1	2	3	4	5
Intercept	−.072	−.113	−.092	.089	−.195
	(.080)	(.080)	(.075)	(.066)	(.032)
Conservative ideology	.177	0	.343	.616	−.009
	(.082)	. . .	(.109)	(.128)	(.118)
Toughness toward Russia, 1984	.208[a]	.261[a]	0	.227[a]	.227[a]
	(.157)	(.149)	. . .	(.236)	(.188)
Willingness to use force	1.141	1.403	1.230	0	1.488
	(.292)	(.321)	(.294)	. . .	(.275)
Isolationism, 1980–88	.156[a]	.095[a]	.152[a]	.365[a]	0
	(.089)	(.094)	(.090)	(.072)	. . .
Economic stake	.0573	.0188	.0385	.0612	.0141
	(.0209)	(.0287)	(.0239)	(.0286)	(.0300)
Selection bias	−.057	−.010	−.033	−.251	.103
	(.135)	(.137)	(.135)	(.126)	(.103)
R^2	.13	.12	.13	.07	.11
Standard error of regression	.544	.612	.578	.478	.637
N	2,146	2,146	2,146	2,146	2,146

NOTE.—Entries are jackknifed instrumental variables parameter estimates based on demographic variables in table A1. Standard errors of parameter estimates are in parentheses.

[a] Jackknifed auxiliary instrumental variables parameter estimates.

significantly when willingness to use force is omitted from the analysis (in the fourth column). The estimated effect of ideology is more variable, increasing significantly when toughness toward Russia or willingness to use force is omitted (in the third and fourth columns, respectively); these variations reflect the positive correlation between general political ideology and the more specific foreign policy attitudes that more directly determine defense spending preferences. On the other hand, omitting either conservative ideology or isolationism from the regression model reduces the apparent impact of the other (in the second and fifth columns).

Significant contractions in the military establishment have put the local economic consequences of defense spending policies very much in the public spotlight in recent years, as evidenced, for example, by the attention attracted by the periodic deliberations of the Defense Base Closure and Realignment Commission. Since previous research has suggested that local economic costs and benefits significantly influenced both public opinion toward Pentagon spending and congressional support for the Reagan military buildup (Bartels 1991a; Trubowitz and Roberts 1992), it would not be surprising to find similar effects in an era of significant declines in Pentagon spending. The parameter estimates in table 1 suggest that economic stakes did influence public opinion toward defense spending in 1992, but in a relatively modest way. Other things being equal, the expected difference in defense spending preferences between the biggest gainers from Pentagon spending (in Virginia, with a net gain of $1,433 per capita) and the biggest losers (in New Jersey, with a net loss of $1,329 per capita) amounted to only about .16—slightly less than the expected difference between strong conservatives and ideological moderates or between hard-liners and moderates on relations with Russia.

The Impact of the End of the Cold War on Defense Spending Preferences

The parameter estimates in table 1 provide a snapshot of the American public's defense spending preferences in the post–Cold War era. But to what extent do these preferences actually reflect public responses to the end of the Cold War, rather than longer-standing preferences about defense spending policy? This section addresses that question by comparing the contemporary structure of defense spending preferences displayed in table 1 with the structure of preferences prevailing before the momentous political changes of the late 1980s and early 1990s. The baseline period employed in this comparison is the period from 1982 to 1984, during Ronald Reagan's "evil empire" phase and

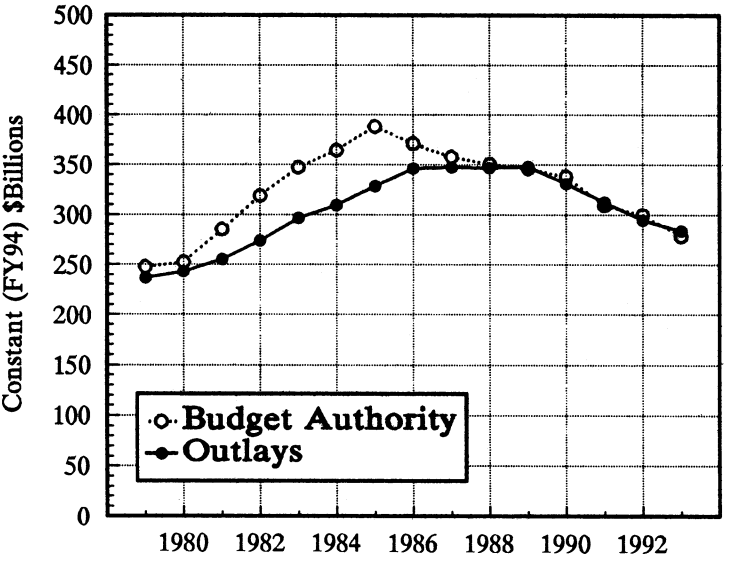

Figure 1. Pentagon budget authority and outlays, fiscal years 1979–93.

before Mikhail Gorbachev's *perestroika* and *glasnost* (Oberdorfer 1991). The 1982–84 baseline is especially convenient because, as figure 1 indicates, real defense outlays in this period were similar (in constant dollars) to the level of 1992; part of the mounting demand for reduced defense spending later in the 1980s reflected higher current levels of spending rather than lower desired levels (Bartels 1992). Choosing a longer Cold War baseline period produces some changes in the results of the analysis; these are documented in table 5 below.[5]

Figure 1 shows the trend of U.S. defense spending during the period covered by this analysis. The Reagan buildup of the early 1980s saw real increases in the Pentagon budget of more than 6 percent per year for 6 consecutive years, from less than $250 billion in fiscal year 1980 to almost $350 billion in fiscal year 1986. Real spending leveled off from fiscal year 1986 to fiscal year 1989, and then began to decline steadily. At the time of the 1992 survey (early in fiscal year 1993), real defense outlays had been declining by 5 percent per year for 4 consecutive years, and defense budget authority (also in real dollars) had been declining by more than 4 percent per year for 8 consecutive years (tables 3 and 4 in Kosiak [1993]).

5. I have also replicated the regression analyses reported here using each of the election surveys from 1980 to 1990 separately; although there are fluctuations in the individual parameter estimates from year to year, there are few clear trends over the decade as a whole.

Parameter estimates relating defense spending preferences in the Cold War baseline period 1982–84 to ideology, toughness toward Russia, willingness to use force, isolationism, and economic stakes are presented in the first column of table 2. These parameter estimates suggest that the factors identified as important determinants of defense spending preferences in 1992 were important during the early 1980s as well; the parameter estimates in the first column of table 2 are roughly similar in magnitude to the corresponding parameter estimates for 1992 (reproduced from table 1 in the second column of table 2), and their *t*-statistics range from 2.4 for conservative ideology to 1.1 for economic stakes, averaging 1.9 (as against 2.4 for the corresponding parameter estimates in 1992).

The last column of table 2 shows how the apparent impact of each explanatory variable changed between the early 1980s and 1992. Only one of these changes approaches statistical significance: an across-the-board decline in defense spending preferences of .19 on the -1 to $+1$ scale since 1984. There is also some evidence of a shift away from ideology as a basis of defense spending preferences and toward economic interests and willingness to use force, but these changes are too imprecisely measured to be statistically significant by conventional standards.[6]

One implication of these results is that, even in the Cold War era, defense spending preferences were determined more by a predisposition to favor or oppose the use of force in the international arena than by either general political ideology or attitudes toward the Soviet Union per se. These results parallel those of Hurwitz and Peffley (1987), who found that defense spending preferences in Lexington, Kentucky, in early 1986 were related primarily to militarism (with a partial correlation of .64),[7] and only weakly to isolationism (.17),[8] party identification (.14), and anticommunism (no significant correlation).[9]

6. All of the statistically insignificant changes in the last column of table 2 remain insignificant if the Cold War baseline period is taken as ending in 1988 rather than in 1984. The corresponding intercept shift from 1988 to 1992 is $-.380$ (with a standard error of .271).

7. Militarism was measured by three distinct survey items with epistemic correlations of .55, .50, and .55, respectively: (1) "Some people feel that in dealing with other nations our government should be strong and tough. Others feel that our government should be understanding and flexible." (2) "Some people feel that the best way to ensure peace is through military strength. Others feel that the best way to peace is to sit down with other nations and work out our disagreements." (3) "The U.S. should maintain its dominant position as the world's most powerful nation at all costs, even going to the brink of war if necessary."

8. Isolationism was measured by two distinct survey items with epistemic correlations of .60 and .75, respectively: (1) "We shouldn't risk our happiness and well-being by getting involved with other nations." (2) "The United States shouldn't worry about world affairs but just concentrate on taking care of problems here at home."

9. Anticommunism was measured by four distinct survey items with epistemic correlations of .75, .65, .41, and .25, respectively: (1) "The United States should do everything

Table 2. Changes in the Structure of Defense Spending Preferences, 1992

	1982–84	1992	Change
1982	.093	. . .	
	(.068)		
1984	.118	. . .	
	(.058)		
1992	. . .	−.072	−.190
		(.080)	(.099)
Conservative ideology	.497	.177	−.320
	(.204)	(.082)	(.220)
Toughness toward Russia, 1984	.236[a]	.208[a]	−.028
	(.179)	(.157)	(.238)
Willingness to use force, 1992	.636[a]	1.141	.505
	(.304)	(.292)	(.422)
Isolationism, 1980–88	.196[a]	.156[a]	−.040
	(.082)	(.089)	(.121)
Economic stake	.0261	.0573	.0312
	(.0246)	(.0209)	(.0323)
Selection bias	−.276	−.057	
	(.113)	(.135)	
R^2	.09	.13	
Standard error of regression	.514	.544	
N	3,058	2,146	

NOTE.—Entries are jackknifed instrumental variables parameter estimates based on demographic variables in table A1. Standard errors of parameter estimates are in parentheses.

[a] Jackknifed auxiliary instrumental variables parameter estimates.

The relative stability of the parameter estimates in table 2 over a decade-long period spanning significant changes in U.S. defense policy and momentous changes in the corresponding policy environment is very striking. Despite the complete disappearance of the Soviet Union, the sorts of respondents who were most likely to advocate a tough posture toward the Soviets during the Cold War remained noticeably more willing to spend money on defense in 1992. Conversely, the sorts

it can to prevent the spread of communism to any other part of the world." (2) "The United States should do everything it can to check the spread of Soviet influence in the world." (3) "Communism may have its problems, but it is an acceptable form of government for some countries." (4) "Some people say that our government should try very hard to get along with Russia. Others say that it would be a mistake to try very hard to get along with Russia."

of respondents who were most predisposed to use force in 1992 were already much more willing to spend money on defense in the early 1980s. In these and other respects, the structure of the public's defense spending preferences in 1992 remained frozen in the Cold War era. And although there was a statistically significant downward shift in the intercept level of defense spending preferences between 1984 and 1992, the magnitude of this shift does not seem very impressive by comparison with the historic decline in the external threat to U.S. security during the same period.

How are we to account for this remarkable stability in the structure of defense spending preferences? One possibility is that ordinary people were simply too uninformed or inattentive to grasp the implications of the collapse of communism for the underpinnings of U.S. defense spending policy, except in the simplest sense that a reduced foreign threat might allow for some modest reduction in the Pentagon budget. If this explanation is correct, it should be possible to discern significant changes in the structure of defense spending preferences among especially well informed citizens, but not among those who are relatively uninformed about politics and public affairs.[10]

Before comparing changes in the *structure* of opinion among relatively uninformed and better-informed citizens, it may be useful to compare changes in the *levels* of aggregate defense spending preferences between the two groups over time.[11] A comparison of this sort is presented in figure 2, which shows separate aggregate defense spending preferences, on the -1 to $+1$ scale introduced previously, for the most informed and least informed respondents in each of the seven NES surveys conducted between 1980 and 1992.[12]

10. Converse (1962), Gamson and Modigliani (1966), and many other analysts have documented the importance of political information in structuring attitude change. Zaller's (1992) treatment is especially comprehensive and insightful, while Sniderman's (1993) review essay is a good source of further references and discussion.

11. My measure of respondents' political information is based on interviewers' summary evaluations of respondents' "general level of information about politics and public affairs" at the end of the NES interview. Zaller's (1985) detailed analysis suggests that these summary evaluations are the "single most effective information item" in the NES surveys, with excellent statistical reliability (.78), strong correlations with a variety of relevant criterion variables, and no evidence of significant interviewer bias on the basis of respondents' race, income, education, or gender.

12. These estimates are derived from linear regressions of defense spending preferences on information (coded 1 for respondents with "very high" information levels, .75 for "fairly high" information, .5 for "average" information, .25 for "fairly low" information, and 0 for "very low" information), lack of information (with the coding of information simply reversed), and a selection bias correction described in the Appendix. Omitting the selection bias correction produces similar results, but with lower levels of apparent support for defense spending among both informed and uninformed respondents from 1980 to 1984. (These differences range from .01 to .08 and average .03.) Based on sample sizes ranging from 1,125 in 1982 to 2,146 in 1992, the average standard

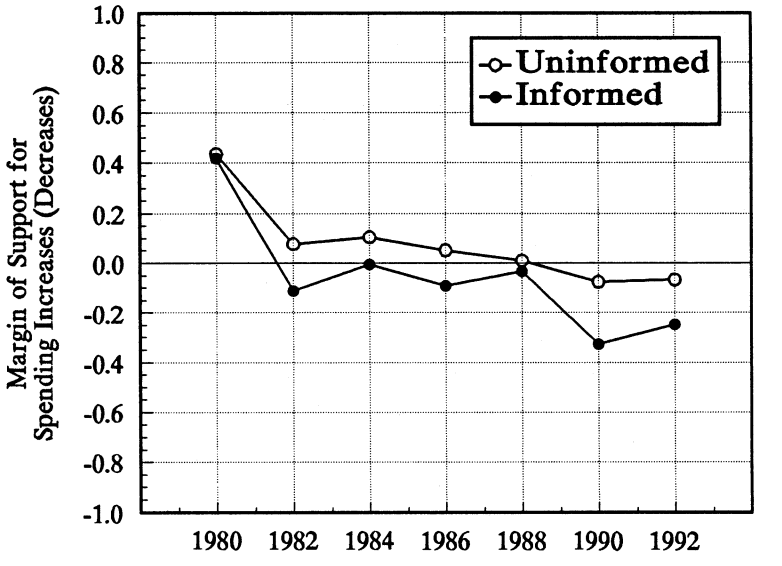

Figure 2. Public support for defense spending by information level, 1980–92.

In one sense the trends in figure 2 are consistent with Page and Shapiro's (1992, chap. 7) hypothesis of "parallel publics": in five of the six pairs of adjacent surveys, the direction of aggregate opinion change among uninformed respondents was in the same direction as among fully informed respondents. However, in every case the changes in aggregate opinion from one survey to the next were smaller among uninformed respondents; the total change averaged across the pairs of adjacent surveys was only half as large. This pattern seems consistent with the idea that relatively uninformed respondents were significantly less responsive than better-informed respondents to the implications of changing political and strategic circumstances for appropriate levels of Pentagon spending.

The analyses presented in tables 3 and 4 extend the comparison between relatively well informed and relatively uninformed respondents from preference levels to preference structures of the sort examined in tables 1 and 2. For example, table 3 presents parameter estimates paralleling those presented in table 2, but only for the one-third or so of the general public most informed about politics and public

errors of the individual estimates in fig. 2 are .027 for informed preferences and .043 for uninformed preferences.

Table 3. Changes in the Structure of Defense Spending Preferences, High Information

	1982–84	1992	Change
1982	.291	. . .	
	(.154)		
1984	.336	. . .	
	(.143)		
1992	. . .	−.273	−.609
		(.137)	(.198)
Conservative ideology	.604	.131	−.473
	(.167)	(.132)	(.213)
Toughness toward Russia, 1984	.318[a]	.029[a]	−.289
	(.194)	(.187)	(.269)
Willingness to use force, 1992	.573[a]	1.613	1.040
	(.369)	(.496)	(.618)
Isolationism, 1980–88	.435[a]	−.021[a]	−.456
	(.184)	(.136)	(.229)
Economic stake	.0348	−.0038	−.0386
	(.0388)	(.0297)	(.0489)
Selection bias	−.558	.319	
	(.175)	(.212)	
R^2	.23	.16	
Standard error of regression	.468	.639	
N	1,194	1,084	

NOTE.—Entries are jackknifed instrumental variables parameter estimates based on demographic variables in table A1. Standard errors of parameter estimates are in parentheses.

[a] Jackknifed auxiliary instrumental variables parameter estimates.

affairs.[13] This is the stratum of the public in which post–Cold War structural change should be evident, if it is evident at all.

The implication of the parameter estimates in table 3 could hardly be clearer: here, at last, is evidence of very marked changes in the structure of defense spending preferences in the post–Cold War era.

13. Respondents whose level of political information was very high or fairly high are classified here as "high information" respondents; those with average, fairly low, or very low levels of information are classified as "low information" respondents. In most of the NES surveys the former group is about 40 percent of the total sample and the latter group about 60 percent; in 1992 the proportion of high-information respondents was somewhat higher, presumably because half the 1992 respondents had survived previous NES interviews.

Table 4. Changes in the Structure of Defense Spending Preferences, Low Information

	1982–84	1992	Change
1982	.056	. . .	
	(.056)		
1984	.069	. . .	
	(.058)		
1992	. . .	.020	−.049
		(.083)	(.101)
Conservative ideology	.267	−.004	−.271
	(.250)	(.304)	(.394)
Toughness toward Russia, 1984	.211[a]	.423[a]	.212
	(.204)	(.229)	(.307)
Willingness to use force, 1992	.642[a]	.936	.294
	(.284)	(.248)	(.377)
Isolationism, 1980–88	.095[a]	.198[a]	.103
	(.096)	(.108)	(.144)
Economic stake	.0298	.0549	.0251
	(.0181)	(.0312)	(.0361)
Selection bias	−.211	−.225	
	(.091)	(.146)	
R^2	.03	.10	
Standard error of regression	.530	.530	
N	1,849	1,060	

NOTE.—Entries are jackknifed instrumental variables parameter estimates based on demographic variables in table A1. Standard errors of parameter estimates are in parentheses.

[a] Jackknifed auxiliary instrumental variables parameter estimates.

A comparison of the 1992 parameter estimates presented in the second column of the table with the Cold War era estimates presented in the first column indicates that the effects of ideology, attitudes toward Russia, and isolationism had virtually disappeared by 1992 among this well-informed stratum of the public, while the effect of willingness to use force nearly tripled and the intercept level of defense spending preferences declined by more than half a point on the −1 to +1 scale.

It could be argued that these marked changes in the structure of defense spending preferences reflect sensible appraisals of how the world has changed with the end of the Cold War. It does not seem surprising that the collapse of communism has dissolved the conventional Cold War linkage between conservative ideology and defense

spending preferences.[14] Nor does it seem odd that isolationists, who may have regarded an expensive military establishment as the price of U.S. security from foreign interference during the Cold War, are no longer willing to pay that price in an era when American military might seems less likely to be used for defense against Soviet aggression than for projecting American influence around the globe. And, conversely, the increasing centrality of willingness to use force in the structure of defense spending preferences seems consistent with the increasingly proactive character of U.S. efforts to "use military force to solve international problems" (as the NES survey item has it) in what President Bush trumpeted as the "new world order."

Of course, attentive citizens need not have worked out for themselves these policy implications of global change; simply watching and listening to political elites would have provided significant clues about how dramatic world events had altered the traditional bases of defense spending preferences. For example, the defense budget reductions projected and implemented by the conservative Bush administration, the militant conservative isolationism of Patrick Buchanan's "America First" campaign, and the ideological heterogeneity of the coalitions supporting and opposing the use of force in the Persian Gulf were clear indications that the Cold War equation of conservatism and internationalism with support for the Pentagon, and liberalism and isolationism with opposition to defense spending, were no longer applicable.[15]

What seems more surprising is that there is almost no trace of parallel changes in the structure of defense spending preferences among the 60 percent or so of the public that is less informed about politics and public affairs. None of the changes evident in the best-informed 40 percent of the public are evident in this less informed stratum. Indeed, as the parameter estimates in table 4 indicate, the changes for which there is some (weak) evidence in the less informed public are often in the opposite direction. Attitudes toward Russia, isolationism, and economic stakes were, if anything, probably more important in 1992 than during the Cold War among the relatively uninformed, while the declining impact of ideology and the increasing impact of willingness to use force were both much smaller in magnitude than among the relatively well informed (and far from attaining conventional statistical significance). The intercept level of defense spending preferences

14. This decoupling illustrates the inverse of the process by which ideology was coupled with racial attitudes in the ideological transformation in the 1960s documented by Carmines and Stimson (1989, chap. 5).

15. The two Senate Republicans who opposed the use of force in the Gulf were liberal Mark Hatfield of Oregon and conservative Charles Grassley of Iowa. Conversely, several moderate liberal Democrats supported the use of force in the Gulf, most notably Al Gore.

among the relatively uninformed was essentially the same in 1992 as in 1984, suggesting that even the one significant change evident in the whole public in table 2 was attributable almost entirely to a change in the preferences of the relatively well-informed stratum of the public.

The absence of systematic change in the structure of less informed opinions persists even if we allow for the possibility that less informed people were slower to recognize fundamental changes in the Cold War environment. Table 5 presents parameter estimates paralleling those in the first columns of tables 2, 3, and 4 but derived from a longer Cold War baseline period extending from 1982 to 1988. For less informed people, extending the Cold War baseline period produces the same absence of significant changes as with the shorter 1982–84 baseline period in table 4. (The average absolute value of the *t*-statistics for parameter shifts in the last column of table 4 is .68; the corresponding average for shifts from 1982–88 to 1992 is .66.)

By contrast, all of the significant structural shifts in well-informed opinions from 1982–84 to 1992 are also evident from the longer Cold War baseline period 1982–88, but with magnitudes reduced by 3–58 percent by comparison with those shown in the last column of table 3. (The average absolute value of the *t*-statistics for parameter shift in the last column of table 3 is 1.81; the corresponding average for shifts from 1982–88 to 1992 is 1.00.)[16] These results suggest that the reorientation of opinions toward defense spending evident among well-informed people in table 3 was already well underway by 1988 (even though the aggregate *level* of defense spending preferences among fully informed respondents, as displayed in figure 2, did not change significantly between 1982 and 1988), but that no corresponding reorientation was underway among less informed people even by 1992 (although there was a gradual decline in the aggregate *level* of defense spending preferences among uninformed respondents beginning in the early 1980s).

Figure 3 presents a graphical comparison of the parameter estimates for more informed respondents from table 3 and those for less informed respondents from table 4. The light bars in each panel of the figure depict the structure of defense spending preferences in the baseline period 1982–84, and the dark bars depict the structure of defense spending preferences in 1992. Clearly, there is little evidence here of Page and Shapiro's (1992, chap. 7) "parallel publics." The pattern of effects for less informed respondents in 1992 resembles the Cold War–

16. The estimated changes in the structure of well-informed opinions between 1982–88 and 1992 (and their standard errors) are −.254 (.316) for the intercept shift from 1988 to 1992, −.268 (.226) for ideology, −.280 (.269) for attitudes toward Russia, +.760 (.554) for willingness to use force, −.209 (.193) for isolationism, and −.0259 (.0485) for economic stakes.

Table 5. Parameter Estimates for 1982–88 Cold War Baseline

	Total Sample	High Information	Low Information
1982	.089	−.040	−.017
	(.054)	(.152)	(.106)
1984	−.068	.347	−.020
	(.232)	(.139)	(.288)
1986	.056	−.014	−.117
	(.098)	(.170)	(.179)
1988	.308	−.019	.395
	(.259)	(.285)	(.316)
Conservative ideology	.192	.399	.084
	(.204)	(.184)	(.227)
Toughness toward Russia, 1984	.426[a]	.309[a]	.371[a]
	(.207)	(.193)	(.186)
Willingness to use force	.794[a]	.853[a]	.751[a]
	(.173)	(.246)	(.161)
Isolationism, 1980–88	.144[a]	.188[a]	.037[a]
	(.088)	(.137)	(.111)
Economic stake	.0669	.0221	.0938
	(.0356)	(.0384)	(.0427)
Selection bias	−.295	−.292	−.233
	(.108)	(.186)	(.120)
R^2	.05	.15	.06
Standard error of regression	.527	.483	.530
N	6,744	2,549	4,165

NOTE.—Entries are jackknifed instrumental variables parameter estimates based on demographic variables in table A1. Standard errors of parameter estimates are in parentheses.

[a] Jackknifed auxiliary instrumental variables parameter estimates.

era pattern for less informed respondents more than it does either the Cold War or contemporary pattern among better-informed respondents. These comparisons reinforce graphically the conclusion that, at least with respect to defense spending policy, most of the American public has not yet come to grips with the end of the Cold War.

The Determinants of Willingness to Use Force

The importance of willingness to use force as a determinant of defense spending preferences in the post–Cold War era naturally raises the

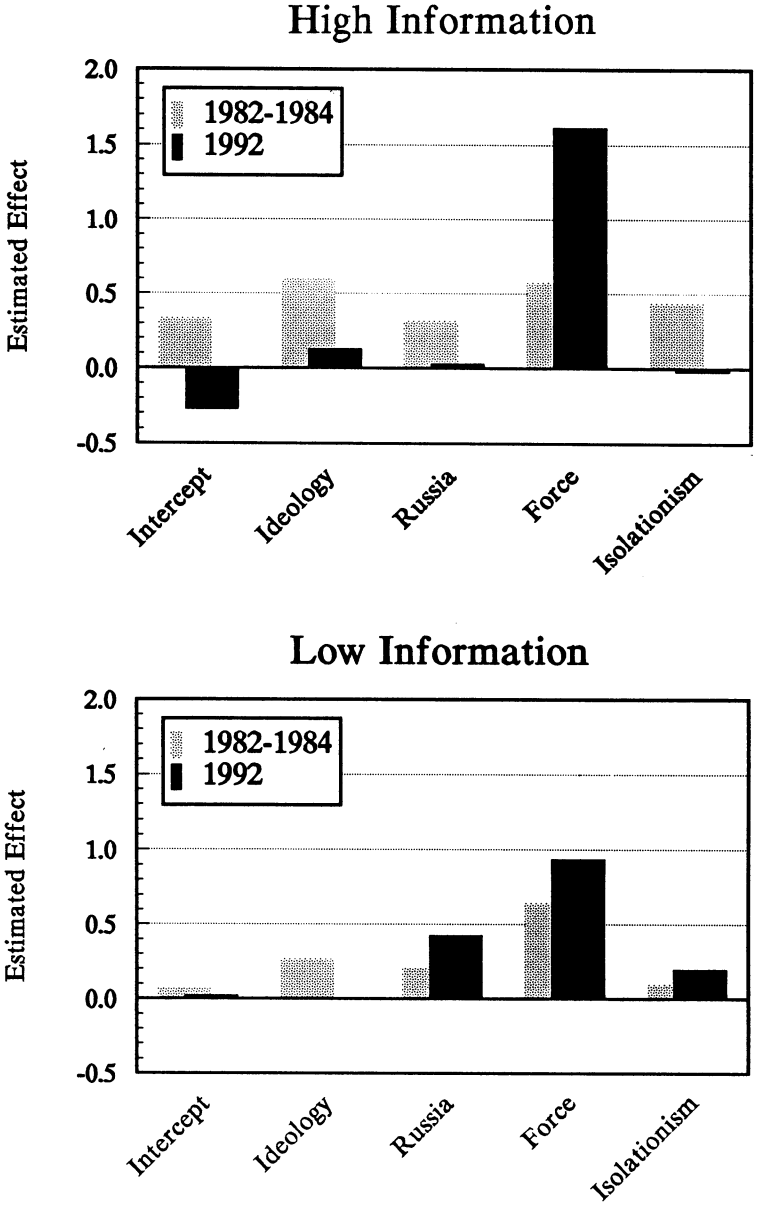

Figure 3. Changes in the structure of defense spending preferences by information level, 1982–92. *Top,* high-information respondents; *bottom,* low-information respondents.

question of how, in turn, to account for willingness to use force. The demographic correlates of willingness to use force reported in table A1 in the Appendix indicate that people with extensive formal education, blacks, easterners, professionals, and females were relatively unwilling to use force in the international arena, while Catholics, Protestants, southerners, and wealthy people were more willing than others to use force. But what sorts of political and foreign policy attitudes mediate these relationships?

The regression analyses reported in table 6 show surprisingly weak relationships between willingness to use force on one hand and more general political and foreign policy attitudes on the other. Ideology seems to matter only when other important correlates of willingness to use force are omitted from the regression model. Toughness toward Russia and economic stakes in the military-industrial complex do not seem to matter at all (nor, in analyses unreported in table 6, does party identification). Isolationism does have a negative effect on willingness to use force in some specifications (columns 3 and 4); this negative effect more than counterbalances the positive direct effect of isolationism on defense spending preferences reported in table 1.

What seems most interesting in table 6 is that two of the three primary determinants of willingness to use force are as much cultural as political: a generalized distrust of people[17] and symbolic patriotism (as measured by a question about pride in the American flag).[18] Again, these results roughly parallel those of Hurwitz and Peffley (1987), who found strong partial correlations between militarism on one hand and "core values" regarding ethnocentrism (.51)[19] and the morality of warfare (.46)[20] on the other, but only weak partial correlations between militarism on one hand and ideology (.14) or party identification (.13) on the other.

It appears from these results that willingness to use force is not only

17. "Generally speaking, would you say that most people can be trusted, or that you can't be too careful in dealing with people?"

18. "When you see the American flag flying does it make you feel *extremely* good, *very* good, *somewhat* good, or *not very good?*"

19. Ethnocentrism was measured by four distinct survey items with epistemic correlations of .61, .46, .46, and .36, respectively: (1) "Other countries should try to make their governments as much like ours as possible." (2) "While the American form of government may not be perfect, it is the best form of government yet devised." (3) "Many other countries have governments that are just as good as ours." (4) "How do you think the United States compares with other countries in the world? Do you think that it is really no better than many other countries, that it is better than many countries but not necessarily the best, or that it is absolutely the best country in the world?"

20. Attitudes toward the morality of war were measured by two distinct survey items with epistemic correlations of .58 and .55, respectively: (1) "It is certainly acceptable to kill one's enemy when fighting for one's country." (2) "A person who loves his fellow man should refuse to fight in any war."

Table 6. Determinants of Willingness to Use Force, 1992

	1	2	3	4
Intercept	.052	−.012	−.286	−.300
	(.017)	(.034)	(.087)	(.045)
Conservative ideology	.403	.394	.004	0
	(.118)	(.105)	(.142)	. . .
Toughness toward Russia, 1984	.004[a]	.022[a]	.005[a]	0
	(.102)	(.086)	(.061)	. . .
Isolationism, 1980–88	.094[a]	−.011[a]	−.239[a]	−.257[a]
	(.020)	(.060)	(.090)	(.065)
Trust in people	0	−.095	−.266	−.280
	. . .	(.055)	(.072)	(.054)
Pride in the American flag	0	0	.364	.380
	. . .	. . .	(.112)	(.051)
Economic stake	.0188	.0112	−.0042	0
	(.0173)	(.0165)	(.0160)	. . .
R^2	.06	.05	.03	.03
Standard error of regression	.432	.436	.490	.497
N	2,434	2,434	2,434	2,434

NOTE.—Entries are jackknifed instrumental variables parameter estimates based on demographic variables in table A1. Standard errors of parameter estimates are in parentheses.

[a] Jackknifed auxiliary instrumental variables parameter estimates.

of abiding importance in predisposing people to prefer more or less defense spending, but also deeply rooted in more basic attitudes and values. Although we lack the data necessary to assess directly the temporal stability of attitudes toward the use of force, considerable stability is at least suggested by the absence of cohort differences in willingness to use force in table A1 in the Appendix. Although attitudes toward Russia and isolationism both display significant cohort effects (with wariness of Russia peaking among people who reached adulthood in the late 1950s and isolationism peaking among those who came of age during the Vietnam War), willingness to use force is essentially unrelated to age.[21] Although the international environment in which

21. The underlying attitudes and values themselves are also stable in this sense. Purging regressions paralleling those reported in table A1 (and available from the author) show no significant generational patterns either in trust in people or in symbolic patriotism. The demographic factors most strongly related to trust in people are race, suburban residence, and union membership (all negative, with blacks especially distrusting), and income, professional status, and education (all positive, with the well-educated especially trusting). The demographic factors most strongly related to symbolic patriotism are race, professional status, and urban residence (all negative, especially for blacks), and income, church attendance, and Protestant religious affiliation (all positive). These

U.S. defense and foreign policy are made may be subject to significant change, the social and cultural orientations that predispose some citizens to support and others to oppose an aggressive foreign policy seem unlikely to change at more than a glacial pace.[22]

Conclusions

The analysis presented here suggests that, broadly speaking, the defense spending preferences of the American public have changed relatively little since the end of the Cold War. While preferred levels of defense spending have declined somewhat, detailed analysis demonstrates that this decline is almost entirely attributable to opinion changes among the most informed 40 percent or so of the public. Both the level and the structure of defense spending preferences among the least informed 60 percent of the public have changed only marginally since the early 1980s. This stability is remarkable in light of the momentous changes in the geopolitical environment in the intervening decade and provides an object lesson (if any was necessary) regarding the inertial tendencies of public opinion about complex policy issues.

It is worth emphasizing, however, that inertia is not inevitable, even among the relatively uninformed stratum of the public. Figure 2 shows that in 1980, in the wake of the Soviet invasion of Afghanistan and in the midst of the Iranian hostage crisis, even relatively uninformed respondents were strongly in favor of increased defense spending. It is also clear from figure 2 that enthusiasm for defense spending increases dissipated rapidly even in the relatively uninformed stratum of the public between 1980 and 1982, although somewhat less rapidly than among the better-informed.

By the same token, Peffley and Hurwitz (1992) provided extensive evidence of changes in public perceptions of the Soviet Union even in the period from 1987 to 1988, although they also "uncovered evidence of impressive stability in respondents' images of the Soviet Union, even in the face of new information that was dramatic, sudden, and consensually interpreted by opinion leaders" (1992, p. 453). The important point is that these changing perceptions of the Soviet Union were apparently not sufficient to precipitate significant restructuring of related policy preferences, even for the rather proximate issues of

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demographic patterns are similar in a few respects to those reported in table A1 for willingness to use force, but not so similar as to suggest that the effects of trust and symbolic patriotism in table 6 are merely artifacts of demographic similarities.

22. Wittkopf (1993) presents a broader but generally consistent interpretation of the public's foreign policy views.

containing communism and defense spending.[23] Thus, only the more informed stratum of the general public has so far succeeded in grasping—either directly or by attending to the arguments of political elites—the implications for U.S. defense policy of the declining Soviet threat.

If the significant changes observed in the most informed stratum of the general public are harbingers of future changes in the public at large, the analysis presented here provides some interesting indications of how the structure of defense spending preferences will change in the years to come: declining demand for defense spending among the general public will continue to produce downward pressure on the Pentagon budget in the post–Cold War era, and remaining differences in defense spending preferences will increasingly come to reflect fundamental differences regarding the use of force in the international arena, while general political ideology, anticommunism, and isolationism will become less significant bases of defense policy conflict. It is worth reiterating, however, that my analysis has produced no evidence that such across-the-board changes in the structure of support for defense spending are already underway outside the most informed stratum of the general public.

The remarkable inertia in the defense spending preferences of much of the American public in the post–Cold War era may provide one explanation for the similarly remarkable inertia in actual defense policy in the last decade. Numerous observers, analysts, and editorialists have emphasized how slowly and haltingly the Pentagon has responded to momentous changes in the global political and military situation, despite the significant changes in overall spending levels documented in figure 1 (e.g., Morrison 1985; Kaufmann 1992, p. vii; Gordon 1993; New York Times 1994). One reporter described policymakers "floating in a Cold War–era time capsule while the currents of a new world order swirl outside" (Schmitt 1991). Another noted that "a huge peace dividend anticipated by many at the end of the cold war has not materialized. Instead, small reductions in spending have been achieved incrementally by cutting troop strength and dropping plans for a few major weapons" (Weiner 1994).

This policy inertia is presumably attributable in part to inertia in the attitudes and perceptions even of political elites (Murray 1993) and in part to the entrenched institutional interests of Pentagon bureaucrats, contractors, and other powerful actors. Nevertheless, the apparent

23. In the Chicago Council on Foreign Relations surveys, the proportion of policymakers, academics, journalists, and other elites who considered containing communism a "very important goal" of American foreign policy declined from 43 percent in 1986 to 10 percent in 1990, but the corresponding views of the mass public changed little over the same 4-year period (Wittkopf 1993, pp. 4–5).

correspondence between the defense spending preferences of the bulk of the general public as depicted here and actual trends in defense policy as depicted by Schmitt, Weiner, and other observers is striking. Defense spending preferences in the bulk of the public reflect a desire for modest reductions, but with surprisingly little evidence of structural change in the post–Cold War era. The same could be said of actual policy outcomes.

Of course, much more detailed analysis would be required to establish whether and how the pattern of public opinion I have documented has helped to determine U.S. defense policy in the post–Cold War era. But the connection is sufficiently plausible for Russett, Hartley, and Murray (1994, p. 20) to have asserted that "public opinion is the most substantively important influence on the [Pentagon] budget that remains after the Cold War."[24] They added (Russett, Hartley, and Murray 1994, p. 20) that, "currently, public opinion points strongly towards a smaller military budget. If those attitudes—and their influence—remain constant, the military budget will decline dramatically." My own reading is somewhat different, emphasizing the rather limited extent to which the implications for defense policy of the last decade's momentous changes have seemed to penetrate the policy preferences of the mass public. Perhaps, if those attitudes—and their influence—remain constant, the military budget will continue to decline and adjust less dramatically than it otherwise would.

Appendix

Data and Estimation

The data utilized in this analysis were collected as part of the 1980, 1982, 1984, 1986, 1988, 1990, and 1992 American National Election Studies.[25] Defense spending preferences are measured by an item appearing in all seven surveys asking respondents whether defense spending should be decreased or increased.

Defense Spending Preference, 1980–92.—Some people believe that we should spend much less money for defense. Others feel that defense spending should be greatly increased. Where would you place yourself on this scale, or haven't you thought much about this?

24. The assertion appears to be based on extrapolation from time series analyses of the impact of aggregate public opinion on Pentagon spending levels during the Cold War, especially that of Hartley and Russett (1992).

25. The data were originally gathered by the University of Michigan's Center for Political Studies and are available through the Inter-University Consortium for Political and Social Research.

(Seven-point scale)
−1 Greatly decrease defense spending
. . .
+1 Greatly increase defense spending

The key explanatory variables in my analysis include three National Election Study questions about foreign policy attitudes:

Toughness toward Russia, 1984.—Some people feel it is important for us to try to cooperate more with Russia, while others believe we should be much tougher in our dealings with Russia. Where would you place yourself on this scale, or haven't you thought much about this?

(Seven-point scale)
−1 Cooperate more
. . .
+1 Get much tougher

Willingness to Use Force, 1992.—In the future, how willing should the United States be to use military force to solve international problems?

−1 Never willing
−0.5 Not very willing
0 Somewhat willing
+0.5 Very willing
+1 Extremely willing

Isolationism, 1980–88.—I am going to read a statement about U.S. foreign policy, and I would like you to tell me whether you agree or disagree. "This country would be better off if we just stayed home and did not concern ourselves with problems in other parts of the world."

−1 Disagree
+1 Agree

Unlike the question on defense spending preferences, these questions on toughness toward Russia, willingness to use force, and isolationism have not been asked consistently since 1980. The question on toughness toward Russia was omitted in 1982, changed in 1984, and dropped after 1988; the question on isolationism was omitted in 1982 and asked of half samples in 1984, 1986, and 1990; the question on willingness to use force appeared for the first time in 1990.

The resulting missing data make it impossible to estimate the relative effects of toughness toward Russia, willingness to use force, and isolationism on defense spending preferences directly in any of the seven election studies since 1980. Nevertheless, the fact that similar batteries of demographic variables were included in each election study makes it possible to simulate responses to the questions on Russia, force, and isolationism on the basis of auxiliary instrumental variables estimation (Franklin 1990). Essentially, predicted responses for each question based on auxiliary "purging" regressions can be substituted for actual responses as explanatory variables in an analysis of defense spending preferences, even in years when no actual responses are available.

Table A1 presents the parameter estimates obtained by regressing attitudes toward Russia, the use of force, and isolationism on a battery of demographic variables common to all seven election surveys. Although the parameter estimates in table A1 are based on separate analyses employing different samples, I used them to construct simulated values for each variable in each election year. It is important to be clear about the nature of these simulated values. They should not be taken as estimates of how the same survey respondents would actually have answered each question in each year. For example, attitudes toward Russia changed markedly in the late 1980s (Richman 1991; Peffley and Hurwitz 1992), and those changes would presumably have been reflected in subsequent responses to the discontinued NES question about getting tough with Russia. What the auxiliary instrumental variables technique does is allow us to identify how the defense spending preferences of the sorts of respondents who advocated a tough posture toward Russia in 1984 varied over time.

Although Franklin (1990) derived the standard errors of auxiliary instrumental variables parameter estimates when there is a single auxiliary instrumental variable, an analytical expression for the corresponding standard errors when there are multiple auxiliary instrumental variables has yet to be derived. Fortunately, the additional sampling variability introduced by the first-stage regressions can be estimated directly by jackknifing the entire analysis.[26] All of the parameter estimates and standard errors reported in tables 1–6 were calculated by the jackknife method: each year's sample was randomly divided into 10 subsamples, and the whole set of first- and second-stage parameter estimates was calculated 10 times, with a different one of these subsamples omitted each time, to produce the parameter estimates and standard errors reported in the tables (Achen 1982, pp. 37–41).

A secondary advantage of the auxiliary instrumental variables technique is that the use of simulated values from purging regressions eliminates the bias in regression parameter estimates that would otherwise result from measurement error in the explanatory variables. Indeed, since all of the explanatory variables derived from survey responses are subject to substantial measurement error, my analysis employs instrumental variables estimation based on the set of exogenous variables listed in table A1 even for the explanatory variables actually included in each election survey, such as ideology in each year and willingness to use force in 1992.[27]

A practical sense of the advantages and disadvantages of this approach can be garnered from a comparison of ordinary least squares and instrumental variables parameter estimates for the same model specification in cases where

26. I am grateful to Charles Franklin for suggesting this approach in a personal communication. In the present application, employing the jackknife method also obviates the need for special calculations to produce correct standard errors in connection with the selection bias correction employed in tables 1–5.

27. Most econometrics textbooks describe the logic of using instrumental variables to estimate parameters consistently when explanatory variables are measured with error. Achen's (1983) discussion highlights some extensions and limitations of the general approach. Instrumental variables may be appropriate even when they are themselves measured with error, although here the demographic variables included in table A1 are unlikely to contain significant measurement error.

Table A1. Purging Regressions for Toughness toward Russia, Willingness to Use Force, and Isolationism

	Toughness toward Russia, 1984	Willingness to Use Force, 1992	Isolationism, 1980–88
Intercept	−2.099 (.557)	.023 (.245)	1.548 (.410)
Cohort age (in 1992)	−.0429 (.0111)	−.0031 (.0057)	.0280 (.0082)
Cohort age$^{1/2}$	.635 (.160)	.034 (.076)	−.357 (.118)
Female	−.126 (.032)	−.048 (.019)	.061 (.027)
Black	−.138 (.052)	−.091 (.026)	.082 (.038)
Southern	.019 (.040)	.055 (.025)	.012 (.033)
Eastern	.096 (.044)	−.058 (.026)	−.023 (.036)
Western	−.054 (.044)	−.016 (.027)	−.018 (.038)
Income	.081 (.060)	.055 (.036)	−.149 (.051)
Professional	−.093 (.042)	−.057 (.026)	−.058 (.035)
Clerical	.029 (.040)	−.030 (.025)	−.029 (.034)
Housewife	.178 (.053)	−.021 (.031)	−.058 (.041)
Union household	−.083 (.035)	.023 (.023)	−.012 (.030)
Protestant	.185 (.049)	.072 (.026)	−.042 (.043)
Catholic	.085 (.055)	.081 (.030)	−.029 (.047)
Jewish	−.058 (.098)	.028 (.065)	−.251 (.092)
Church attendance	.053 (.042)	.018 (.023)	−.163 (.035)
Children	.067 (.033)	.018 (.019)	−.019 (.027)
Education (years)	−.0202 (.0080)	−.0113 (.0042)	−.0434 (.0064)
Political information	−.034 (.065)	−.021 (.038)	−.428 (.053)
Economic stake	.0615 (.0268)	−.0205 (.0178)	−.0614 (.0238)
R^2	.07	.03	.10
Standard error of regression	.601	.410	.838
N	1,864	2,434	5,242

NOTE.—Entries are ordinary least squares parameter estimates. Standard errors of parameter estimates are in parentheses.

both approaches are feasible. Ordinary least squares parameter estimates paralleling the instrumental variables parameter estimates presented in tables 2, 3, and 4 appear in table A2.

The relative imprecision of the instrumental variables parameter estimates is clear by comparison with the ordinary least squares parameter estimates in table A2. Across a range of variables and alternative model specifications, the standard errors of the instrumental variables parameter estimates are, on average, two or three times as large as those for the corresponding ordinary least squares parameter estimates.[28] The corresponding advantage of the in-

28. The differences are especially conspicuous for ideology and (in 1992 only) willingness to use force. They are less conspicuous for the variables that are necessarily replaced by instruments even in table A2 because they are not measured directly in some or all

Table A2. Ordinary Least Squares Parameter Estimates

	Total Sample, 1982–84	Total Sample, 1992	High Information, 1982–84	High Information, 1992	Low Information, 1982–84	Low Information, 1992
1982	.114	. . .	.283	. . .	.080	. . .
	(.053)		(.100)		(.071)	
1984	.137	. . .	.327	. . .	.091	. . .
	(.046)		(.088)		(.061)	
1992	. . .	−.188	. . .	−.262	. . .	−.095
		(.019)		(.024)		(.030)
Conservative ideology	.307	.165	.438	.209	.163	.113
	(.024)	(.023)	(.031)	(.028)	(.036)	(.037)
Toughness toward Russia, 1984	.307[a]	.355[a]	.402[a]	.293[a]	.229[a]	.412[a]
	(.071)	(.056)	(.107)	(.074)	(.093)	(.083)
Willingness to use force	.629[a]	.326	.668[a]	.335	.566[a]	.306
	(.151)	(.024)	(.228)	(.031)	(.199)	(.035)
Isolationism	.199[a]	−.004	.406[a]	−.015	.114[a]	−.005
	(.057)	(.011)	(.100)	(.017)	(.089)	(.016)
Economic stake	.0287	.0284	.0367	.0088	.0349	.0562
	(.0173)	(.0159)	(.0249)	(.0196)	(.0237)	(.0256)
Selection bias	−.320	.122	−.574	.313	−.244	−.059
	(.079)	(.054)	(.144)	(.086)	(.099)	(.077)
R^2	.10	.16	.24	.21	.04	.12
Standard error of regression	.509	.432	.464	.395	.529	.463
N	3,058	2,146	1,194	1,084	1,849	1,060

NOTE.—Entries are ordinary least squares parameter estimates. Standard errors of parameter estimates are in parentheses.
[a] Instrumental variables parameter estimates based on demographic variables in table A1.

strumental variables approach, however, is that the resulting parameter estimates are much less susceptible to bias due to measurement error and other problems. Even modest endogeneity in the explanatory variables can produce biases in the ordinary least squares parameter estimates that more than erase their advantage in precision (Bartels 1991b). In the present case, for example, a correlation of as little as .15 between measured and unmeasured causes of defense spending preferences might produce enough bias to outweigh the advantage in precision of the ordinary least squares estimates.

A comparison of the ordinary least squares parameter estimates in table A2 and the corresponding instrumental variables parameter estimates in tables 2, 3, and 4 suggests that ordinary least squares estimation tends to understate drastically the importance of willingness to use force as a determinant of defense spending preferences in 1992. Across the range of model specifications presented in table A2, the estimated impact of willingness to use force in 1992 is understated by more than 70 percent when no account is taken of measurement error. The impact of isolationism is also somewhat understated, while the impact of attitudes toward Russia is overstated.[29] As a result, the increased importance of willingness to use force in the post–Cold War era is entirely obscured in the ordinary least squares analysis, and the changes in the effects of the other variables in tables 3 and 4 are understated by about 50 percent.

The models for which results are reported in tables 1–5 include one further defense against bias: the inclusion in the relevant regressions of a variable intended to capture the effect of selection bias due to nonrandom nonresponse. Almost 15 percent of the respondents in the various NES surveys declined to place themselves on the defense spending scale, fastening upon the response option "or haven't you thought much about this?" in the survey question. To guard against bias in the parameter estimates due to this sample truncation, the regressions reported in tables 1–5 include a selection bias coefficient measuring the correlation between the unmeasured causes of defense spending preferences and response probabilities (Heckman 1979; Achen 1986).[30]

These estimated selection biases are mostly negative, especially during the Cold War period. This pattern suggests that the unmeasured characteristics predisposing survey respondents to place themselves on the NES defense spending scale made them less supportive of defense spending, other things

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of the relevant surveys: toughness toward Russia, isolationism, and (in the Cold War period only) willingness to use force.

29. It is important to recall here that biases due to measurement error generally affect all of the parameter estimates in an equation, not just those associated with the variable or variables measured with error. It is also important to recall that, except in the simplest bivariate case, measurement error may produce either attenuation or inflation of parameter estimates; it is not uncommon to find the parameter estimates for some (especially error-laden) variables biased toward zero and those for other (usually more reliably measured) variables biased upward in magnitude (Achen 1983). Here, even though the impact of attitudes toward Russia is necessarily estimated with the equivalent of an instrumental variable, since these attitudes were not measured in the 1992 survey, the parameter estimate appears to be biased upward by measurement error in the *other* explanatory variables.

30. The selection bias correction is omitted from table 6 because the nonresponse rate for the "willingness to use force" variable analyzed there was only about 2 percent.

Table A3. Parameter Estimates without Corrections for Selection Bias

	Total Sample, 1982–84	Total Sample, 1992	High Information, 1982–84	High Information, 1992	Low Information, 1982–84	Low Information, 1992
Intercept	−.043	−.107	.013	−.092	−.062	−.137
	(.029)	(.040)	(.086)	(.068)	(.038)	(.048)
Conservative ideology	.572	.146	.661	.180	.384	−.300
	(.176)	(.092)	(.147)	(.131)	(.290)	(.310)
Toughness toward Russia, 1984	.112[a]	.201[a]	.124[a]	.039[a]	.107[a]	.452[a]
	(.168)	(.155)	(.193)	(.186)	(.201)	(.208)
Willingness to use force	.811[a]	1.222	.833[a]	1.472	.777[a]	1.243
	(.271)	(.273)	(.282)	(.502)	(.279)	(.238)
Isolationism, 1980–88	.047[a]	.118[a]	.141[a]	.161[a]	−.043[a]	−.037[a]
	(.068)	(.056)	(.133)	(.085)	(.099)	(.079)
Economic stake	.0216	.0271	.0232	.0053	.0230	.0306
	(.0233)	(.0285)	(.0344)	(.0296)	(.0175)	(.0402)
R^2	.09	.13	.21	.16	.03	.07
Standard error of regression	.520	.564	.477	.598	.535	.616
N	3,058	2,146	1,194	1,084	1,849	1,060

NOTE.—Entries are jackknifed instrumental variables parameter estimates based on demographic variables in table A1. Standard errors of parameter estimates are in parentheses.

[a] Jackknifed auxiliary instrumental variables parameter estimates.

being equal; this suggests in turn that the omission of nonrespondents from the sample reduced apparent support for defense spending (by about .08 on the −1 to +1 defense spending scale, given the selection bias parameter estimate for 1982–84 in table 2). This implication of the selection bias coefficients is not especially surprising, given that respondents who decline to place themselves on issue scales tend to be relatively less educated and less informed about politics: less educated respondents were shown in table A1 to be tougher toward Russia, more willing to use force, and more isolationist than better-educated respondents, while less informed respondents were shown in figure 2 to prefer more defense spending than more informed respondents did in each of the seven NES surveys.

The effect of correcting for this apparent selection bias on the other parameter estimates in the analysis is suggested by comparing the parameter estimates in tables 2–4 with those in table A3, which presents parallel results from analyses in which the correction for selection bias is omitted. The apparent effects of ideology and willingness to use force are generally exaggerated in table A3 by comparison with those in tables 2–4, while the apparent effects of isolationism and toughness toward Russia are generally understated. The parameter estimates in table A3 show virtually no change over time in the effect of isolationism among well-informed respondents, whereas the corresponding estimate in table 3 was strongly negative. In most respects, however, the pattern of changes in the structure of defense spending preferences implied by the parameter estimates in table A3 is similar to the pattern found in tables 2–4.[31]

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31. The three changes in table 2 that are larger in magnitude than their standard errors are in the same direction and still larger than their standard errors without the correction for selection bias. All but one of the changes for relatively well-informed respondents in table 3 are in the same direction without the correction for selection bias, although some that were statistically significant in table 3 are insignificant in table A3. (The estimated change in the effect of isolationism is strongly negative in table 3 but slightly, albeit insignificantly, positive in table A3.) All of the changes for relatively uninformed respondents in table 4 are in the same direction without the correction for selection bias, and several are larger in magnitude than their standard errors (though none has a *t*-statistic larger in absolute value than 1.61, for ideology).

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