An Experimental Investigation of the Democratic Peace

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Abstract

One of the most prominent debates in the international relations literature concerns the relationship between democracy and peace. Some researchers argue that shared democracy causes peace, whereas others maintain that the apparent correlation between democracy and peace is spurious. Three problems—endogeneity, multicollinearity, and aggregation—have prevented previous researchers from resolving the controversy satisfactorily. In this paper, we use experiments to overcome all three obstacles, and thereby shed new light on the democratic peace hypothesis. Our experiments, administered to a nationally representative sample of British adults, reveal that voters are substantially less supportive of military strikes against democracies than against otherwise identical autocracies. The effect exists across a wide range of situations and demographic groups, and is most pronounced among the politically active segments of the electorate. These findings help advance a debate of central importance for both theory and policy.
1. Introduction

The debate over whether shared democracy causes peace has been one of the most prominent in the recent international relations literature. Many studies have confirmed that conflict between democracies is unusually rare, but strong disagreement remains over why this pattern exists. Some scholars argue that there is a causal relationship between shared democracy and peace, due to factors such as democratic institutions or shared norms. Other scholars, though, question whether the “democratic peace” has much to do with democracy at all. These skeptics argue that the effects of joint democracy are spurious: given the pressures of anarchy, democratic leaders and citizens would have no special aversion to using force against another democracy in the name of self-interest. Rather, the absence of military conflict between democracies is due to other factors, such as democracies’ overlapping interests during the Cold War, American hegemony, or other omitted variables. In this view, peace between democracies has been a happy historical accident rather than an empirical “law,” and is not guaranteed to persist in the future.

Despite the enduring importance of the democratic peace hypothesis for both scholars and policymakers, three obstacles have prevented previous researchers from resolving the controversy satisfactorily. The first obstacle, endogeneity, has vexed both proponents and opponents of the democratic peace. Although proponents contend that democracy causes peace, the relationship may (also) run in reverse: peace may contribute to the establishment and maintenance of democratic regimes. And although critics attribute peace to shared interests, the alignment of economic and political interests among democracies is itself endogenous, and could well be a byproduct of democracy. These and other problems of endogeneity have made it difficult to separate cause from effect, and therefore to answer fundamental questions about the democratic peace.

The second obstacle is collinearity. To test the democratic peace hypothesis, we need datasets in which democracy is not strongly correlated with other potentially pacifying factors. At least in recent decades, though, democracy has coincided with other prospective sources of peace. Recognizing this problem, researchers have probed deeper into the past and across a wider range of dyads. Farber and Gowa argue, for example, that the nineteenth century is especially informative because democracies at that time did not have a shared interest in containing communism. Critics respond that the nineteenth century, when democracies were unstable and rare, tells us little about how the world works today. Researchers need what nature has not delivered: modern-day data in which democracy is not strongly correlated with potentially confounding variables.

The third obstacle concerns aggregation. Existing data about the democratic peace are highly aggregated: the unit of observation is the country or the dyad, measured over time. But to understand why democracies fight each other at lower rates than other dyads, we need complementary data about the individuals who shape policy. Other factors equal, are voters and democratically elected leaders less likely to approve of using military force against a democracy than against an autocracy? Under what conditions would voters support military action against a democracy, and for what reasons? Unfortunately, existing datasets are not well suited to answering these micro-level questions.

In this paper, we use experiments to shed new light on the democratic peace. Our experiments, administered to a nationally representative sample of British adults, involve a foreign

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1 Farber and Gowa 1995, 1997; Gowa 1999
2 Rosato 2003
policy situation in which a country is developing nuclear weapons. When describing the situation, we randomly and independently varied three potential sources of peace: the political regime, alliance status, and military power of the potential adversary. After describing the situation, we asked each individual whether they would support or oppose a preventive military strike against the country’s nuclear facilities. By design, the experiment exogenously manipulated key variables, minimized the collinearity between those variables, and collected micro-level data about the preferences of citizens. As such, the experiment overcame three roadblocks to research about the democratic peace.

Consistent with the democratic peace hypothesis, voters in our experiment were substantially less supportive of military strikes against democracies than against otherwise identical autocracies. The effect exists across a wide range of situations and demographic groups, and is most pronounced among the politically active segments of the electorate. Moreover, because we randomly and independently manipulated the regime type of the adversary, our experiment shows that the observed preference for peace with other democracies is almost certainly causal, rather than spurious. Thus, the experiments in this paper supply important new evidence on a debate of central importance for both theory and policy.

In the remainder of the paper, we briefly review the most common causal mechanisms that might explain why democracies have, historically, been very unlikely to fight each other. We then discuss the most prominent critiques, which suggest that observational studies are flawed and do not take into account omitted variables that in fact drive the correlation between shared democracy and peace. We also summarize the two existing studies that have used survey experiments to investigate the democratic peace, and explain how they may be prone to “information leakage” and are therefore not immune to criticism from democratic peace skeptics. Finally, we describe our experimental protocols, summarize our findings, and discuss avenues for future research.

2. Previous Accounts of the Democratic Peace

Numerous studies have documented a correlation between democracy and peace. Most studies have found that the democratic peace is dyadic, meaning that democracies are less likely to attack other democracies while they are no less likely to attack autocracies. Fewer studies have found evidence of a monadic democratic peace in which democracies are overall less likely than autocracies to use military force. We therefore focus here on democracies’ apparent unwillingness to use force against other democracies, a pattern that that is, famously, as close to an “empirical law” as any in the international relations literature.

A first set of causal mechanisms suggests that democratic institutions constrain democratic leaders from fighting other democracies. There are many variants of this general argument. Kant’s classic insight was that democratic institutions empower voters, for whom fighting war entails significant costs. Because democratic leaders require the consent of their citizens for policy decisions, democratic domestic audiences will therefore tend to constrain their leaders from entering costly wars, or punish them afterwards. Additional assumptions are required to explain the dyadic democratic peace. One common argument is that because autocracies do not share

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5 Levy 1988
6 Kant 1957 (1795)
democracies’ aversion to war, democracies must fight to prevent themselves from being exploited by autocracies. Another argument is that voters do not mind fighting wars so much as they mind losing wars; democracies are therefore deterred from fighting wars against other democracies, whose similar desire to win ensures that a war between democracies would be especially costly. Related arguments highlight the ability of democracies to signal their intentions, increasing the range of peaceful mutually acceptable bargains.

A second broad set of mechanisms suggests that shared norms of peaceful dispute resolution cause peace between democracies. As above, there are both monadic and dyadic versions of the argument. The monadic version is that countries externalize their domestic norms of peaceful conflict resolution, meaning that democracies apply the same norms of conflict resolution abroad as they do at home. But this would not account for the finding that democracies commonly use force against non-democracies. A dyadic version of the argument is that when democracies and nondemocracies clash, democratic leaders stop applying their peaceful norms and start applying violent norms. Why might leaders do this? One possibility is that democratic leaders are socialized to extend the same consideration to other democracies as they do to their own citizens, but not to autocracies. Alternatively, similar to the “institutional constraints” mechanism, leaders could be concerned that they will be punished by voters if they deviate from the domestic norms in their relations with other democracies. Leaders and voters might feel this way either because they do not think peaceful standards apply to non-democratic states, or because they do not want to be taken advantage of by non-democracies who do not share their norms. A related possibility is that democracies are more willing to use force against “legitimate” leaders, but not illegitimate ones. If decisionmakers, or the public, view non-democratic governments as illegitimate, this could enhance their willingness to use force against autocracies, compared to democracies. Finally, an additional argument is that democracies form peaceful “security communities” based in part on these shared norms.

Both the institutional and normative mechanisms imply that citizens in democracies would be less supportive of using force against a democracy than against an autocracy, all else equal. This is true even of arguments that focus on the decisions of leaders. The institutional arguments, for example, suggest that leaders respond rationally to the preferences of citizens, and that citizens are less supportive of using military force against democracies than against autocracies, either because they fear that the costs of war against a democracy will be higher, or because they fear exploitation by an autocracy if they do not use force but do not fear such exploitation from other democracies. Similarly, the normative arguments assume either that leaders are socialized to view conflict against democracies as inappropriate, or will be held accountable by citizens who feel that way. Either way, we would expect citizens (members of the democratic political community) to be more supportive of using force against an autocracy than against a democracy, all else equal.

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8 See for example Maoz and Russett 1993.
9 See for example Bueno de Mesquita et al 2003.
14 The one possible exception is the signaling mechanism, which makes no assumptions about how the willingness to use force varies according to the opponent’s regime type.
3. Empirical Critiques of the Democratic Peace

A number of critics have argued that the finding of a democratic peace is spurious, an historical accident rather than a causal link. While many of these scholars have also critiqued the logic of democratic peace theory, here we focus on their alternative explanations for the strong correlation between democracy and peace.

Shared Political Interests
In one of the most prominent critiques, Henry Farber and Joanne Gowa argue that peace between democracies is a by-product of shared political interests. In particular, the Cold War “induced strong common interests among democratic states” in their struggle against the communist bloc.\(^{15}\) In this view, common interests, not common polities, explain the finding that democracies rarely engage in military conflicts.\(^{16}\) As evidence of the idea that the “democratic peace” is a Cold War phenomenon, Farber and Gowa find that there is no statistically significant relationship between shared democracy and the absence of war until 1945.\(^{17}\) For lower-level militarized disputes, the relationship between joint democracy and peace is significant only after 1914. Farber and Gowa therefore conclude that the peace among democracies is not permanent, but rather is due to the historical confluence of shared polity and shared interests during a unique historical era. Moreover, they argue that democracies are not “natural allies” – there is nothing inherent in shared democracy that leads democracies to develop similar international interests or lasting bonds of friendship. Democracy and interests are not causally related; they have merely happened to overlap during certain epochs, leading us to observe a correlation between the two factors.

Shared Economic Interests
A second critique holds that peace between democracies is a product of shared economic interests, namely the interest in continued trade, financial interdependence, and economic development. Building on the economic tradition of liberal theory, Erik Gartzke (2007) argues that joint capitalism produces peace through a number of mechanisms: by reducing important motivations for conflict, such as territorial expansion; by increasing the relative costs of fighting; and because economic interdependence allows states to signal their intentions more credibly. Gartzke argues that when one accounts for economic interdependence and development, democracies are no longer statistically less likely to fight each other. While others have critiqued this view,\(^{18}\) shared economic interests remain a plausible alternative explanation for the relationship between shared democracy and peace.

The Distribution of Military Power
Others have argued that the correlation between democracy and peace is due not to shared interests, but to the post-World War II distribution of material power. In his critique of democratic

\(^{16}\) See also Gartzke 1998 for evidence that common interests account for much of the relationship between shared democracy and peace.
\(^{17}\) Earlier empirical critiques also noted that the low incidence of democracy in earlier time periods makes it difficult to say whether the absence of war is significant for all time periods (Mearsheimer 1990, Spiro 1994)
\(^{18}\) Dafoe, forthcoming. See also the 2010 special issue in International Interactions on the capitalist peace.
peace theory, Sebastian Rosato (2003) argues that the absence of conflict among democracies is primarily a consequence of American hegemony. Rosato argues that 90% of double-democratic dyads are located in the Americas and Western Europe (p. 600). Citing Gowa’s finding that the democratic peace is only robust after 1945, Rosato then suggests that “the United States has been the dominant power in both these regions since World War II and has placed an overriding emphasis on regional peace” (p. 599). Eager to avoid a return to regional security dilemmas in these strategically-important areas, the U.S. polices its spheres of interest to ensure that conflicts do not escalate to the point of military confrontation. Thus, it is not shared democracy that explains the peaceful behavior of European and Latin American states; rather, it is the watchful gaze of the American superpower.

**Endogeneity between Peace and Democracy**

A fourth critique is that democracy does not cause peace, but rather that peace causes democracy. For example, Christopher Layne (1994) argues that an alternative explanation for the correlation between democracy and peace is that democracy is most likely in environments that are peaceful, and likely to remain so: “States that are, or believe they are, in high-threat environments are less likely to be democracies because such states are more likely to be involved in wars, and states that are likely to be involved in wars tend to adopt autocratic governmental structures that enhance their strategic posture” (p. 45). Scholars such as William Thompson (1996), Steve Chan (1997), Kristian Gleditsch (2002), and Douglas Gibler (2010) have also hypothesized that peace may foster democracy.19 In a related argument, Gibler (2007) argues that the correlation between democracy and peace is due mainly to the fact that democratic states rarely emerge unless territorial disputes have already been solved; pairs of democracies do not fight not because of shared norms or institutions, but because one of the central causes of international conflict – disagreements over borders – is absent.20 While the extent to which reverse causation fully explains the relationship is up for debate21, it remains a possible explanation for the correlation between democracy and peace.

In summary, many scholars dispute the alleged relationship between democracy and peace. They emphasize a variety of problems, including the possibility that the democracy-peace correlation is spurious or due to endogeneity. Experiments can overcome these problems and, at the same time, help provide micro-foundations for our theories of war and peace.

4. **Past Experimental Approaches to the Democratic Peace: The Possibility of Information Leakage**

Given the challenges of using observational data to test whether joint democracy causes peace, a different approach is to turn to survey experiments, and to focus on the implications of democratic peace theory for public opinion about using military force. Above, we argued that each of the existing causal mechanisms of the democratic peace suggests that voters should be less supportive of using military force against democracies than against autocracies, all else equal. One advantage of using survey experiments to assess this hypothesis is that the researcher can design the

19 See also Gates, Knutsen, and Moses 1996, though they do not provide evidence of this claim.
20 See also Kacowicz 1995.
21 Reiter 2001 does not find evidence that peace fosters democracy, though Reuveny and Li (2003) find some evidence of a reciprocal relationship between democracy and peace.
experiment in a way that addresses the critiques of Gowa, Rosato, Gartzke, and others. For example, experiments can guard against omitted variable bias, such as failing to control for factors such as common interests or the absence of territorial disputes, by holding all features of the scenario—other than democracy—constant. Experiments can also rule out the possibility of endogeneity between the dependent and independent variables by making the explanatory variable (regime type) truly exogenous.

To our knowledge, only two existing studies have used survey experiments to investigate whether citizens of democracies are more supportive of using military force against autocracies than against other democracies. Alex Mintz and Nehemia Geva (1993) published the first experimental assessment of the democratic peace. The study involved a survey experiment carried out on three samples: a group of American college students, a group of American adults, and a group of Israeli college students, with a total of 117 respondents in all three groups. The survey instrument described a crisis in which one hypothetical country, “Gorendy,” had invaded another hypothetical country, “Raggol.” The regime type of the invader, Gorendy, was varied randomly: either a democracy or a military dictatorship. Respondents were then asked to rate their approval for various policy options, including whether to use force against Gorendy. In all three experiments, subjects were significantly more supportive of using force when Gorendy was described as a military dictatorship, rather than a republic, lending support to the democratic peace hypothesis.

More recently, David Rousseau (2005) conducted an experiment to investigate similar issues. In Rousseau’s experiment, administered to 141 American college students, the respondent was asked to play the role of chief political advisor to the President of a fictional, democratic country. The scenario described a territorial dispute involving the respondent’s country and a fictional “southern neighbor.” Three experimental treatments were varied randomly: the opponent's

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22 Mintz and Geva (1993) and Rousseau (2005). A third study by Lacina and Lee (2009) asks whether the same action is viewed as more threatening when it is taken by an autocracy as opposed to a democracy. Others have probed related questions, such as how shared “identity” or cultural similarity might affect support for the use of force, though we do not discuss those in depth here. Geva and Hanson 1999, Rousseau and Garcia-Retamero 2007. Other experiments vary regime type, but not in ways that allow us to test the central prediction of democratic peace theory: that voters in democracies approve less of military actions against democracies than against non-democracies. For example, Herrmann, Tetlock, and Visser (1999) carry out an experiment that varies the regime type of a country that has been attacked or has fallen into civil war. However, we are not told the regime type of the attacking country against whom the U.S. would potentially intervene. Similarly, Herrmann and Shannon (2001) examine whether American elites were more likely to defend a victim against external aggression if the victim was a democracy.

23 The study involved a survey experiment carried out on three samples: a group of American college students, on a group of American adults, a group of Israeli college students. Total N=117.

24 The experimental text from Mintz and Geva (1993) is published in Geva, DeRouen, and Mintz 1993, pp. 227-228. In the democratic condition, Gorendy’s decision to invade was described as follows: “[The] Republic of Gorendy in an emergency session of its parliament declared war on Raggol… The decision received a commanding majority of the newly elected parliament of this stable democracy. It was backed both by the majority party, and by the two of the three opposition parties. The parliament authorized Gorendy’s Prime Minister to invade Raggol Island in order to protect the vital interests of Gorendy.” Later in the scenario, additional language suggested that there would be a “national referendum on this issue so that any further action would represent the desires of Gorendy’s citizens (as would be expected from a democratic state).” In the non-democratic condition, the leader was described as a military dictator: “[The] ruler of Gorendy Colonel Deabor, in an emergency session of his puppet parliament, declared war on Raggol. As usual Deabor’s decision was fast, since he did not have to care much about public opinion. His police state was very efficient in making public opinion a non-existent factor. Only supportive demonstrations were allowed, and were generally orchestrated by the dictator’s fierce police… Gorendy’s dictator did not have to seek any approval for his decision. His full control of his country enabled him to issue the orders to his supportive military to invade Raggol Island in order to protect the vital interests of Gorendy.”
regime type (“democratically elected government” versus “single-party dictatorship”); the balance of military forces (strong versus weak); and the domestic political position of the President that the respondent is advising (strong versus weak). Respondents were then asked whether they would advise the President to use military force to seize the disputed land, given various contingencies. As in Mintz and Geva (1993), subjects were significantly less likely to support using military force against a democracy than against an autocracy.

The problem of information leakage
Both of these experiments confirm the central prediction of democratic peace theory: that voters in democracies are less likely to support using force against a democracy than against an autocracy. However, while these experiments are path-breaking, they are open to the critique that the experimental treatments may inadvertently “leak” information about factors other than regime type – factors that may also affect a respondent’s support for using military force. Information leakage occurs when a respondent infers additional information from an experimental condition that may affect the dependent variable.25 In these experiments, information leakage occurs if, when the opponent is described as a democracy or a non-democracy, respondents infer that these two types of countries differ not only in their political regime, but also in other respects. In other words, previous experiments may not allow us to rule out the possibility that variables other than regime type explain variation in the respondent’s support for using military force – precisely the critique that Gowa and others have leveled at observational studies.

Leakage about shared interests
One possible form of information leakage in these existing experiments relates directly to Gowa’s argument that common interests rather than shared democracy explains peace between democracies. Problematic information leakage about common interests could occur if respondents inferred from the prompts that they were more likely to “share interests” or be allied with another country when it was described as a democracy than when it was described as a non-democracy. This is important because individuals may be more supportive of using military force against countries with whom they do not perceive shared interests than against close friends or allies, even in the face of a dispute.

Neither of the two existing experiments mentioned whether the opponent (either “Gorendy” or the “southern neighbor”) was an ally or otherwise shared political interests with the respondent’s own country. Because shared democracy and alliance status are positively correlated in the modern world, this could lead to inadvertent information leakage. At the time the surveys were fielded in the US and Israel, both countries had comparatively few (if any) allies that could be described as either a “military dictatorship” (Mintz and Geva) or a “single party dictatorship” (Rousseau). Respondents may therefore have been more likely to infer that the country was an ally when it was described as a democracy, and to infer that the country was a non-ally when it was described as a military or single party dictatorship. Thus, the experiments are open to Gowa’s critique that a perception of shared interest, rather than shared regime type, drove the respondents’ decreased willingness to use force against other democracies.

Leakage about relative military strength
A second potentially important form of information leakage concerns the military strength of the opponent. Recent scholarship suggests that respondents are more supportive of using military

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25 Sher and McKenzie 2006
force when they expect that the military action will be successful. Military actions are more likely to succeed, one assumes, when the target is militarily weak. While the Rousseau experiment varied the military strength of the opponent, the Mintz and Geva experiments did not vary or mention military strength. The respondent might therefore have inferred that the opponent was militarily stronger in the democracy condition than in the autocracy condition. Thus, the effects of democracy could conceivably have been due to deterrence rather than a genuine “democratic peace.” In sum, the previous studies that have used survey experiments to investigate the democratic peace may be prone to “information leakage” and are therefore not immune to criticism from democratic peace skeptics.

Previous studies are also limited in another way: they were carried out on very small samples (117 and 141 subjects, respectively), and with the exception of a poll of 39 Israeli students, all the surveys were conducted in the United States. The small sample sizes and lack of demographic information mean that we cannot assess the extent to which the treatment effects hold across different subsets of the population, such as the politically-active individuals who are most likely to affect government policy. The fact that the studies were carried out primarily in the United States means that we cannot assess whether the effects hold in other countries, as well.

5. Experimental Design and Procedures

With these limitations in mind, we designed a new experimental investigation of the democratic peace hypothesis. Our experiment was included in an omnibus public opinion poll, which was fielded to a representative sample of 762 adults in the United Kingdom in April-May 2010, just before the British national election.

Respondents were told: “There is much concern these days about the spread of nuclear weapons. We are going to describe a situation the U.K. could face in the future. For scientific validity the situation is general, and is not about a specific country in the news today. Some parts of the description may strike you as important; other parts may seem unimportant. After describing the situation, we will ask your opinion about a policy option.”

Respondents then received a series of bullet points with details about the situation. The first bullet point explained, “A country is developing nuclear weapons and would have its first nuclear bomb within six months. The country could then use its missiles to launch nuclear attacks against any country in the world.”

Next, respondents received information about three factors: the country’s military alliances, political regime, and military power. We randomly and independently varied these factors, each of which had two levels. Thus, in roughly half the interviews, the country had signed a military alliance with the U.K., but in the other half of the interviews, the country had not signed a military alliance with the U.K. Likewise, half the respondents read that the country “is a democracy and shows every sign that it will remain a democracy,” while the other half read that the country “is not a democracy and shows no sign of becoming a democracy.” Finally, we told some participants that the country’s nonnuclear forces were “as strong” as Britain’s nonnuclear forces, but told others that the country’s nuclear forces were “half as strong” as Britain’s. Overall, there were three random factors, each with two levels, resulting in a fully-crossed 2x2x2 experimental design.

In describing the country’s political regime, we avoided using terms such as “military dictatorship” or “single party dictatorship,” since this might have leaked additional information.

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26 Gelpi, Feaver, and Reifler 2006.
about shared interests. Instead, we indicated that the country was either “a democracy” or “not a democracy.”

Having randomized the details about the country’s alliance relations, political regime, and military power, we concluded the scenario with several additional bullet points, which were identical for everyone. Respondents were told that “the country’s motives remain unclear, but if it builds nuclear weapons, it will have the power to blackmail or destroy other countries.” Additionally, they learned that the country had “refused all requests to stop its nuclear weapons program.” Finally, the scenario explained that “By attacking the country’s nuclear development sites now, Britain could prevent the country from making any nuclear weapons.”

After presenting this information, we asked whether respondents would favor or oppose using the British Armed Forces to attack the country’s nuclear development sites. Figure 1 shows a screen shot of the experiment and lists the options we presented to respondents.

[Figure 1 about here]

6. Findings

Our experimental design allowed us to distinguish the effects of democracy, alliances, and power on the preferences of citizens. Before analyzing the data, we confirmed that the treatment groups were balanced on baseline covariates that could affect support for the use of force. In particular, we assessed balance with respect to demographic variables such as gender, age, and education. We also judged whether groups were politically balanced by exhibiting similar patterns of ideology, party identification, interest in politics, and involvement in politics. Given that the experiment asked about a preventive military strike, we also checked for equality in attitudes toward internationalism and the use of force. Due to randomization, the groups were quite similar, on average. Consequently, there is little need for elaborate statistical models with control variables. One can obtain unbiased estimates of treatment effects via cross-tabulation, the approach we employ in all the tables of this paper.

Consistent with many theories of the democratic peace, citizens were much less willing to attack another democracy than to attack an autocracy. Table 1 quantifies the effect of democracy on support for a military strike. To compute this effect, we calculated the mean level support when the country was democratic (averaging over other contextual variables such as alliances and power). We then subtracted the mean level of support when the country was not democratic. The table shows that $11.3 + 22.9 = 34.2$ percent of respondents favored a military strike against an autocratic target, whereas only $5.5 + 15.4 = 20.9$ percent favored military action against a democratic target. The difference between these two values is 13.3 percent. Thus, the mere presence of democracy shifted public opinion in Britain by more than 13 percentage points, with a 95-percent confidence interval that ranged from 7.0 to 19.6 percent. Thus, democracy exerted a substantively large and statistically significant effect on mass public preferences.

[Table 1 about here]

Our experiment also revealed the effect of alliances, which Farber and Gowa regard as markers of shared interests. As Table 2 shows, support for military action was 5.7 percentage points lower when the target had signed an alliance with the United Kingdom. Though noteworthy, this
effect was only half as substantial as the one we observed for democracy, and was not quite significant at the .05 level.

[Table 2 about here]

Finally, British citizens took the military power of the adversary into account, but as was the case with alliances, they gave military power much less weight than democracy. The effect of military power is most evident in the bottom rows of Table 3, which measure opposition to (rather than support for) a military strike. In our experiment, $28.0 + 17.0 = 45$ percent of respondents preferred not to strike a country that was half as strong as the U.K. Opposition rose to $29.5 + 22.1 = 51.6$ percent when the target and Britain were at conventional military parity. Thus, consistent with theories of deterrence, public enthusiasm for an attack was 6.6 percentage points lower with a strong adversary than with a weak one.

[Table 3 about here]

It is worth emphasizing that the estimates in Tables 1-3 come from experiments, and therefore avoid several problems that arise with historical data. As noted earlier, both sides of the democratic peace debate worry about endogeneity. We overcame this problem by assigning the key explanatory variables randomly. Previous researchers have also worried about high levels of collinearity between democracy and potential confounders. Our experiment, in contrast, had a full 2x2x2 factorial design, in which the correlations among democracy, alliances, and power were approximately zero. This allowed us to identify the average effect of each variable without fear that one factor was proxying for another. Finally, previous research about the democratic peace has proceeded at a high level of aggregation, in which the units of observation are entire countries or dyads. Our experiments supplement the existing body of knowledge by providing micro-level data about the preferences of adult citizens.

Having found a genuine aversion to using force against democracies, we next examined whether the effects of democracy depended on the context. Table 4 summarizes the impact of democracy for each of the four possible combinations of military power and alliances. The table indicates that the effect of democracy was strongest when the target was a weak non-ally. In that case, respondents were only half as likely to support military strikes in the democratic condition (20.7 percent) as in the non-democratic condition (42.6 percent). The effects of democracy were smaller in the other conditions, and in some cases not statistically distinguishable from zero at conventional levels of confidence. Nevertheless, the values in the right column of Table 4 are consistently negative and substantively large. Thus, it seems most likely that democracy reduces support for the use of force, not only on average but also in a variety of specific circumstances.

[Table 4 about here]

Democracy not only sways public opinion, but does so to a particularly large degree among politically interested and active adults, i.e., those who might campaign, vote, or lobby the government. We classified respondents’ interest in politics as high if they said they were “very interested” or “somewhat interested” in politics (71% of respondents), and coded their interest as low if they were “not that much” or “not at all” interested in politics (29% of respondents). Table 5 shows that democracy was a crucial variable for politically-interested respondents, whose
preference for military action fell by more than 17 percentage points when the target was a democracy. Among respondents who expressed little interest in politics, though, democracy affected opinion by only about 3 percentage points.

[Table 5 about here]

The effect of democracy was even more striking among political activists. We classified political activism as high if respondents reported that they did one of the following the previous day: wore a badge or sticker for a candidate, discussed a candidate with someone, went to hear a candidate speak, visited a political party web site, visited a candidate web site, or watched video of a candidate on the Internet. This is a very stringent definition of political activism, since it only refers to activity that occurred the day before. Approximately 24% of respondents qualified as highly active according to our measure. However, among this subset of the population, and despite its small size, the effect of democracy was overwhelming. Support for military action against an autocracy was three times higher than support for military action against a democracy. The absolute effect was 26.7 points, meaning that democracy alone was sufficient to convince more than a quarter of the most politically active citizens in Britain to withhold their support for a military strike.

Our experiments further showed that democracy affects attitudes across many demographic and political strata. Table 6 shows, for example, that democracy shapes the preferences of men and women, conservatives and liberals, young and old, and those with and without college degrees. Moreover, the effects vary in interesting ways that suggest the need for further research. For example, in our sample democracy was twice as consequential for males as for females, and twice as consequential for conservatives as for liberals. In both cases, the pattern seems to arise because males and conservatives are more belligerent in general, creating more space to observe the peace-inducing effects of democracy. Although our sample is too small to say for sure, our preliminary analyses suggest that the penchant for peace with democracies is evident across society, but may be an especially male and conservative phenomenon.

Finally, we carried out a “hard test” of the democratic peace hypothesis to address the possibility that despite our efforts, our experimental design did not fully eliminate information leakage. For example, even though we explicitly told respondents whether or not the U.K. shared a military alliance with the target, it is still possible that respondents believed that there were more shared interests at stake when the target was a democracy than when it was a non-democracy. Alternatively, even though we informed respondents of the target’s military power, it is possible that respondents nonetheless thought the target was militarily stronger when it was a democracy than when it was a non-democracy.

If the democracy treatment leaked information about shared interests, we could mitigate this by comparing support for a military strike against a democratic non-ally to support for a strike against a non-democratic ally. Describing the democratic target as a non-ally would dampen any impression that Britain and the target had shared interests. Likewise, describing the autocratic target as an ally would heighten the impression of shared interests between the two countries. If British citizens were less willing to use force against the democratic non-ally than against the non-democratic ally, this would count as compelling evidence of a democratic peace.

Of course, this is an extremely hard test, because Table 2 already showed that alliances independently reduce support for a strike by about 5.7 percentage points. Even when hobbling the democratic peace hypothesis in this way, however, we find substantial effects of democracy:
attacking a democratic non-ally is 7.5 points less popular than attacking a non-democratic state with which the U.K. has a military alliance, and, presumably, shared interests (see Table 7). The negative effect of democracy was not only substantively large, but also statistically significant at the .10 level.

[Table 7 about here]

Similarly, we compared a weak democratic state to a strong non-democratic state. Recall from Table 3 that military power independently decreased support for a military strike. Nevertheless, Table 7 shows that respondents were significantly less willing to attack a weak democracy than to attack a strong non-democracy. Overall, democracy swung public opinion by 10.7 percentage points, an amount that is not only politically consequential but also statistically distinguishable from 0 at the .02 level.

Finally, we implemented the toughest test of all: comparing a democracy that had not aligned with Britain and had relatively weak conventional forces, against an autocracy that was not only a formal British ally but also had a conventional military as powerful as Britain’s. Even in this scenario, support for military action against the democracy was 8.6 percentage points lower than support for military action against the autocracy. The 95-percent confidence interval overlaps zero, perhaps due to the small cell sizes (92 weak non-allied democracies, and 99 strong allied autocracies). Nonetheless, the pattern in Table 7 remains clear: citizens are less willing to use force against democracies, even when democracies are described in ways that imply military weakness and a lack of shared interests.

7. Conclusion

The experiments in this paper offer strong evidence for a democratic peace, at least as manifested in public opinion. Using a nationally representative sample, we found that British adults were far less willing to use force against democracies than to use force against otherwise equivalent autocracies. The effect of democracy was evident across most demographic categories, but was especially large among the politically interested and active members of society. Two other factors, alliances and military power, also affected public opinion, though to a lesser degree than democracy.

We regard survey-based experiments about the democratic peace as complements to, rather than substitutes for, historical analysis. After all, each type of data offers its own advantages and disadvantages. Historical data offer high levels of external validity, but they also present researchers with difficult challenges, including endogeneity and the possibility of spurious correlations. Experiments have the opposite attributes: they score lower on external validity but are especially powerful tools for causal inference because, by design, they avoid problems of endogeneity and spurious correlation.

This paper sheds new light on a debate of longstanding importance for scholars and policymakers. At the same time, it provides a template for future research about the democratic peace. Future experiments could, for example, manipulate the level of economic interdependence among countries, and then estimate the effects of democracy while holding interdependence constant. One could also design experiments that discriminate between various hypotheses about the institutional and normative sources of the democratic peace. Finally, by running experiments in
a wide range of countries, one could gain a better understanding of the causes and the empirical scope of the democratic peace.
Works Cited


Sher, Shlomi, and Craig R M Mckenzie. 2006. “Information leakage from logically equivalent


Figure 1: Measuring preferences about a military strike

Here is the situation:

- A country is developing nuclear weapons and will have its first nuclear bomb within six months. The country could then use its missiles to launch nuclear attacks against any country in the world.
- The country has not signed a military alliance with the U.K.
- The country is a democracy, and shows every sign that it will remain a democracy.
- The country’s nonnuclear military forces are half as strong as Britain’s nonnuclear forces.
- The country’s motives remain unclear, but if it builds nuclear weapons, it will have the power to blackmail or destroy other countries.
- The country has refused all requests to stop its nuclear weapons program.

By attacking the country’s nuclear development sites now, Britain could prevent the country from making any nuclear weapons. Would you favour or oppose using the British Armed Forces to attack the country’s nuclear development sites?

- Favour strongly
- Favour somewhat
- Neither favour nor oppose
- Oppose somewhat
- Oppose strongly
**Table 1: The effect of democracy on preferences**
(The table gives the percentage of respondents who expressed each preference)

<table>
<thead>
<tr>
<th>Country is a democracy</th>
<th>County is not a democracy</th>
<th>Effect of democracy</th>
<th>Summary of effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Favor a military strike</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Favor strongly</td>
<td>5.5</td>
<td>11.3</td>
<td>-5.8</td>
</tr>
<tr>
<td>Favor somewhat</td>
<td>15.4</td>
<td>22.9</td>
<td>-7.5</td>
</tr>
<tr>
<td>Neither favor nor oppose</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lean toward favoring</td>
<td>5.0</td>
<td>5.3</td>
<td>-0.3</td>
</tr>
<tr>
<td>Neither favor nor oppose</td>
<td>13.5</td>
<td>12.6</td>
<td>0.9</td>
</tr>
<tr>
<td>Lean toward opposing</td>
<td>6.0</td>
<td>5.5</td>
<td>0.5</td>
</tr>
<tr>
<td>Oppose a military strike</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oppose somewhat</td>
<td>31.0</td>
<td>26.6</td>
<td>4.4</td>
</tr>
<tr>
<td>Oppose strongly</td>
<td>23.6</td>
<td>15.8</td>
<td>7.8</td>
</tr>
</tbody>
</table>

*Note:* Sample size was 364 for “country is a democracy” and 398 for “country is not a democracy.” The chi-squared statistic for the table is 20.5 with 6 degrees of freedom (p-value .002). In the column labeled summary of effects, 95-percent confidence intervals appear in parentheses.
Table 2: The effect of alliances on preferences  
(The table gives the percentage of respondents who expressed each preference)

<table>
<thead>
<tr>
<th>Preference</th>
<th>Country is an ally</th>
<th>Country is not an ally</th>
<th>Effect of alliance</th>
<th>Summary of effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Favor a military strike</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Favor strongly</td>
<td>8.2</td>
<td>8.9</td>
<td>-0.7</td>
<td>-5.7</td>
</tr>
<tr>
<td>Favor somewhat</td>
<td>16.9</td>
<td>21.8</td>
<td>-5.0</td>
<td>(-12.0 to 0.7)</td>
</tr>
<tr>
<td>Neither favor nor oppose</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lean toward favoring</td>
<td>4.9</td>
<td>5.4</td>
<td>-0.5</td>
<td></td>
</tr>
<tr>
<td>Neither favor nor oppose</td>
<td>14.6</td>
<td>11.3</td>
<td>3.3</td>
<td>6.1</td>
</tr>
<tr>
<td>Lean toward opposing</td>
<td>7.4</td>
<td>4.0</td>
<td>3.4</td>
<td>(0.0 to 12.2)</td>
</tr>
<tr>
<td>Oppose a military strike</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oppose somewhat</td>
<td>27.4</td>
<td>30.2</td>
<td>-2.8</td>
<td>-0.4</td>
</tr>
<tr>
<td>Oppose strongly</td>
<td>20.7</td>
<td>18.3</td>
<td>2.4</td>
<td>(-7.6 to 6.7)</td>
</tr>
</tbody>
</table>

Note: Sample size was 391 for “country is an ally” and 371 for “country is not an ally.” The chi-squared statistic for the table is 9.03 with 6 degrees of freedom (p-value .17). In the column labeled summary of effects, 95-percent confidence intervals appear in parentheses.
**Table 3: The effect of military power on preferences**
(The table gives the percentage of respondents who expressed each preference)

<table>
<thead>
<tr>
<th></th>
<th>As strong as the UK</th>
<th>Half as strong as the UK</th>
<th>Effect of strength</th>
<th>Summary of effects</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Favor a military strike</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Favor strongly</td>
<td>7.6</td>
<td>9.4</td>
<td>-1.8</td>
<td>-3.0</td>
</tr>
<tr>
<td>Favor somewhat</td>
<td>18.7</td>
<td>19.9</td>
<td>-1.2</td>
<td>(-9.4 to 3.4)</td>
</tr>
<tr>
<td><strong>Neither favor nor oppose</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lean toward favoring</td>
<td>5.0</td>
<td>5.2</td>
<td>-0.2</td>
<td></td>
</tr>
<tr>
<td>Neither favor nor oppose</td>
<td>12.9</td>
<td>13.1</td>
<td>-0.2</td>
<td>-3.5</td>
</tr>
<tr>
<td>Lean toward opposing</td>
<td>4.2</td>
<td>7.3</td>
<td>-3.1</td>
<td>(-9.6 to 2.5)</td>
</tr>
<tr>
<td><strong>Oppose a military strike</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oppose somewhat</td>
<td>29.5</td>
<td>28.0</td>
<td>1.5</td>
<td>6.6</td>
</tr>
<tr>
<td>Oppose strongly</td>
<td>22.1</td>
<td>17.0</td>
<td>5.1</td>
<td>(-0.5 to 13.7)</td>
</tr>
</tbody>
</table>

*Note: Sample size was 380 for “as strong as the U.K.” and 382 for “half as strong as the U.K.” The chi-squared statistic for the table is 6.76 with 6 degrees of freedom (p-value .34). In the column labeled summary of effects, 95-percent confidence intervals appear in parentheses.*
Table 4: The effect of democracy, conditional on strength and alliance
(The table gives the percentage of respondents who favored a military strike)

<table>
<thead>
<tr>
<th></th>
<th>Country is a democracy</th>
<th>County is not a democracy</th>
<th>Effect of democracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weak non-ally</td>
<td>20.7</td>
<td>42.6</td>
<td>-21.9</td>
</tr>
<tr>
<td></td>
<td>12.2 to 29.1</td>
<td>32.4 to 52.7</td>
<td>-35.1 to -8.7</td>
</tr>
<tr>
<td>Weak ally</td>
<td>20.9</td>
<td>31.8</td>
<td>-10.9</td>
</tr>
<tr>
<td></td>
<td>12.2 to 29.7</td>
<td>23.0 to 40.7</td>
<td>-23.5 to 1.7</td>
</tr>
<tr>
<td>Strong non-ally</td>
<td>25.6</td>
<td>33.7</td>
<td>-8.1</td>
</tr>
<tr>
<td></td>
<td>16.4 to 34.7</td>
<td>24.0 to 43.4</td>
<td>-21.4 to 5.2</td>
</tr>
<tr>
<td>Strong ally</td>
<td>16.7</td>
<td>29.3</td>
<td>-12.6</td>
</tr>
<tr>
<td></td>
<td>9.1 to 24.3</td>
<td>20.2 to 38.4</td>
<td>-24.5 to -0.8</td>
</tr>
</tbody>
</table>

*Note:* Sample sizes ranged from 86 to 110 respondents per cell. 95 percent confidence intervals appear in parentheses.
Table 5: The effect of democracy, conditional on political interest and activism
(The table gives the percentage of respondents who favored a military strike)

<table>
<thead>
<tr>
<th>Political interest</th>
<th>Country is a democracy</th>
<th>County is not a democracy</th>
<th>Effect of democracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>20.1</td>
<td>37.5</td>
<td>-17.4</td>
</tr>
<tr>
<td></td>
<td>15.1 to 25.0</td>
<td>31.8 to 43.1</td>
<td>-25.0 to -9.8</td>
</tr>
<tr>
<td>Low</td>
<td>22.2</td>
<td>25.7</td>
<td>-3.4</td>
</tr>
<tr>
<td></td>
<td>14.3 to 30.2</td>
<td>17.5 to 33.8</td>
<td>-14.8 to 7.9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Political activism</th>
<th>Country is a democracy</th>
<th>County is not a democracy</th>
<th>Effect of democracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>13.0</td>
<td>39.8</td>
<td>-26.7</td>
</tr>
<tr>
<td></td>
<td>6.0 to 20.1</td>
<td>29.7 to 49.9</td>
<td>-39.0 to -14.5</td>
</tr>
<tr>
<td>Low</td>
<td>23.5</td>
<td>32.5</td>
<td>-8.9</td>
</tr>
<tr>
<td></td>
<td>18.5 to 28.6</td>
<td>27.2 to 37.7</td>
<td>-16.3 to -1.6</td>
</tr>
</tbody>
</table>

Note: We classified political interest as high if the respondent said they were “very interested” or “somewhat interested” in politics (n=254 when country was a democracy, 283 when country was not a democracy). We classified political interest as low if the respondent said they were “not that much” or “not at all” interested in politics (n=108 when country was a democracy, n=113 when country was not a democracy). We classified political activism as high if the respondent reported doing one of the following the previous day: wore a badge or sticker for a candidate, discussed a candidate with someone, went to hear a candidate speak, visited a political party web site, visited a candidate web site, or watched video of a candidate on the Internet (n=92 when country was a democracy, n=93 when it was not). We classified political activism as low if the respondent did not report having done any of those activities on the previous day (n=272 when country was a democracy, n=305 when it was not). 95-percent confidence intervals appear below each estimate.
Table 6: The effect of democracy, by demographic group
(The table gives the percentage of respondents who favored a military strike)

<table>
<thead>
<tr>
<th></th>
<th>Country is a democracy</th>
<th>County is not a democracy</th>
<th>Effect of democracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>24.7</td>
<td>41.0</td>
<td>-16.3</td>
</tr>
<tr>
<td></td>
<td>18.5 to 30.9</td>
<td>34.7 to 47.4</td>
<td>-25.3 to -7.3</td>
</tr>
<tr>
<td>Female</td>
<td>16.7</td>
<td>24.4</td>
<td>-7.7</td>
</tr>
<tr>
<td></td>
<td>11.1 to 22.3</td>
<td>17.7 to 31.0</td>
<td>-16.3 to 0.9</td>
</tr>
<tr>
<td>Ideology</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conservative</td>
<td>24.4</td>
<td>45.3</td>
<td>-21.0</td>
</tr>
<tr>
<td></td>
<td>17.7 to 31.1</td>
<td>37.6 to 53.1</td>
<td>-31.2 to -10.7</td>
</tr>
<tr>
<td>Liberal</td>
<td>16.5</td>
<td>27.2</td>
<td>-10.7</td>
</tr>
<tr>
<td></td>
<td>10.6 to 22.3</td>
<td>20.9 to 33.5</td>
<td>-19.5 to -2.0</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>at least 55</td>
<td>20.0</td>
<td>36.5</td>
<td>-16.5</td>
</tr>
<tr>
<td></td>
<td>14.2 to 25.8</td>
<td>29.8 to 43.3</td>
<td>-25.5 to -7.6</td>
</tr>
<tr>
<td>less than 55</td>
<td>21.8</td>
<td>31.8</td>
<td>-10.1</td>
</tr>
<tr>
<td></td>
<td>15.7 to 27.9</td>
<td>25.3 to 38.3</td>
<td>-19.0 to -1.1</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>College degree</td>
<td>21.2</td>
<td>31.3</td>
<td>-10.0</td>
</tr>
<tr>
<td></td>
<td>14.5 to 27.9</td>
<td>24.0 to 38.5</td>
<td>-19.9 to -0.1</td>
</tr>
<tr>
<td>No college degree</td>
<td>20.9</td>
<td>36.3</td>
<td>-15.4</td>
</tr>
<tr>
<td></td>
<td>15.4 to 26.4</td>
<td>30.1 to 42.5</td>
<td>-23.7 to -7.1</td>
</tr>
</tbody>
</table>

Note: When the country was a democracy, sample sizes were 234 for males, 174 for females, 160 for conservatives, 158 for liberals, 185 for people at least 55 years old, 179 for people less than 55 years of age, 185 for people with a college degree, and 146 for people without a college degree. When the country was not a democracy, sample sizes were 190 for males, 164 for females, 161 for conservatives, 195 for liberals, 197 for people at least 55 years old, 201 for people less than 55 years of age, 197 for people with a college degree, and 160 for people without a college degree.
Table 7: A hard test of the democratic peace hypothesis
(The table gives the percentage of respondents who favored a military strike)

<table>
<thead>
<tr>
<th></th>
<th>Support for military strike</th>
<th>95% C.I.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Democratic, non-ally</td>
<td>23.1</td>
<td>(16.9 to 29.3)</td>
</tr>
<tr>
<td>Nondemocratic, ally</td>
<td>30.6</td>
<td>(24.3 to 36.9)</td>
</tr>
<tr>
<td><strong>Difference</strong></td>
<td>-7.5</td>
<td>(-16.4 to 1.3)</td>
</tr>
<tr>
<td>Democratic, weak</td>
<td>20.8</td>
<td>(14.8 to 26.8)</td>
</tr>
<tr>
<td>Nondemocratic, strong</td>
<td>31.4</td>
<td>(24.9 to 38.0)</td>
</tr>
<tr>
<td><strong>Difference</strong></td>
<td>-10.7</td>
<td>(-19.6 to -1.7)</td>
</tr>
<tr>
<td>Democratic, weak non-ally</td>
<td>20.7</td>
<td>(12.2 to 29.1)</td>
</tr>
<tr>
<td>Nondemocratic, strong ally</td>
<td>29.3</td>
<td>(20.2 to 38.4)</td>
</tr>
<tr>
<td><strong>Difference</strong></td>
<td>-8.6</td>
<td>(-21.0 to 3.8)</td>
</tr>
</tbody>
</table>

*Note: 95-percent confidence intervals appear in parentheses.*