The Laws of War and Public Opinion: An Experimental Study

Adam S. Chilton

Follow this and additional works at: https://chicagounbound.uchicago.edu/law_and_economics

Part of the Law Commons

Recommended Citation


This Working Paper is brought to you for free and open access by the Coase-Sandor Institute for Law and Economics at Chicago Unbound. It has been accepted for inclusion in Coase-Sandor Working Paper Series in Law and Economics by an authorized administrator of Chicago Unbound. For more information, please contact unbound@law.uchicago.edu.
The Laws of War and Public Opinion: An Experimental Study

Adam S. Chilton

May 2014

This paper can be downloaded without charge at:
The University of Chicago, Institute for Law and Economics Working Paper Series Index:
http://www.law.uchicago.edu/Lawecon/index.html
and at the Social Science Research Network Electronic Paper Collection.
The Laws of War and Public Opinion: An Experimental Study

by

Adam S. Chilton* 

Research examining whether the laws of war change state behavior has produced conflicting results, and limitations of observational studies have stalled progress on the topic. I have conducted a survey experiment to bring new evidence to the debate. I directly test whether a mechanism hypothesized to drive compliance with international law—public opinion—creates pressure to comply with the laws of war. The results provide qualified support to research suggesting that democracies may comply with the laws of war when there is the expectation of reciprocity, and demonstrate the potential of using experimental methods to study the laws of war.

* University of Chicago Law School. Email: adamchilton@uchicago.edu. I'd like to thank Omri Ben-Shahar, Gabriella Blum, David Cope, Britt Cramer, David Law, Eric Posner, Matthew Stephenson, Rob Schub, Beth Simmons, and Mila Versteeg for helpful advice and comments. Special thanks are due to Dustin Tingley. This project was been supported by grants from the Tobin Project and the Institute of Quantitative Social Science.

JEL: K330, F530, F510.
I Introduction

A considerable effort has been expended since World War II to develop an increasingly dense web of treaties that regulate state conduct during conflicts. The explicit goal of that project has been to soften the edges of war in the hopes that doing so will help to protect civilians from indiscriminate violence. Although there has been academic debate on the efficacy and wisdom of particular provisions contained within treaties, there is little empirical evidence on whether the laws of war are achieving one of their primary goals: protecting civilians.

In fact, this author is only aware of two empirical studies that have examined whether the laws of war help to protect civilians. The first, Valentino, Huth, & Croco (2006), found that the laws of war have not influenced whether states—including democracies—target civilians during interstate wars. The second study, Morrow (2007), found that ratification of the laws of war by non-democracies does not predict compliance during interstate wars, but that ratification by democracies does. Moreover, Morrow found that the laws of war are enforced through reciprocity, and that reciprocity is more likely when both parties have ratified the relevant agreements.

Given the conflicting evidence produced by Valentino, Huth, & Croco (2006) and Morrow (2007), there is not a conclusive answer to the question of whether the laws of war help to protect civilians during conflict. The lack of an answer is not simply because of shortcomings with these studies, however, but instead because of at least three limitations that would hamper any observational study addressing the question: first, there is little variance in the applicability of international law to conflicts; second, there is a very small sample of conflicts to study since International Humanitarian Law (“IHL”) has been fully developed; and third, there is an endogenous relationship between the ratification of IHL treaties and other variables that would predict respect for life during conflicts.

Despite the limitations of using observational research designs, the question of whether the laws of war help to protect civilians is critically important. Attempts should thus be made to find new strategies to research the topic. One method of doing so is directly testing the theoretical mechanisms that could potentially drive compliance with the laws of war. Since Morrow (2007) produced evidence that ratifying treaties on the laws of war might have an effect on the behavior of democracies, one mechanism to test is whether information on international law changes public opinion. Not only has the argument that “public opinion creates some pressure towards compliance with international law” been made generally (Posner and Sykes, 2013, p. 27), but there is also evidence that information on international law changes public opinion on human rights issues (Chilton 2014; Wallace 2013). Of course, evidence that information on the laws of war changes public opinion will not settle this debate; but when considered with observational studies, this evidence could advance our understanding of this important topic.

To test this mechanism, I conducted a survey experiment that examined whether information on the laws of war can change public approval for strategic decisions made during conflicts. My experiment—administered to a sample of U.S. adults—presented subjects with a vignette wherein the American President had to decide whether to halt a bombing campaign where changed circumstances
guaranteed that, if the bombing campaign were to continue, it would result in excessive loss of civilian life. When I presented the scenario, I randomly assigned the information that subjects were given on the status of international law. Taking this approach allowed me to test the influence that the laws of war have on public opinion, while avoiding some of the problems associated with observational research designs.

This experiment produced at least two results that have implications for our understanding of compliance with the laws of war. First, information on treaty ratification did lower support for violations of the laws of war, but this effect only substituted for the effect of arguments based on morality instead of international law. That suggests that the presence of international legal obligations may not even change the behavior of democracies—unless there are other factors at play (like reciprocity). Second, information on international law did have an effect, however, when respondents were also informed that opponents have committed themselves to international law. As a consequence, this study provides support to previous research that found democracies are likely to comply with the laws of war when there is the expectation of reciprocity.

The remainder of the paper proceeds in four parts. Part 2 reviews the existing empirical literature on compliance with the laws of war, and then discuss the limitations of observational studies that make it difficult to confidently assess the influence of the laws of war on conduct during conflicts. Part 3 explains the experimental approach that I have taken to address this question. Part 4 presents the results of the experiment. Part 5 concludes by discussing the key findings of the experiment and limitations on how they should be interpreted.

2 Compliance with the Laws of War

In this section, I first discuss the existing literature on the influence that the laws of war have on conduct during conflicts. Second, I explain why limitations of observational studies make it unlikely that any such study could end the debate on this issue. Third, I argue that using an experimental approach could help shed new light on this important topic.

2.1 Previous Research

Whether states comply with their international commitments has been one of the principal topics studied by scholars of international relations and international law in the last decade (Simmons 2010). This scholarship emerged out of the criticism that high rates of compliance with international law are the result of little more than selection effects because states sign treaties that codify actions that they would take even in the absence of treaties (Downs et al. 1996). Despite evidence that international commitments influence behavior in some areas (Simmons 2010), many scholars are skeptical that states would comply with international law if state security were on the line (Desch 2003; Mearsheimer 1995). In fact, one prominent legal scholar recently argued that the only reason states sometimes honor the laws of war is because of the potential of reciprocity (Posner 2013). Far from being aberrant, Posner’s argument is reflective of a view that is “widely
believed, especially by realist scholars of [International Relations], that when it comes to war, states pay no heed to international law” (Armstrong, 2012, p. 147).

Although many scholars hold this view, there is little empirical research directly on the topic. Only two published studies have attempted to empirically address whether ratification of the laws of war helps to protect civilians during conflicts (Simmons, 2010, p. 281-82). Moreover, these two studies produced conflicting results. The first study, Valentino, Huth, and Croco (2006), compiled a dataset of conflicts between 1900 and 2003, and then ran a series of linear regressions that suggested that whether a state had signed the Geneva Conventions (or whether it was a democracy) made no impact on the number of civilians the state killed during conflicts. This study concluded that strategic concerns were the only thing that influenced the decisions of leaders during conflicts.1

The second study, Morrow (2007), examined a similar set of conflicts as Valentino, Huth, and Croco (2006). Morrow (2007) used data from the Correlates of War project to analyze interstate conflicts between 1899 and 1991. After controlling for a number of factors, Morrow found that, although ratifying international treaties did not impact the behavior of non-democracies, it did alter the behavior of democracies. Morrow argued that this is because democracies signal their willingness to comply with their laws of war obligations through ratification, and the agreements are then enforced through reciprocity when both states have signaled their willingness to comply.

2.2. The Limits of Observational Studies

Given the conflicting evidence produced by Valentino, Huth, and Croco (2006) and Morrow (2007), it is an open question whether the laws of war can help to protect civilians during conflicts. The reason the question remains open is not because of major theoretical differences among scholars on what variables to analyze or which conflicts to study. Instead, it is because the limitations of observational research designs make it difficult—if not impossible—to directly test the influence of the laws of war. Three specific problems are: lack of variation, limited sample size, and endogeneity.

First, any observational study on the impact of the laws of war is plagued by a lack of variation. A basic requirement of any causal analysis is variation of the explanatory variable, because “the causal effect of an explanatory variable that does not vary cannot be assessed” (King, Keohane, and Verba, 1994, p. 146). Both of the studies previously discussed examined whether ratification of particular treaties changed behavior during interstate wars. One major shortcoming of repeating this approach going forward, however, is that there is no longer meaningful variation in the applicability of the most important treaties that govern interstate wars (Chilton and Tingley 2013). There are now 194 states party to the 1949 Geneva Conventions, and 170 states party to the 1977 Additional Protocol I of the Geneva Conventions. Put in perspective, after the admission of South Sudan in 2012, the United Nations had 193 members. As a result, there is

---

1 This evidence is consistent with Downes (2008), which found that democracies frequently kill civilians during war.
likely not enough variation in the ratification of these treaties to study their effect on state behavior beyond the time period that has already been examined.

Second, any observational study trying to examine the impact of the laws of war will be hampered by small sample sizes. Both Valentino, Huth, and Croco (2006) and Morrow (2007) examined conflicts from the start of the twentieth century. As previously noted, however, efforts to codify and increase the precision of the laws of war took off in the second half of the twentieth century. This is significant because interstate wars have comprised an increasingly small share of armed conflicts since World War II (Moir 2009). Moreover, the most precise articulation of the laws of war for interstate conflicts was the 1977 Additional Protocol I to the Geneva Conventions (AP I). This sharply reduces the sample size of any observational study because between 1978 and 2007, only 15 interstate wars occurred.² It is thus the case that even if scholars try to ignore the variance problems posed by widespread adoption of international instruments, there are relatively few conflicts available to study.

Third, observational studies focusing on the influence of the ratification of treaties on the laws of war are plagued by problems with endogeneity (Chilton and Tingley 2013).³ Even using sophisticated statistical techniques, it is incredibly hard to tell whether states change their behavior as a result of ratifying IHL treaties, or whether states ratify IHL treaties because they are likely to already comply with the norms the treaties codify. This problem arises because the decision to ratify and the decision to comply are endogenous, and without the ability to randomly assign which countries are subject to treaties, it is difficult to determine whether the laws of war are having an effect. Consequently, it is difficult for any observational study to convincingly model the decisions to ratify and comply in a way that can isolate the effects of ratification on compliance.

Taken together, these limitations make it unlikely that an observational study could definitively answer the question of whether the laws of war help to protect civilians. Although this paper has focused on the drawbacks of using observational methods to study the laws of war, it is not my position that they have no value. Instead, they are critically important. It is simply my contention that, although observational studies have many advantages, our understanding of the laws of war would be enriched if new methods were also used to study IHL.

2.3 The Advantages of an Experimental Approach

Using experimental methods to study compliance with the laws of war provides several advantages.⁴ First, experimental approaches allow researchers to design a scenario that can present a direct test of compliance with the laws of war. One problem with studying compliance with the laws of war is that it is difficult

² Sarkees and Wayman (2010). There are 15 interstate wars included in the Correlates of War (COW) interstate dataset v4.0 that commenced after 1977.
³ For a related discussion of how endogeneity problems create obstacles for observational studies of the democratic peace, see Tomz and Weeks (2013).
⁴ Chilton and Tingley (2013) provide a more thorough defense of using experimental methods to study international law generally. For a discussion of the drawbacks of the specific experimental method used in this paper, see infra Part 5.
to find situations where a leader is directly confronted with the discreet decision to take an action that clearly violates international law. Instead, in the real world, decisions are made by a diffuse set of actors in situations with ambiguous facts. For example, one of the previous studies discussed—Valentino, Huth, and Croco (2006)—only used civilian deaths as their dependent variable. But the law of war does not restrict the incidental killing of civilians, only the intentional killing of civilians or the undertaking of actions where the risk to civilians is excessive relative to the military advantages. As a result, any direct study of compliance would have to find a way to examine cases where leaders were faced with one of these two expressly impermissible choices, and could not simply look at total civilian deaths. While instances of these cases occurring in history may be difficult to find, it is relatively easy to design an experiment where leaders are faced with a clear choice to violate the laws of war in a discrete way.

Second, experimental approaches make it possible to randomize information on the status of international law. As previously outlined, one difficulty in researching compliance with the laws of war specifically, and human rights treaties more generally, is that many important legal instruments have been widely ratified. The result is that there is not sufficient variance in observational studies to test theories of compliance. By randomizing whether subjects are provided information on international law, however, it is possible to test whether that information has the potential to change opinions. Randomization thus helps to solve the problems of insufficient variance that plague observational studies, and also can help to address endogeneity concerns as well.

Third, experimental approaches provide an excellent way to test one credible theory for why certain states may comply with the laws of war. As previously discussed, there is not any evidence that states broadly comply with previous commitments to the laws of war. Instead, Morrow (2007) found that democracies that have ratified IHL treaties are less likely to target civilians during war. Since decision makers in democracies are constrained by public opinion—and there is evidence that domestic political mechanisms drive compliance with treaty obligations broadly (Simmons 2009; Dai 2007)—one way to test Morrow's claim would be to see if information on ratification changes public opinion. If ratification of international legal agreements does have the ability to change public opinion, it could indicate that such treaties would provide a constraint on democratic leaders. As a result, testing if information on the laws of war to changes public opinion is one way to test whether it is likely that democracies would be more likely to comply with IHL treaties than non-democracies.

Fourth, there is some evidence that surveys of public opinion can help gain insight into elite opinion in democracies (Tomz and Weeks 2103). This is because elites not only have a strong incentive to follow public opinion, but also because public opinion polls have shown to be a surprisingly accurate way to infer elite opinion on foreign policy. Researchers that have studied public opinion and elite opinion on the same foreign policy questions have produced a range of evidence that suggests a correlation between the two groups (Holyk 2011; Herron et al.

---

5 Morrow (2007) used a variety of sources to code “compliance,” which was then used as the dependent variable in the study.
In the case of compliance with the laws of war, the implication is that it is possible to be skeptical that democratic leaders will respond to changes in public opinion that are a consequence of international law, but still recognize that survey experiments provide at least some evidence about how that same information might directly influence the views of decision makers themselves.

Of course, despite the considerable advantages of using an experimental approach, there are limitations of studying compliance with the laws of war via experimentation. Perhaps most notably, there is an inherent trade-off between internal and external validity. That is to say, even if an experiment produces a statistically significant treatment effect, it is still possible that this effect would not be realized outside of the experimental setting. Moreover, even if information on the status of international law also would change public opinion outside of the experimental setting, it does not automatically follow that these changes would translate into leaders altering policy decisions. There are many steps in the causal chain, and the survey experiment that I conducted admittedly only tests one.

These concerns—as well as several other limitations of my experimental approach—are discussed further in Part 5. At this point, it is simply important to note that these limitations make it highly unlikely that experimental research could ever settle the debate over whether the laws of war change state behavior. The advantages of experimental research, however, do allow experiments to bring important new evidence to the discussion.

3 Research Design

Before presenting the results of my experiment, I first briefly describe the motivations of the experiment and the hypotheses that the experiment was designed to test. Second, I discuss the process used to recruit subjects. Third, I outline the survey experiment I conducted. Fourth, I report the results of tests conducted to ensure that the treatment groups were balanced.

3.1 Motivations and Hypotheses

My experiment was specifically designed to test four hypotheses. First, the primary question of interest is whether information on the status of international law changes public opinion on the acceptability of violations of the laws of war. The small body of existing survey research conducted about international law more generally has suggested that informing individuals that a policy would violate international law does in fact change American public opinion (Chilton 2014; Chaudoin 2014; Wallace 2013; Tomz 2008), so it would be reasonable to hypothesize that this result would occur in the law of war context as well.

Second, if information on international law does change public opinion, an important second question is whether the information has a “substitutive” or “additive” effect over other similar arguments that do not rely on the existence of international agreements. As Tomz (2008) argued, even if international law changes opinion, if other arguments—such as appeals to morality—have an equal effect, then informing people about violations of international law simply is “substituting” it for another argument. If information about international law and
additional arguments have a combined effect, however, this “additive” effect might still change public opinion because an international legal obligation would give advocates an additional argument. Based on Tomz’s evidence in the human rights context, my hypothesis is that the laws of war have an additive effect with other arguments. That is to say, I hypothesize that respondents who are told that an action is morally wrong will more strongly disapprove of that action when they also hear it violates the laws of war.

Third, previous research has suggested that democracies are more likely to comply with the laws of war when their opponent has previously committed to do so (Morrow 2007). Moreover, previous survey research on the effect of international law support for the use of torture has shown that learning that the opposition uses torture changes public opinion (Wallace 2013). As a result, I hypothesize that information on international law will have a greater effect when individuals are told that the opposition has made a previous commitment to obey the laws of war.

Fourth, previous survey research has shown that the influence of information on international law varies based on political ideology. Specifically, Wallace (2013) found that liberals are more likely to change their opinions, compared to conservatives, on the acceptability of torturing detainees for information after learning that the use of torture violates international law. I thus hypothesize that information on the laws of war will have a greater effect on the opinions of respondents that hold liberal political views.

3.2 Survey Recruitment

I developed and administered an identical survey in November 2012 and March 2013 to a combined sample of 2,077 U.S. adults. The respondents were administered the survey online, and were recruited using Amazon’s Mechanical Turk (mTurk) service. Amazon’s mTurk offers a pool of users a small fee to complete short tasks. I offered users from this pool a small cash incentive to complete a survey. Using mTurk for survey recruitment has the advantage of being a convenient and fast way to recruit subjects for experimental research (Mason and Suri 2012; Paolacci, Chandler and Ipeirotis 2010). Moreover, there is evidence that it is a reliable way of conducting experimental research. Research on the reliability of using mTurk for experimental research has suggested that mTurk produces the same treatment effects as experiments conducted on subjects recruited using other methods (Germine et al. 2012). Most notably, Berinsky, Huber, and Lenz (2012) used mTurk to replicate experiments that had been conducted with alternative subjects recruitment strategies, and their results suggested that the results produced by mTurk are comparable to those produced by administering the experiment using other methods. Moreover, experimental research conducted using mTurk has gained acceptance in political science. Studies with mTurk samples have appeared in the field’s most respected peer-reviewed journals (Arceneaux 2012; Huber, Hill, and Lenz 2012). It is important to note, however, that samples recruited through mTurk may not be nationally representative—which is true of my sample. The implication is that although using mTurk is a cost-effective means of conductive research, the tradeoff is that
it limits the generalizability of the results (Kahan 2013). Summary statistics for
the sample recruited through this experiment are reported in Table 1.

Table 1: Summary Statistics of the Subjects’ Demographic Characteristics

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>SD</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>0.63</td>
<td>0.48</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Age</td>
<td>30.91</td>
<td>10.82</td>
<td>18</td>
<td>82</td>
</tr>
<tr>
<td>College</td>
<td>0.42</td>
<td>0.49</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Republican</td>
<td>0.31</td>
<td>0.46</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Citizen</td>
<td>0.98</td>
<td>0.13</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>White</td>
<td>0.77</td>
<td>0.42</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Black</td>
<td>0.06</td>
<td>0.24</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Asian</td>
<td>0.10</td>
<td>0.30</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Hispanic</td>
<td>0.05</td>
<td>0.21</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Other</td>
<td>0.02</td>
<td>0.15</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

3.3 Experimental Design

The respondents were first asked a number of preliminary questions about
their demographic background and political views. Second, the respondents were
presented with a hypothetical scenario under which a future president is forced to
decide whether to continue a military campaign that would violate the laws of
war. While reading this vignette, the respondents were randomly assigned to eight
treatment conditions that changed the information on international law that they
were presented with. After reading the vignette, the respondents were then asked
whether they approved of the president’s policy decision.

It was during the second part of the survey that the randomized experiment
was conducted. The respondents were presented a vignette where the U.S.
president was confronted with a choice over whether to take a military action that
would be in clear violation of the laws of war. In the vignette, all respondents
were first told that, “[i]n a country that is a strategic ally of the United States, a
rebel group has controlled an outlying region of the country for a long time. As a
result of recent instability in the country, the rebels have left the areas they control
and launched an attack on the country’s capital in an effort to overthrow the
government.” The respondents were next informed that, “[t]he U.S. president
responded by launching air strikes in support of our ally. After suffering initial
casualties from the air strikes, the rebel forces took shelter in areas heavily
populated with civilians. This made the U.S. military unable to continue air strikes
while distinguishing rebel targets from civilian targets. Any continued bombing
would result in excessive civilian casualties. This forced the U.S. president to
consider whether to continue the bombing campaign.”

All respondents were then presented with the argument in favor of continued
bombing that, “[i]f the U.S. were to halt the bombing campaign, it is likely that
the rebel forces would overthrow the government, and that the country would no longer be an ally of America.” At this point, respondents were subjected to one of four treatment conditions. Respondents in the first treatment group, the control group, did not receive an argument continued bombing. The other respondents in the other three treatment groups were randomly given one of three arguments against continued bombing. The specific text of the four treatments were:

- **Control Treatment**: (None).
- **International Law Treatment**: “On the other hand, continuing the bombing of civilians would violate international law. It is a violation of international law and treaties that the United States has signed to continue a bombing campaign when the expected loss of civilian life is excessive relative to the military advantage gained.”
- **Morality Treatment**: “On the other hand, continuing the bombing of civilians would be immoral. It is immoral to continue a bombing campaign when the expected loss of civilian life is excessive relative to the military advantage gained.”
- **Combined Treatment**: “On the other hand, continuing the bombing of civilians would violate international law. It is a violation of international law and treaties that the United States has signed to continue a bombing campaign when the expected loss of civilian life is excessive relative to the military advantage gained. Additionally, continuing to bomb civilians is not only a violation of international law, it is immoral. It is also immoral to continue a bombing campaign when the expected loss of civilian life is excessive relative to the military advantage gained.”

The international law treatment makes it possible to directly test the first hypothesis of this experiment, namely, whether information on international law lowers support for actions that violate international law. The treatment makes it clear that continued bombing would violate both international law generally and treaties that the United States has committed to. It is important to note that the treatment specifically noted that the loss of civilian life would be “excessive.” This was choice was made so that it would be unambiguously true that continued bombing would violate international law.

The next two treatments make it possible to test whether international law has a substitutive or additive effect. The morality treatment was designed to be comparable to the international law treatment: it has a parallel structure, similar tone, and the same fundamental claim. This treatment was specifically worded to not claim that the United States was obligated in any way because of legal requirements. In other words, it is designed to test an argument that would have been available in the absence of international law on the topic. The combined treatment tests whether there is an additive effect by combining the international law and morality treatment.

---

6 To avoid the possibility of ordering effects, the order in which the two arguments contained in this treatment was randomized so that half received the morality argument first, and half received the international law argument first.
To test the third hypothesis of the study—that the likelihood of reciprocity influences opinion—the experiment contained a second treatment condition. After respondents received one of the first four treatments, a second treatment was administered. In the first group, respondents were not given any information about the rebels’ commitment to international law. In the second group, respondents were told that, “[t]he rebel forces have publicly committed to comply with international law and not intentionally kill civilians, and there is not any evidence that they have broken that commitment.” Table 2 presents the 8 treatment groups created by this 4x2 design.

<table>
<thead>
<tr>
<th></th>
<th>Control</th>
<th>Int’l Law</th>
<th>Morality</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Reciprocity</td>
<td>Group 1</td>
<td>Group 2</td>
<td>Group 3</td>
<td>Group 4</td>
</tr>
<tr>
<td>Reciprocity</td>
<td>Group 5</td>
<td>Group 6</td>
<td>Group 7</td>
<td>Group 8</td>
</tr>
</tbody>
</table>

After randomly receiving one of these sets of arguments, respondents were told that “[u]ltimately, the president decided to continue the bombing campaign against the rebel forces because failing to do so would result in the loss of a strategic ally.” The respondents were then asked their opinion on a seven-point scale (with 1 for strongly disapproved and 7 for strongly approved). This is consistent with previous studies on public opinion and international law (Tomz 2008; Wallace 2013).7 It is worth noting, however, that other survey experiments on international law that have used a similar response scale, but then collapsed the subjects’ responses into a binary “approve” or “disapprove” scale (Chaudoin 2014; Wallace 2013). Although I use the full seven-point response scale because it provides richer information, all of the results presented in this paper are robust to converting the responses to a binary scale.8

3.4 Sample Balance

Before analyzing the results of the experiment, I first checked to ensure that the probability that respondents received a particular treatment was not skewed among the pre-treatment covariates measured. Following Chaudoin (2014), I estimated a logit model with pre-treatment demographic variables to assess whether the probability of treatment was evenly distributed. To do so, I regressed the respondent’s gender, age, education level, party affiliation, citizenship and race on the binary variable to represent receiving each of eight treatments. The results of this analysis suggest that there is limited evidence that any variables were skewed along treatment groups. For the eight treatment groups, only four of

---

7 In a slightly different approach, Chaudoin (2014) and Chilton (2014) use a six-point scale by eliminating “neither lean towards approving or disapproving.”

8 These results are reported in the Appendix.
the 72 total covariates achieved statistical significance. This is exactly what would be expected based on random chance.\(^9\) As a result, it appears that the probability of the being in each of the eight treatment was evenly distributed.

### 4 Results

Table 3 reports the results for the eight treatment groups. These results are discussed in the proceeding four sections, which correspond to the hypotheses presented in Part 3.1.

#### Table 3: Mean Responses and 90% Confidence Intervals

<table>
<thead>
<tr>
<th>No Reciprocity</th>
<th>Control</th>
<th>Int’l Law</th>
<th>Morality</th>
<th>Combined</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3.24</td>
<td>2.77</td>
<td>2.83</td>
<td>2.68</td>
<td>2.89</td>
</tr>
<tr>
<td></td>
<td>(3.04, 3.44)</td>
<td>(2.57, 2.97)</td>
<td>(2.62, 3.04)</td>
<td>(2.48, 2.89)</td>
<td>(2.78, 2.99)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reciprocity</th>
<th>2.82</th>
<th>2.57</th>
<th>2.73</th>
<th>2.46</th>
<th>2.64</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(2.61, 3.03)</td>
<td>(2.37, 2.77)</td>
<td>(2.52, 2.94)</td>
<td>(2.26, 2.66)</td>
<td>(2.54, 2.74)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Total</th>
<th>3.04</th>
<th>2.68</th>
<th>2.78</th>
<th>2.57</th>
<th>2.77</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(2.90, 3.19)</td>
<td>(2.54, 2.82)</td>
<td>(2.64, 2.93)</td>
<td>(2.43, 2.72)</td>
<td>(2.79, 2.84)</td>
</tr>
</tbody>
</table>

#### 4.1 Hypothesis 1: The Effect of the Laws of War

The primary question of this study is whether information on international law changes public opinion on the acceptability of the government taking actions during conflicts that violate the laws of war. Figure 1 presents the mean response and 90% confidence interval for respondents that received the control and international law treatments. Higher average responses indicate that the respondents were more supportive of the violation of the laws of war discussed in the vignette. Among the respondents that received the control treatment (Group 1), there was an average response of 3.24 (90% CI = 3.04, 3.44). Of the respondents who were told that continued bombing violated international law (Group 2), the response was 2.77 (90% CI = 2.57, 2.97). This difference illustrates the effect that information on international law has on public opinion. On a binary scale, this corresponds to a 9% difference in approval rates between the control treatment and international law treatment groups. This difference is both substantively large, and highly statistically significant (the p-value for the difference between the two groups is 0.01). Moreover, the magnitude of this

---

\(^9\) Using a 0.05 p-value as the measure of statistical significance, one in every twenty variables should be statistically significant based on random chance. With over 72 variables analyzed, 3.6 should achieve significance by random chance (72 * 0.05 = 3.6).
treatment effect is consistent with the limited previous research on the impact of international law on public opinion.\textsuperscript{10}

\begin{figure}[h]
\centering
\includegraphics[width=0.5\textwidth]{figure1}
\caption{The Effect of International Law}
\end{figure}

4.2 Hypothesis 2: Substitutive or Additive Effects

Of course, even though information on the status of international law caused a 9% change in public opinion, that does not necessarily mean that the ratification of treaties would change the course of policy debates. After all, information on the status of international law would only influence policy discussions if the fact that the treaty had been ratified presented a new argument that was more persuasive than the arguments available in the treaty’s absence. As a result, I tested whether information on international law had a substitutive effect (and simply reproduced the effect of other arguments), or had an additive effect when combined with other arguments (and thus caused additional changes in public opinion).

In Figure 2, the first two treatment groups shown are identical to the treatment groups presented in Figure 1: the control treatment group and the international law treatment group. Figure 2 also includes the results for the respondents who were told that continued bombing was immoral (Group 3) and for the respondents who were told that continued bombing was both immoral and a violation of international law (Group 4). As previously noted, respondents who were given the

\textsuperscript{10}Chaudoin (2014) found that information on a prior international agreement changed support for using import restrictions by 11%, Chilton (2014) found that information on international law changed support for reforming solitary confinement practices by 4, and Wallace (2013) found that information on the status of international law produced a 6% drop in approval for the use of torture.
international law treatment had a mean response of 2.77. The respondents who were only told that continued bombing was immoral, however, had a mean response of 2.83 (90% CI = 2.62, 3.04). This rate is only 0.06 different on a seven-point scale (or roughly 2% on a binary scale), so although the international law argument appeared to be slightly stronger, this result is not close to being statistically significant (the p-value is 0.74). This suggests that information on the laws of war has a substitute effect over other possible arguments.

Figure 2: The Effect of International Law & Morality

The next question is whether there is an additive effect. The combined treatment tests this proposition. The respondents in the combined treatment group approved of the president’s decision at a rate of 2.68 (90% CI = 2.48, 2.89). This is slightly lower than both being told that continued bombing violates international law (2.77) or that continued bombing is immoral (2.83). Of course, these differences are not statistically significant. The result thus does not provide any evidence that information the laws of war has an additive effect. Instead, the results suggest that information on the laws of war is a substitute for being told that the behavior in question would be immoral. The consequence is that this results suggests that the ratification of treaties on the laws of war alone may not be enough to change public opinion, and in turn, state behavior.

11 The p-value for the difference between Group 2 and Group 4 is 0.61, and the p-value for the difference between Group 3 and Group 4 is 0.41.
4.3 Hypothesis 3: The Effect of Reciprocity

The third hypothesis was that information on international law would have a greater effect when respondents were also told that there is the likelihood of reciprocity. As previously noted, Morrow (2007) studied the influence of the laws of war using observational data, and the results suggest that democracies are most likely to follow the laws of war when both parties to a conflict have previously committed to obeying the laws of war. To test the effect of reciprocity on public opinion, I included a second treatment condition where each group of respondents was also told that the opposition had previously pledged to follow international law and does not appear to have broken that commitment.

Figure 3: The Effect of Reciprocity

![Figure 3: The Effect of Reciprocity](image)

Figure 3 presents the results for all eight treatment groups. The left panel is identical to Figure 2, and presents results for the groups that did not receive the reciprocity treatment. The panel on the right presents the results for the respondents who were also given the reciprocity treatment. Overall, respondents that were told nothing about reciprocity had an average response of 2.89 (90% CI = 2.78, 2.99), and respondents that received the reciprocity treatment had an average response of 2.64 (90% CI = 2.54, 2.74). Moreover, this difference is statistically significant at the 0.01 level (p-value = 0.005). Although this simply may be because the respondents in the reciprocity treatment received an additional argument against continued bombing, this does provide some evidence that information on reciprocity does lower support for violations of international law.

In addition to comparing the groups in the aggregate, it is also possible to compare the effect of the reciprocity argument to other individual arguments. The respondents who were only told that the other side in the conflict had pledged to
obey international law (Group 5) had an average response of 2.82 (90% CI = 2.61, 3.03). This is roughly comparable to the respondents that were told about prior U.S. commitments to international law (Group 2), that were told that continued bombing is immoral (Group 3), or that were told both, without mention of reciprocity (Group 4). Interestingly, however, when the argument that continued bombing was immoral, violated treaties, and there was the chance of reciprocity was presented to respondents (Group 8), the average response dropped to 2.46 (90% CI = 2.26, 2.66). This is not only statistically significant compared to the Control Treatment (Group 1), but also statistically significant compared to the respondents that received the Morality Treatment (Group 3). On a binary scale, this translates to a 13% lower level of approval compared to the respondents that only received the Control Treatment, and 6% lower levels of approval compared to the respondents that only received the Morality Treatment.

There are two possible explanations for these results. First, it simple may be the case that the difference in response rate between Group 1 and Group 3 compared to Group 8 is due to the fact that respondents in Group 8 received three arguments against continued bombing. Second, it may be the case that, although simply being told that an action violates international law may not be more powerful than saying it is immoral, telling individuals that both sides have made commitments to international law does have an additive effect. Because the public would be less supportive of violating the laws of war when they believe that the other side of the conflict will not do so, this would support the finding in Morrow (2007) that democracies should be expected to be less likely to commit violations of the laws of war when both sides have previously committed to not doing so. Without further research, however, it would be impossible to adjudicate between these two possible explanations.

4.4 Hypothesis 4: The Effect of Ideology

As previously noted, prior research on the influence of international law on public opinion has suggested that treatment effect are not uniform. Instead, individuals that have expressed liberal political views are more likely to change their opinions after being told about international legal obligations than are conservatives (Wallace 2013). To test whether this is true in the laws of war context, I broke down the sample by respondents that leaned towards the Democratic Party and those that leaned towards the Republican Party. Figure 4 recreates Figure 1 (by comparing Group 1 to Group 2), but with the results broken out for Democrats and Republicans. As the results in the left panel show, Democrats are moved by the influence of international law, but the result is quite small and not statistically significant (p-value = 0.36). For Republicans, information on international law changes public opinion in a way that is statistical significance at the 0.1 level (p-value = 0.09). Additionally, the results for the respondents that did not identify with either political party were similar. The reason that this different treatment effect is interesting, however, is that previous

12 The p-value for the difference between Group 1 and Group 8 is 0.00.
13 The p-value for the difference between Group 3 and Group 8 is 0.03.
research has suggested that international law has a larger treatment effect on those with liberal political views (Wallace 2013). Of course, this may simply be because Democrats had a lower baseline approval rate, and thus less possible room for change. Alternatively, this result may be because information on international law does more to change Republicans’ beliefs on this subject.

Figure 4: International Law’s Effect by Political Affiliation

5 Discusion and Conclusion

As this paper has outlined, previous observational studies on whether the laws of war change behavior have produced inconclusive results. Moreover, there are a number of reasons that it is unlikely that any observational research design will be able to resolve this debate. It is thus important to use new research methods that can add information to the debate—experimental methods do exactly that.

Of course, there are serious limitations to the experimental design used in this study—and of experimental methods more generally—that are important to note. First, there is a trade-off between internal and external validity. Although survey experiments have the advantage of allowing researchers to cleanly measure treatment effects, it is not obvious that these effects would exist outside of a controlled experimental setting. Second, this survey was only administered to a sample of American adults. Since there are good reason to think that Americans have different reactions to international law than citizens in other countries, it may be inappropriate to infer that these results would be generalizable to democracies more broadly. Third, this experiment used a single vignette to test how public opinion changed in response to international law. To have a richer understanding of the effects of the laws of war on public opinion, future research would need to
test whether information on international law could alter public opinion in other situations. Fourth, it is possible that the treatment effects are biased because respondents that are not given information on the laws of war may still be influenced by prior knowledge of international law. In other words, the ideal control group would come from a counterfactual world in which the laws of war were never developed. Without such a control group, however, it is not possible to test the treatment effect without the risk of bias. Fifth, it is important to note that modest changes in public opinion may not translate into changes in conduct during war. Even if this experiment were to have found that information about the laws of war had robust effect on public opinion, it does not necessarily follow that the United States would alter its strategic decisions during conflicts.

With those limitations in mind, this project has still been able to make several contributions to our understanding of compliance with the laws of war. First, the results of this experiment suggest that even without information about international law, support for actions that would violate its core principles is quite low in the United States. Second, information on the ratification of relevant treaties lowers support for violations of the laws of war by roughly 9 percentage points. Although this a large enough margin to have the potential to sway policy outcomes, a similar argument based on moral principles, and not law, has the same effect. Moreover, the effect of the argument based on moral principles does not have a larger effect when combined with information on international law. Third, information that an opponent has committed to comply with the laws of war does, however, have an additive effect in lowering support for targeting civilians over the morality argument alone. This is consistent with previous statistical evidence and theoretical arguments that posit that concern for reciprocity is a major driver of compliance. Fourth, information on international law has a larger treatment effect on Republicans than Democrats. This finding has not been consistent in all studies on the effect of international law and public opinion, and suggests that more research needs to be done to understand how ideology influences opinions on international law.

Finally, this experiment not only sheds light on the debate on whether countries comply with IHL treaties that they have ratified, but also contributes to the small body of experimental research on international law. This is perhaps the first study to use experimental methods to test theories of compliance with the laws of war. Hopefully this project will help to demonstrate that experimental research can help not only to test whether states are likely to comply with their international legal obligations, but also to explore why they would comply. It is only by finding answers to the latter question that we will be able to understand whether international law has the potential to help solve critical problems, such as the need to reduce needless civilian causalities during war.
Appendix

Average Responses and 90% Confidence Interval with Binary Response Scale

<table>
<thead>
<tr>
<th></th>
<th>Control</th>
<th>Int’l Law</th>
<th>Morality</th>
<th>Combined</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Reciprocity</td>
<td>0.34</td>
<td>0.24</td>
<td>0.26</td>
<td>0.25</td>
<td>0.27</td>
</tr>
<tr>
<td></td>
<td>(0.29, 0.38)</td>
<td>(0.20, 0.28)</td>
<td>(0.22, 0.31)</td>
<td>(0.20, 0.29)</td>
<td>(0.25, 0.29)</td>
</tr>
<tr>
<td>Reciprocity</td>
<td>0.25</td>
<td>0.21</td>
<td>0.22</td>
<td>0.20</td>
<td>0.22</td>
</tr>
<tr>
<td></td>
<td>(0.21, 0.30)</td>
<td>(0.17, 0.26)</td>
<td>(0.18, 0.27)</td>
<td>(0.16, 0.24)</td>
<td>(0.20, 0.25)</td>
</tr>
<tr>
<td>Total</td>
<td>0.30</td>
<td>0.22</td>
<td>0.25</td>
<td>0.22</td>
<td>0.25</td>
</tr>
<tr>
<td></td>
<td>(0.26, 0.33)</td>
<td>(0.20, 0.26)</td>
<td>(0.22, 0.28)</td>
<td>(0.19, 0.25)</td>
<td>(0.23, 0.26)</td>
</tr>
</tbody>
</table>

References


29.


Author:
Adam S. Chilton
The Law School
University of Chicago
1111 E. 60th Street
Chicago, IL 60637
United States
E-mail:
adamchilton@uchicago.edu
Readers with comments should address them to:

Lecturer Adam S. Chilton
    adamchilton@uchicago.edu
Chicago Working Papers in Law and Economics  
(Second Series) 

For a listing of papers 1–600 please go to Working Papers at http://www.law.uchicago.edu/Lawecon/index.html

602. Saul Levmore, Harmonization, Preferences, and the Calculus of Consent in Commercial and Other Law, June 2012
603. David S. Evans, Excessive Litigation by Business Users of Free Platform Services, June 2012
604. Ariel Porat, Mistake under the Common European Sales Law, June 2012
608. Lior Jacob Strahilevitz, Absolute Preferences and Relative Preferences in Property Law, July 2012
611. Joseph Isenbergh, Cliff Schmiff, August 2012
613. M. Todd Henderson, Voice versus Exit in Health Care Policy, October 2012
615. William H. J. Hubbard, Another Look at the Eurobarometer Surveys, October 2012
616. Lee Anne Fennell, Resource Access Costs, October 2012
617. Ariel Porat, Negligence Liability for Non-Negligent Behavior, November 2012
618. William A. Birdthistle and M. Todd Henderson, Becoming the Fifth Branch, November 2012
620. Rosa M. Abrantes-Metz and David S. Evans, Replacing the LIBOR with a Transparent and Reliable Index of Interbank Borrowing: Comments on the Wheatley Review of LIBOR Initial Discussion Paper, November 2012
621. Reid Thompson and David Weisbach, Attributes of Ownership, November 2012
626. David S. Evans, Economics of Vertical Restraints for Multi-Sided Platforms, January 2013
627. David S. Evans, Attention to Rivalry among Online Platforms and Its Implications for Antitrust Analysis, January 2013
632. Adam B. Cox and Thomas J. Miles, Policing Immigration, February 2013
633. Anup Malani and Jonathan S. Masur, Raising the Stakes in Patent Cases, February 2013
637. Lior Jacob Strahilevitz, Toward a Positive Theory of Privacy Law, March 2013
639. Lisa Bernstein, Merchant Law in a Modern Economy, April 2013
640. Omri Ben-Shahar, Regulation through Boilerplate: An Apologia, April 2013
<table>
<thead>
<tr>
<th>Number</th>
<th>Title</th>
<th>Authors</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>641</td>
<td>Anthony J. Casey and Andres Sawicki, Copyright in Teams</td>
<td></td>
<td>May 2013</td>
</tr>
<tr>
<td>643</td>
<td>Eric A. Posner and E. Glen Weyl, Quadratic Vote Buying as Efficient Corporate Governance</td>
<td></td>
<td>May 2013</td>
</tr>
<tr>
<td>646</td>
<td>Stephen M. Bainbridge and M. Todd Henderson, Boards-R-Us: Reconceptualizing Corporate Boards</td>
<td></td>
<td>July 2013</td>
</tr>
<tr>
<td>647</td>
<td>Mary Anne Case, Is There a Lingua Franca for the American Legal Academy?</td>
<td></td>
<td>July 2013</td>
</tr>
<tr>
<td>650</td>
<td>Rosalind Dixon &amp; Tom Ginsburg, The South African Constitutional Court and Socio-economic Rights as “Insurance Swaps”</td>
<td></td>
<td>August 2013</td>
</tr>
<tr>
<td>651</td>
<td>Maciej H. Kotowski, David A. Weisbach, and Richard J. Zeckhauser, Audits as Signals</td>
<td></td>
<td>August 2013</td>
</tr>
<tr>
<td>652</td>
<td>Elisabeth J. Moyer, Michael D. Woolley, Michael J. Glotter, and David A. Weisbach, Climate Impacts on Economic Growth as Drivers of Uncertainty in the Social Cost of Carbon</td>
<td></td>
<td>August 2013</td>
</tr>
<tr>
<td>653</td>
<td>Eric A. Posner and E. Glen Weyl, A Solution to the Collective Action Problem in Corporate Reorganization</td>
<td></td>
<td>September 2013</td>
</tr>
<tr>
<td>657</td>
<td>The Impact of the U.S. Debit Card Interchange Fee Regulation on Consumer Welfare: An Event Study Analysis</td>
<td>David S. Evans, Howard Chang, and Steven Joyce</td>
<td>October 2013</td>
</tr>
<tr>
<td>658</td>
<td>Lee Anne Fennell, Just Enough</td>
<td></td>
<td>October 2013</td>
</tr>
<tr>
<td>661</td>
<td>Have Inter-Judge Sentencing Disparities Increased in an Advisory Guidelines Regime? Evidence from Booker, Crystal S. Yang</td>
<td></td>
<td>March 2014</td>
</tr>
<tr>
<td>663</td>
<td>Tom Ginsburg, Nick Foti, and Daniel Rockmore, “We the Peoples”: The Global Origins of Constitutional Preambles</td>
<td></td>
<td>December 2013</td>
</tr>
<tr>
<td>664</td>
<td>Lee Anne Fennell and Eduardo M. Peñalver, Exactions Creep</td>
<td></td>
<td>December 2013</td>
</tr>
<tr>
<td>665</td>
<td>Lee Anne Fennell, Forcings</td>
<td></td>
<td>December 2013</td>
</tr>
<tr>
<td>667</td>
<td>Jose Antonio Cheibub, Zachary Elkins, and Tom Ginsburg, Beyond Presidentialism and Parliamentarism</td>
<td></td>
<td>December 2013</td>
</tr>
<tr>
<td>668</td>
<td>Lisa Bernstein, Trade Usage in the Courts: The Flawed Conceptual and Evidentiary Basis of Article 2’s Incorporation Strategy</td>
<td></td>
<td>November 2013</td>
</tr>
<tr>
<td>669</td>
<td>Roger Allan Ford, Patent Invalidity versus Noninfringement</td>
<td></td>
<td>December 2013</td>
</tr>
<tr>
<td>No.</td>
<td>Title</td>
<td>Authors</td>
<td>Publication Date</td>
</tr>
<tr>
<td>-----</td>
<td>----------------------------------------------------------------------</td>
<td>--------------------------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>673</td>
<td>Eric A. Posner and Alan O. Sykes, Voting Rules in International Organizations</td>
<td>January 2014</td>
<td></td>
</tr>
<tr>
<td>674</td>
<td>Tom Ginsburg and Thomas J. Miles, The Teaching/Research Tradeoff in Law: Data from the Right Tail</td>
<td>February 2014</td>
<td></td>
</tr>
<tr>
<td>675</td>
<td>Ariel Porat and Eric Posner, Offsetting Benefits</td>
<td>February 2014</td>
<td></td>
</tr>
<tr>
<td>676</td>
<td>Nuno Garoupa and Tom Ginsburg, Judicial Roles in Nonjudicial Functions</td>
<td>February 2014</td>
<td></td>
</tr>
<tr>
<td>678</td>
<td>David S. Evans, Vanessa Yanhua Zhang, and Xinzhui Zhang, Assessing Unfair Pricing under China's Anti-Monopoly Law for Innovation-Intensive Industries</td>
<td>March 2014</td>
<td></td>
</tr>
<tr>
<td>679</td>
<td>Jonathan S. Masur and Lisa Larrimore Ouellette, Deference Mistakes</td>
<td>March 2014</td>
<td></td>
</tr>
<tr>
<td>681</td>
<td>Yun-chien Chang and Lee Anne Fennell, Partition and Revelation</td>
<td>April 2014</td>
<td></td>
</tr>
<tr>
<td>682</td>
<td>Tom Ginsburg and James Melton, Does the Constitutional Amendment Rule Matter at All? Amendment Cultures and the Challenges of Measuring Amendment Difficulty</td>
<td>May 2014</td>
<td></td>
</tr>
<tr>
<td>684</td>
<td>Adam B. Badawi and Anthony J. Casey, The Fannie and Freddie Bailouts Through the Corporate Lens</td>
<td>March 2014</td>
<td></td>
</tr>
<tr>
<td>685</td>
<td>David S. Evans, Economic Aspects of Bitcoin and Other Decentralized Public-Ledger Currency Platforms</td>
<td>April 2014</td>
<td></td>
</tr>
<tr>
<td>687</td>
<td>Adam S. Chilton, The Laws of War and Public Opinion: An Experimental Study</td>
<td>May 2014</td>
<td></td>
</tr>
</tbody>
</table>