Laws of War and Public Opinion: Report for the Replication Workshop

Jie Peng Ren

Institute of Criminology,
University of Cambridge

Introduction

The development of treaties aimed at protecting civilians against violence resulted from war are paid with significant attention by international communities. To evaluate whether these treaties could reduce civilian casualties, Chilton (2015) examined one mechanism hypothesized to increase state compliance with the laws of war, that is, public opinions against state violation of the laws. His approach is claimed to be relatively more rigorous than other empirical studies that have examined whether the laws of war help to protect civilians (Chilton, 2015: 1). To overcome the limitations of previous studies, two methodological issues are considered in his study. First, instead of using one treatment, two different treatments are applied to see how they affect public opinions differently, together with changes in information in favour of or against their enemy. Accordingly, a 2X3 treatment condition is used. Secondly, a huge sample size is used to increase generalizability and statistical power.

Given these strengths, there are several conclusions in the original study. First, information on the laws of war lowers public support for wars in violation of such laws. This is hypothesis 1. Second, the effect of the laws of war is likely to be substitutive but not additive. This is hypothesis 2. Third, reciprocity between one country and its enemy lowers public support for wars when it violates the laws. The final hypothesis is that opinions of people who are liberal more likely to be changed by information on the laws of war.

This replication study is to test each of the above hypotheses and investigate the reasons behind the incongruence. Overall, this replication study has similar findings to the original study, despite some subtle differences. The first difference is that magnitudes of the effect of each treatment are smaller than those in the original paper. The second difference is that, for hypothesis 4, the effect of political affiliation (for both Democrats and Republicans) is not statistically

significant, while the effect of being Republicans is statistically significant in the original paper.

Replicating Data Analysis

The first thing to be mentioned is that the normality of data distribution is not reported in the original paper, so it is unknown whether which test (e.g. T-test or the Mann–Whitney test) is to be used and which is not applicable. To remedy this, the distribution data from each group is investigated to see whether it is normal. After plotting each group of data into histograms, the result shows that each group of data is not normally distributed. Accordingly, T-test is not applicable and thus replaced by the Mann–Whitney test. Differences in this between the replication result and the original result are to be reported below.

1.1 Summary Table

Table 1 shows the replication results on mean responses by the 8 groups with a change from 90% to 95% (as it is used more often) as confidence intervals. All of the results are different from the original results in that they are slightly higher. For example, the mean response is 3.24 in group 1 (control group with no reciprocity), while it is originally 3.18. Group 2 (international law with reciprocity) has a 2.77 mean response in replication, compared to 2.63 in the original study. Also, for group 7 (morality with reciprocity), the result is 2.73 in the replication but 2.65 in the original paper. Factors that contribute to such difference are unknown, because measurements and variables are the same except in group 7 and group 8, and also a different confidence interval (95%) is used. Nonetheless, it is important to look at whether these differences lead to a different conclusion from Chilton's study.

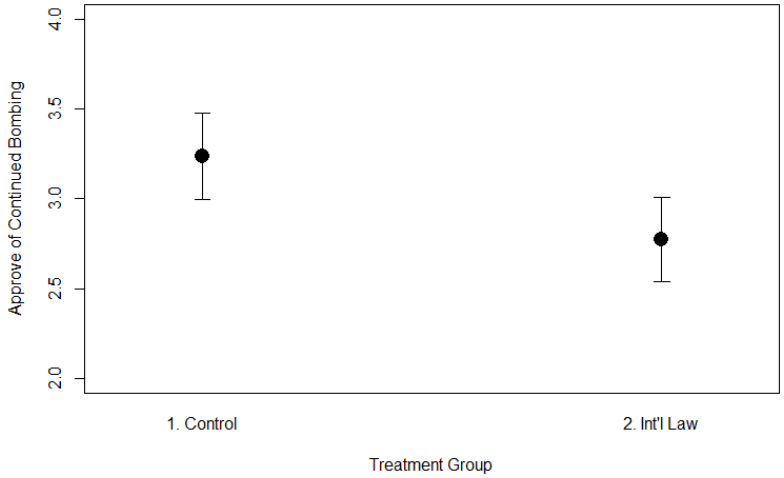
Table 1: Mean Responses and 95% Confidence Intervals

	Control	International Law	Morality	Combined	Total
No Reciprocity	3.24 (3.00, 3.48)	2.77 (2.54, 3.01)	2.83 (2.58, 3.08)	2.68 (2.44, 2.93)	2.89 (2.77, 3.01)
Reciprocity	2.82 (2.57, 3.07)	2.57 (2.33, 2.81)	2.73 (2.48, 2.98)	2.46 (2.23, 2.70)	2.64 (2.52, 2.77)
Total	3.04 (2.87, 3.22)	2.68 (2.51, 2.85)	2.78 (2.61, 2.96)	2.57 (2.40, 2.74)	2.77 (2.69, 2.86)

1.2 Hypothesis 1: The Effect of the Laws of War

To investigate further on these differences, first, the difference in mean response between group 1 (control with no reciprocity) and group 2 (International Law with No Reciprocity) is compared in Figure 1. This corresponds to Hypothesis 1 in the paper, which is to examine whether information on international law could change public opinions to accept state decisions that violates the laws of war. The control group displays a higher approval scores (M = 3.24, 95% CI = 3.00, 3.48) than do the group who was told that decision is in violation of international law (M = 2.77, 95% CI = 2.54, 3.01). On a binary scale, this corresponds to approximately a 9% difference in approval rates. This difference is moderate but statistically significant (p-value = 0.003< 0.05). In contrast, this difference is roughly 12% in the original paper. As a result, the replication result shows the effect of International Law is moderate and lower than the original results, and both of them are statistically significant.

Figure 1: The Effect of International Law



1.3 Hypothesis 2: Substitutive or Additive Effects

To investigate Hypothesis 2, comparisons are made between the 4 groups below. Hypothesis 2 claims that, if international law is ratified, it does not necessarily change public opinions, because morality plays a role adhered with international law. As such, it is important to look at the independent effect of morality and the combined effect of both. They refer to a substitutive effect and an addictive effect respectively. Figure 2 is the replication result, which shows differences between group 1, 2, 3, and 4. These differences are similar to those from the original paper, as approval scores are highest in group 3 (M = 2.83, 95% CI = 2.58, 3.08), and also this score is higher in group 2 (M = 2.77, 95% CI = 2.54, 3.01) than in group 4 (M = 2.68, 95% CI = 2.44, 2.93). To look at the

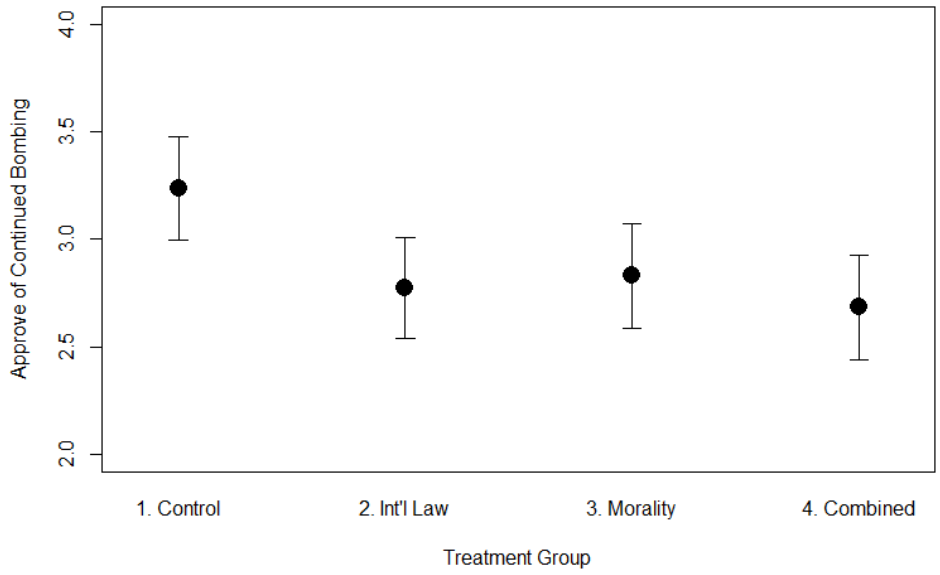
independent effect of moral arguments, difference between group 1 and group 3 is compared. On a binary scale, there is a 7% difference between them, and this difference is statistically significant (p = 0.01).

To examine the difference in approval rates between group 2 and group 3, there is a 4% difference between them, while this difference is reported as 4% in the original report. Also, in in terms of p-value, this difference is not statistically significant in replication (p = 0.76), while it is also claimed to be the same in the original paper (p = 0.52). Difference between international law and moral argument is thus disregarded. As such, international law is likely to have a substitutive effect in relation to other treatments.

To examine whether international law has an additive effect, the combined treatment is considered. Participants in this group (group 4) have a mean response at 2.68 (95% CI = 2.44, 2.93). This is lower than the approval score of both international law (2.77) and morality (2.83). However, the difference between group 4 and the other 2 groups is neither noteworthy (approximately 2% difference between group 2 and group 4, and between group 3 and group 4) nor statistically significant (p = 0.54 between group 2 and group 4, p = 0.37 between group 3 and group 4). Combined treatment is not different from discrete treatment, so the effect of each treatment is more likely to be independent. In this case, the effect is more likely to be substitutive than additive. This is similar to the original finding.

In sum, although there are some outcome differences in the statistical analysis, the conclusion is consistent to the original findings. The above result suggests that ratification of treaties on the laws of war alone is not enough to change public opinion. The public should also recognise or be told that actions in violation of the laws of war are immoral. The difference is that magnitudes of the effect of each treatment are lower than those in the original paper.

Figure 2: The Effects of IL & Morality Treatments



1.4 Hypothesis 3: The Effect of Reciprocity

Hypothesis 3 claims that the effect of international law is stronger when the public know there is reciprocity between their own country and the country targeted by war. To formulate the reciprocity treatment, the author included a second treatment condition in which participants were told that the enemy had previously pledged to follow international law and did not appear to have broken that commitment.

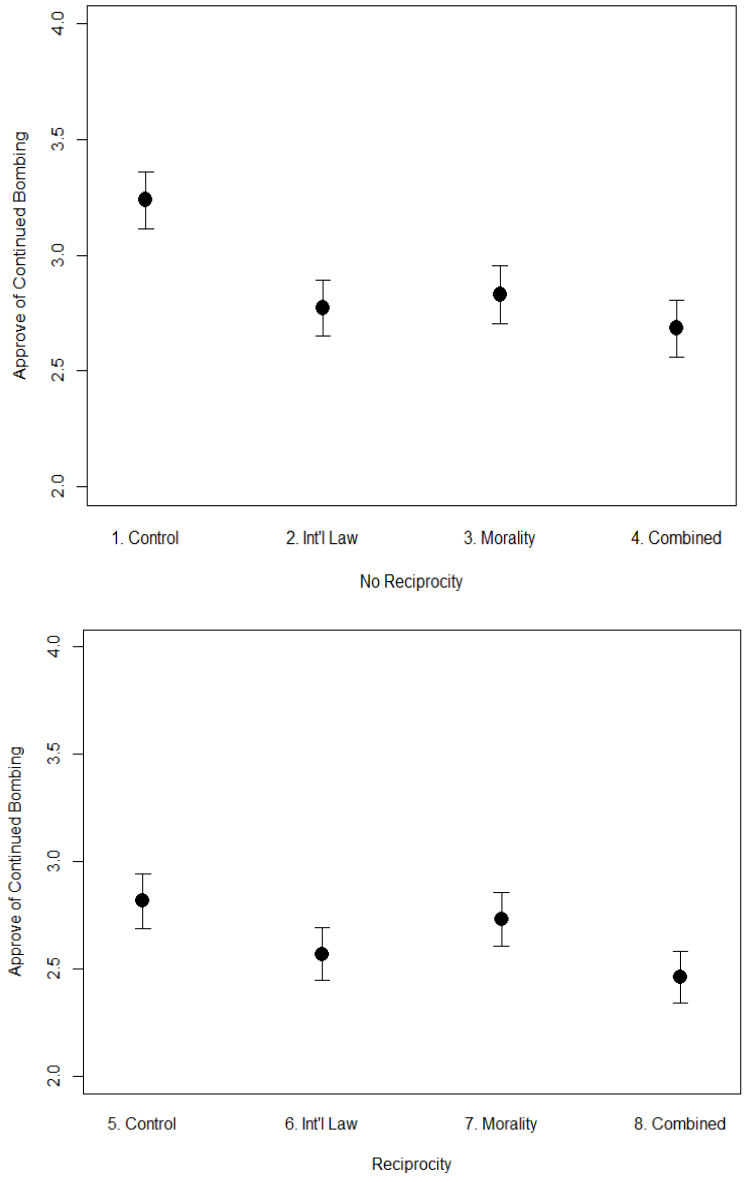
In Figure 3, the first graph presents the result of the groups that did not receive the reciprocity treatment. The second graph shows those who received that treatment. In general, the mean response of the reciprocity group is 2.64 (95% CI = 2.52, 2.77), and this is 2.86 (95% CI = 2.77, 3.01) for the non-reciprocity group. On a binary scale, the difference in approval rates between the two groups is 5%, and it is statistically significant (p = 0.01), which is consistent to the original finding that information on reciprocity has a stronger effect (lowering the support for war) than non-reciprocity.

The difference in individual treatments between reciprocity and non-reciprocity groups is compared below. For control group, the one without reciprocity has a mean of response at 3.24 (95% CI = 3.00, 3.48), which is higher than the mean of the one with reciprocity (M = 2.82, 95% CI = 2.57, 3.07). On a binary scale, the difference in approval rates between the two groups is 8%. This difference is also statistically significant (p = 0.016). For international law treatment, those who were told that the enemy has commitment to obey the law have an average response of 2.57 (95% CI = 2.33, 2.81), which is stronger than the effect of international law without reciprocity (M = 2.77, 95% CI = 2.54, 3.01) and also

other treatments (group 3 and group 4) in the non-reciprocity category.

However, none of them is statistically significant except for the difference between group 3 and group 8 (a 6% difference in approval rates), and the difference between group 1 and all the groups with the reciprocity treatment. In the original paper, the difference between group 3 and group 8, and between group 1 and group 8, is also statistically significant. It is quite surprising that, when international law, morality, and combined treatment are compared, very few of the comparison is statistically significant. In sum, reciprocity lowers the support for war. When enemies are previously committed to obey the laws of war, the public is less likely to approve war against them if the war is in violation of the law. This conclusion is consistent to findings in the original study.

Figure 3: The Effect of Reciprocity

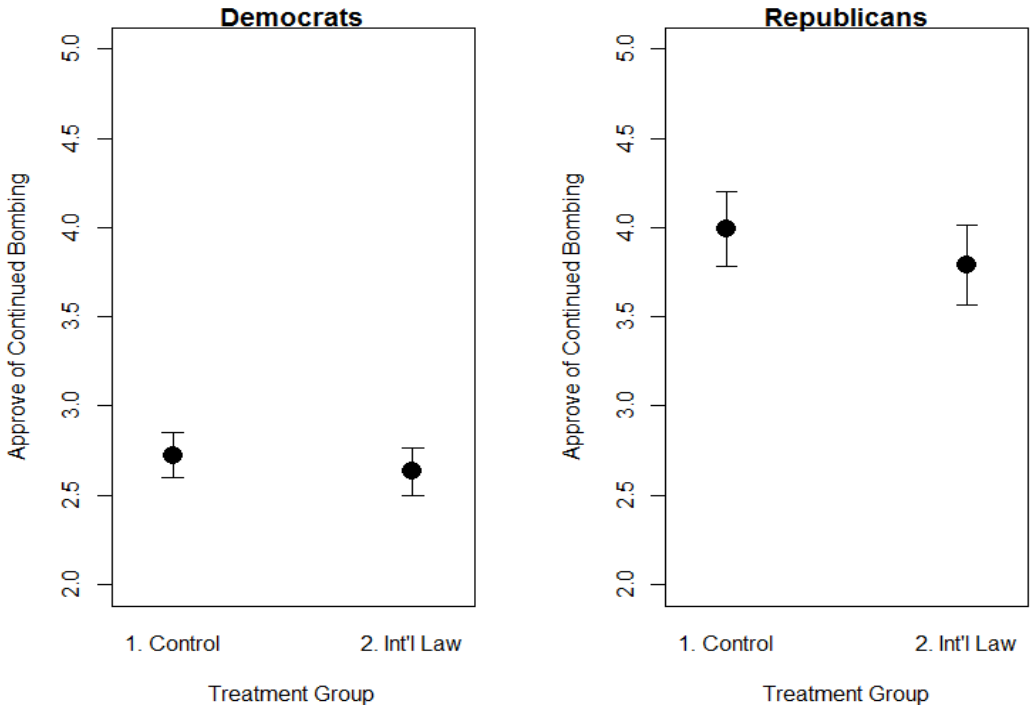


1.5 Hypothesis 4: The Effect of Ideology

Hypothesis 4 suggests that individuals who are more liberal are more likely to change their opinions after being told about international legal obligations than are conservatives. To examine this hypothesis, information about party affiliation of participants was collected. It is also important to note the difference in coding this political factor between the replication and the original study. In the original study, those who are political neutral were also included in the analysis, while the replication study only takes into account those who explicitly expressed their political point of view. For this coding scheme, results are discussed below.

For Democrats, international law lowers the support for war, but this difference is not statistically significant ($p = 0.42$). For Republicans, the difference is also not significant ($p = 0.50$), while the original paper reported a statistically significant difference for such political belief. Such difference could be attributed to the difference in coding scheme i.e. whether those who hold neutral belief in politics are included. To find out this, the data was re-coded to follow the original coding schemes. This means those holding neutral belief in politics were also included in analysis. However, results show again that, for Republicans, the difference between control condition and international law is not statistically significant ($p = 0.21$). Because the analysis process is not clarified in the original paper, for example, whether T-test or the Mann–Whitney test was used, the reason why the replication results are different from those in the original paper is unknown. As such, the effect of political affiliation is not clear.

Figure 4: International Law's Effect by Political Affiliation



Conclusion

To summarise, this replication study has similar findings to the original study, despite some subtle differences. For hypothesis 1, 2, and 3, findings are consistent between the two studies. Information on the laws of war lowers public support for wars in violation of such laws. Such effect is likely to be substitutive but not additive. Also, reciprocity between one country and its enemy lowers public support for wars when it violates the laws. This means that, when public are told their enemies are previously committed to obey the laws of war, they are less likely to approve the war that is in violation of such laws. For differences between the replication study and the original paper, however, the first difference is that magnitudes of each treatment are smaller than those in the original paper. The second difference is that, for hypothesis 4, the effect of political affiliation (for both Democrats and Republicans) is not statistically significant, while the effect of being Republicans is statistically significant in the original paper. The reason why these differences exist is unknown, since the process of data analysis is not clear enough in the original study. For instance, this replication study found that the data is not normally distributed. As a result, T-test is not applicable, but the author did not state which test was used. This might impede further investigation on data analysis. The author is strongly advised to clarify such process and other analytic results in the future when necessary.

Reference:

Chilton, A. S. (2015) 'The Laws of War and Public Opinion: An Experimental Study', *Journal of Institutional and Theoretical Economics* (Forthcoming). University of Chicago Coase-Sandor Institute for Law & Economics Research Paper No. 687. Available at SSRN: http://ssrn.com/abstract=2439428 or http://dx.doi.org/10.2139/ssrn.2439428