

# When Foreign Countries Push the Button

Joshua A. Schwartz

**D**oes public opinion significantly constrain policymakers from deciding to use nuclear weapons? Russia's 2022 invasion of Ukraine and nuclear threats against the West, China's large-scale expansion of its nuclear arsenal, the collapse of foundational arms control agreements like the Intermediate-Range Nuclear Forces Treaty, and nuclear proliferation crises with Iran and North Korea motivate the contemporary importance of this question for international security. Nevertheless, there is significant debate among scholars about the strength of constraints against nuclear use. Nuclear norm optimists argue that support for the use of nuclear weapons is low among both the public and policymakers.<sup>1</sup> There may even be a nuclear "taboo," whereby nuclear use is viewed as so morally abhorrent that it is not even considered.<sup>2</sup> On the other hand, nuclear norm pessimists contend that no such strong norm or taboo exists. In a series of cross-national experimental studies, norm pessimists find a majority or near

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The author thanks Joshua Byun, Don Casler, Alexandra Chinchilla, Jonathan Chu, William d'Ambruoso, Augusta Dell'Omo, Thomas Doyle, Jennifer Erickson, Mayumi Fukushima, J. Andrés Gannon, Meghan Garrity, Michael Goldfien, Doreen Horschig, Bekir Ilhan, Renanah Miles Joyce, Antonia Juelich, Gabriella Levy, David Logan, Nina Miller, Tamara Lilinoe Patton, Averell Schmidt, Christopher Wiley Shay, Kunal Singh, Megan Turnbull, Kimberly Turner, Stephen Walt, Christopher Way, Heather Williams, and other participants of the Belfer Center for Science and International Affairs International Security Program Seminar, the International Studies Association Annual Convention, the Midwestern Political Science Association Conference, the MIT Nuclear Weapons Working Group, and the Junior Scholars in International Security Workshop for helpful comments and advice. This research was approved by the University of Pennsylvania's Institutional Review Board (IRB Protocol Number 849804). Online supplementary materials are available at <https://doi.org/10.7910/DVN/FESGF3>.

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1. T. V. Paul, *The Tradition of Non-Use of Nuclear Weapons* (Stanford, CA: Stanford University Press, 2009); Charli Carpenter and Alexander H. Montgomery, "The Stopping Power of Norms: Saturation Bombing, Civilian Immunity, and U.S. Attitudes toward the Laws of War," *International Security*, Vol. 45, No. 2 (Fall 2020), pp. 140–169, [https://doi.org/10.1162/isec\\_a\\_00392](https://doi.org/10.1162/isec_a_00392).

2. On defining the nuclear taboo, see Nina Tannenwald, "The Nuclear Taboo: The United States and the Normative Basis of Nuclear Non-Use," *International Organization*, Vol. 53, No. 3 (1999), pp. 433–468, <https://doi.org/10.1162/002081899550959>; Harald Müller, "Taboo or Tradition or What? A Critical Look at the Terminology and Conceptualization of Nuclear Nonuse," in Michal Smetana and Carmen Wunderlich, "Forum: Nonuse of Nuclear Weapons in World Politics; Toward the Third Generation of 'Nuclear Taboo' Research," *International Studies Review*, Vol. 23, No. 3 (September 2021), pp. 1082–1085, <https://doi.org/10.1093/isr/viab002>.

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*International Security*, Vol. 48, No. 4 (Spring 2024), 47–86, [https://doi.org/10.1162/isec\\_a\\_00483](https://doi.org/10.1162/isec_a_00483)  
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majority of citizens would approve of nuclear strikes by their *own* government if those strikes offer military advantages or help save the lives of co-national soldiers.<sup>3</sup>

I contribute to this debate by theorizing and testing how individual-level public attitudes toward nuclear use differ depending on if the country carrying out the strike is one's own domestic government, a foreign ally or partner country, or a foreign non-allied or non-partner country. This is a question that prior research does not consider. Nuclear norm optimists do not theoretically or methodologically distinguish how reactions to the use of nuclear weapons would differ depending on the identity of the country that carries out the attack. Instead, the assumption is that nuclear use would generally be viewed unfavorably no matter who carries out the attack. Similarly, nuclear norm optimists typically analyze support for the use of nuclear weapons only by one's own government, leaving open the question of how nuclear use would be perceived by foreign audiences.

Addressing how the identity of the country using nuclear weapons affects public support for their use matters because one unexplored possibility is that the nuclear taboo may only begin at the water's edge. In other words, members of the public may willingly support nuclear use by their *own* government but strongly oppose nuclear attacks by *foreign* governments. In 1950, National Security Council (NSC) 68—one of the most influential policy documents of the Cold War—contained a similar argument. Specifically, it suggested that the U.S. public would support the use of nuclear weapons by its own government, but the reaction in foreign countries to nuclear use would be “proportionately” negative, even among allies: “Although the American people would probably rally in support of [a nuclear war against the Soviet Union]. . . . Many would doubt it was a ‘just war’. . . . *Many more, proportionately, would hold such views in other countries, particularly in Western Europe* (emphasis added).”<sup>4</sup> Many policy-

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3. Daryl G. Press, Scott D. Sagan, and Benjamin A. Valentino, “Atomic Aversion: Experimental Evidence on Taboos, Traditions, and the Non-Use of Nuclear Weapons,” *American Political Science Review*, Vol. 107, No. 1 (2013), pp. 188–206, <https://doi.org/10.1017/S0003055412000597>; Scott D. Sagan and Benjamin A. Valentino, “Revisiting Hiroshima in Iran: What Americans Really Think about Using Nuclear Weapons and Killing Noncombatants,” *International Security*, Vol. 42, No. 1 (Summer 2017), pp. 41–79, [https://doi.org/10.1162/ISEC\\_a\\_00284](https://doi.org/10.1162/ISEC_a_00284); Janina Dill, Scott D. Sagan, and Benjamin A. Valentino, “Kettles of Hawks: Public Opinion on the Nuclear Taboo and Noncombatant Immunity in the United States, United Kingdom, France, and Israel,” *Security Studies*, Vol. 31, No. 1 (2022), pp. 1–31, <https://doi.org/10.1080/09636412.2022.2038663>.

4. A Report to the National Security Council by the Executive Secretary (Lay), April 14, 1950, *Foreign Relations of the United States (FRUS)*, 1950, *National Security Affairs: Foreign Economic Policy*,

makers assume that a state's allies and partners would strongly disapprove of its nuclear use.<sup>5</sup> I argue that this assumption is incorrect.

My theory builds on both the well-established tendency toward in-group bias<sup>6</sup> and Virtuous Violence Theory (VVT) in psychology.<sup>7</sup> VVT holds that when people engage in or support violence, they typically do so to create or regulate social relationships, which are core to human happiness and well-being. People who engage in or support violence usually believe that it is the moral, or "virtuous," course of action. Citizens may be willing to support the use of violence—even nuclear violence—by their country's foreign allies and partners to maintain and foster such relationships in the face of a security threat. In fact, if foreign allies and partners are perceived as part of an individual's in-group, then their use of nuclear violence may be viewed as an ethical and virtuous act of in-group protection. Consequently, I hypothesize that the public should be no less likely to approve of a nuclear attack and no less likely to view a nuclear attack as unethical when conducted by an allied or partner country than by its own government. If true, then this hypothesis would contradict the expectations of NSC 68 and of many policymakers.

On the other hand, I expect the approval of and the perceived morality of a nuclear attack to be lower when conducted by a non-allied or non-partner foreign country than by either (1) an individual's own country or (2) an ally or partner of an individual's own country. Given that non-allied and non-partner countries are not members of an individual's in-group, VVT suggests that their employment of nuclear weapons will be viewed as a less virtuous use of violence. But this does not mean that absolute support for nuclear use by non-allied or non-partner countries will be low, as predicted by nuclear norm optimists. If non-allied or non-partner foreign countries use nuclear weapons

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Vol. 1 (Washington, DC: U.S. Government Printing Office, 1977), doc. 85, <https://history.state.gov/historicaldocuments/frus1950v01/d85>.

5. Nina Tannenwald, *The Nuclear Taboo: The United States and the Non-Use of Nuclear Weapons since 1945* (New York: Cambridge University Press, 2007); Paul, *The Tradition of Non-Use*.

6. For foundational works on in-group bias, see: Marilyn B. Brewer, "In-Group Bias in the Minimal Intergroup Situation: A Cognitive-Motivational Analysis," *Psychological Bulletin*, Vol. 86, No. 2 (1979), pp. 307–324, <https://psycnet.apa.org/doi/10.1037/0033-2909.86.2.307>; Henri Tajfel and John Turner, "An Integrative Theory of Intergroup Conflict," in William G. Austin and Stephen Worchel, eds., *The Social Psychology of Intergroup Relations* (Monterey, CA: Brooks Cole, 1979), pp. 96–103.

7. Alan Page Fiske and Tage S. Rai, *Virtuous Violence: Hurting and Killing to Create, Sustain, End, and Honor Social Relationships* (Cambridge: Cambridge University Press, 2015); Paul Slovic et al., "Virtuous Violence from the War Room to Death Row," *Proceedings of the National Academy of Science*, Vol. 117, No. 34 (2020), pp. 20474–20482, <https://doi.org/10.1073/pnas.2001583117>.

against other out-groups (e.g., terrorist organizations) that threaten the security of an individual's in-group, then that use of violence may still garner significant support.

To test this theory, I designed and administered three survey experiments in the United States and one in India that made a simple modification to the seminal studies by Daryl Press, Scott Sagan, and Benjamin Valentino.<sup>8</sup> These authors hold the country conducting the nuclear strike constant, whereas I experimentally manipulate it.

These experiments yield four principal findings that, on balance, call into question the constraints that public opinion place on nuclear use, providing additional support for the arguments of nuclear norm pessimists.<sup>9</sup> First, in contrast to the assumptions of many policymakers, I find no statistically significant differences in public support for or the perceived morality of nuclear attacks when allied or partner countries carry them out compared to when one's own government does. This finding contradicts arguments from nuclear norm optimists that citizens will strongly disapprove of and even potentially abandon allies and partners that use nuclear weapons.<sup>10</sup> Second, absolute levels of support for nuclear use are quite high no matter which country presses the nuclear button, which belies the existence of an unthinkable taboo.<sup>11</sup> Third, support for nuclear use is lower when conducted by non-allied or non-partner foreign countries than by an individual's own government or by an ally or partner of an individual's own country. Fourth, this dynamic also holds when analyzing support for the use of conventional weapons by non-allied or non-partner countries. Consequently, lower support for the use of nuclear weapons by these countries does not suggest that the nuclear non-use norm is relatively strong. This outcome simply means that support for the use of force by out-group countries is generally lower than support for the use of force by in-group countries.

Overall, this article contributes to the debate between nuclear norm optimists and pessimists by providing additional evidence that neither a nuclear taboo nor a very strong non-use norm exists, at least among the public. To the

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8. Press, Sagan, and Valentino, "Atomic Aversion"; Sagan and Valentino, "Revisiting Hiroshima in Iran."

9. For a debate about how results like the ones found in this article can be viewed pessimistically or optimistically, see Scott D. Sagan et al., "Does the Noncombatant Immunity Norm Have Stopping Power? A Debate," *International Security*, Vol. 45, No. 2 (Fall 2020), pp. 170–186, [https://doi.org/10.1162/isec\\_a\\_00393](https://doi.org/10.1162/isec_a_00393).

10. Tannenwald, "The Nuclear Taboo."

11. *Ibid.*, p. 436.

contrary, my theory and evidence demonstrate that many individuals view the use of nuclear weapons as a virtuous and moral use of violence. From a policy perspective, this finding means that the risks of nuclear use are higher than the conventional wisdom suggests. Leaders must therefore be more active in their efforts to prevent nuclear use than if a stronger norm existed.

This article also contributes to broader debates in political science and other social sciences about the existence and boundaries of in-group bias.<sup>12</sup> In fact, this study constitutes a hard test of whether in-group bias exists and how far the in-group extends. It is a hard test of whether in-group bias exists because of arguments about the nuclear taboo. If there is an absolute prohibition on the use of nuclear weapons, then support for nuclear attacks should be extremely low in a relative and absolute sense no matter who might press the nuclear button.<sup>13</sup>

This study is also a hard test of how far in-groups extend. The public is more likely to see its own country as part of the in-group than non-allied or non-partner foreign countries. Yet whether individuals also view allied and partner foreign countries as part of their in-group is less certain. Especially in the context of nuclear weapons use, which is particularly morally questionable,<sup>14</sup> it is possible that individuals will not show favoritism, even toward the allies and partners of their own country. For example, the United States has often attempted to prevent its allies and partners from acquiring nuclear weapons.<sup>15</sup> Despite these hard tests, I find that in-group bias does exist and that allies and non-allied partners are considered members of the in-group. My results suggest that similar dynamics with respect to public support for military force are relatively likely to hold in contexts aside from the nuclear realm.

This article proceeds in five sections. First, I review the literature on the nuclear non-use norm and highlight some of its gaps. I also discuss prior work on in-group bias and VVT. Second, I use the VVT framework to develop a theory of how variation in the identity of the country carrying out a nuclear attack influences public support. Third, I describe a series of survey experiments designed to test the theory at the individual level of analysis. Fourth, I present

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12. For an overview of this literature on in-group bias and its boundaries, see Michael Kalin and Nicholas Sambanis, "How to Think about Social Identity," *Annual Review of Political Science*, Vol. 21 (2018), pp. 239–257, <https://doi.org/10.1146/annurev-polisci-042016-024408>.

13. Tannenwald, "The Nuclear Taboo," p. 436.

14. Paul, *The Tradition of Non-Use*.

15. Gene Gerzhoy, "Alliance Coercion and Nuclear Restraint: How the United States Thwarted West Germany's Nuclear Ambitions," *International Security*, Vol. 39, No. 4 (Spring 2015), pp. 91–129, [https://doi.org/10.1162/ISEC\\_a\\_00198](https://doi.org/10.1162/ISEC_a_00198).

the findings of these experiments. Finally, I conclude by discussing the policy relevance of my findings and their implications for future scholarship on norms and nuclear weapons.

### *Debates over the Nuclear Non-Use Norm*

Scholars disagree about the strength of the nuclear non-use norm. Broadly speaking, there are two schools of thought: nuclear norm optimists contend that the constraints against the use of nuclear weapons are strong; nuclear norm pessimists argue that no strong non-use norm exists.

#### NUCLEAR NORM OPTIMISTS

Some scholars argue that a “humanitarian revolution” has led to a widely held and deeply internalized norm against killing noncombatants.<sup>16</sup> One prominent school of thought holds that the constraints against killing noncombatants are strongest regarding weapons of mass destruction, given their potential to inflict cataclysmic harm. Scholars in this camp contend that there is a well-developed norm or “tradition” against the use of nuclear weapons,<sup>17</sup> perhaps even rising to the level of a “taboo.”<sup>18</sup> While norms outline standards of appropriate behavior,<sup>19</sup> taboos are more robust and deeply internalized than regular norms because they suggest an unconditional proscription against the use of nuclear weapons. Violations are thought to be so morally loathsome that they are not even contemplated.<sup>20</sup> If a nuclear taboo or strong non-use tradition exists, then it could restrain the use of nuclear weapons even against non-nuclear states that cannot threaten nuclear retaliation.

Nuclear norm optimists argue that opposition to nuclear use can operate through three mechanisms: the conscience of individual decision-makers, domestic public opinion, and world opinion.<sup>21</sup> To support this argument, Nina Tannenwald points to both “taboo talk” by policymakers that signals belief in

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16. Ward Thomas, *The Ethics of Destruction: Norms and Force in International Relations* (Ithaca, NY: Cornell University Press, 2001); Steven Pinker, *The Better Angels of Our Nature: Why Violence Has Declined* (New York: Viking, 2011).

17. Paul, *The Tradition of Non-Use*.

18. Tannenwald, “The Nuclear Taboo.”

19. Martha Finnemore and Kathryn Sikkink, “International Norm Dynamics and Political Change,” *International Organization*, Vol. 52, No. 4 (1998), pp. 887–917, <https://doi.org/10.1162/002081898550789>.

20. Tannenwald, “The Nuclear Taboo,” p. 436; Müller, “Taboo or Tradition or What?”

21. Tannenwald, *The Nuclear Taboo*, p. 47.

an absolute prohibition against the use of nuclear weapons and to global and domestic public opinion polling that ostensibly indicates low support for nuclear use. She also highlights that since 1945 the United States has refrained from using nuclear weapons, even when it faced an adversary like the Vietcong that could not retaliate with its own nuclear weapons. Matthew Jones provides additional evidence that the use of nuclear weapons by the United States against Asian populations became more difficult and less likely after 1945 because policymakers feared that doing so would increase perceptions that the United States was racist.<sup>22</sup>

While the first wave of research on the nuclear non-use norm tends to focus on qualitative historical analyses, the second wave uses large-N quantitative methods, especially survey experiments focused on more systematically understanding public opinion toward the use of nuclear weapons.<sup>23</sup> Some studies adopting this approach find support for the argument that the constraints against nuclear use are relatively high among the public, even if they may not rise to the level of a taboo. For example, Michal Smetana and Michal Onderco find that members of the Russian public are significantly more likely to disapprove of a nuclear attack than a conventional attack in a war with the North Atlantic Treaty Organization (NATO) in the Baltics.<sup>24</sup> Similarly, Lauren Sukin finds that a majority of citizens in the United States and in South Korea oppose being the first to use nuclear weapons in a conflict with Russia or North Korea, even when those countries have themselves threatened to use nuclear weapons.<sup>25</sup> Nonetheless, these studies are likely a relatively easy test of the nuclear non-use norm because they involve target countries that could retaliate using their own nuclear weapons. By contrast, the public should be more likely to support nuclear weapons use against non-nuclear states since they cannot threaten nuclear retaliation.

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22. Matthew Jones, *After Hiroshima: The United States, Race, and Nuclear Weapons in Asia, 1945–1965* (Cambridge: Cambridge University Press, 2010).

23. Michal Smetana and Carmen Wunderlich, “Nuclear Taboo 3.0: Research Gaps and New Avenues in the Study of Nuclear Weapons Nonuse,” in Smetana and Wunderlich, “Forum,” *International Studies Review*, Vol. 23, No. 3 (September 2021), pp. 1075–1082, <https://doi.org/10.1093/isr/viab002>.

24. Michal Smetana and Michal Onderco, “From Moscow with a Mushroom Cloud? Russian Public Attitudes to the Use of Nuclear Weapons in a Conflict with NATO,” *Journal of Conflict Resolution*, Vol. 67, Nos. 2–3 (February/March 2023), pp. 183–209, <https://doi.org/10.1177/0022002721118815>.

25. Lauren Sukin, “Experimental Evidence on Determinants of Support for Nuclear Use in Response to Threats of Nuclear Retaliation,” *Peace and Conflict: Journal of Peace Psychology*, Vol. 26, No. 3 (2020), pp. 336–339, <https://psycnet.apa.org/doi/10.1037/pac0000407>.



Several other studies suggest that public support for nuclear use can be reduced. For example, this reduction can be achieved by priming ethical norms,<sup>26</sup> providing elite cues against the use of nuclear weapons,<sup>27</sup> including vivid information about how a nuclear attack would harm civilians,<sup>28</sup> or presenting other negative effects of a nuclear strike like environmental degradation and casualties.<sup>29</sup> Still, these studies do not find evidence of a taboo-like absolute prohibition on support for the use of nuclear weapons.

#### NUCLEAR NORM PESSIMISTS

In contrast to those who believe in a strong nuclear non-use norm or taboo, nuclear norm pessimists argue that the nuclear taboo is largely an illusion, meaning that optimism about non-use is unwarranted. Most strikingly, studies by Press, Sagan, and Valentino<sup>30</sup> and by Sagan and Valentino<sup>31</sup> demonstrate that a majority of citizens in the United States would approve of a U.S. nuclear strike if it offers military advantages or preserves other core values like saving the lives of co-national soldiers. The same dynamic largely holds true for citizens of France, Israel, and the United Kingdom.<sup>32</sup> These findings imply that nuclear use is far from unthinkable for many members of the public, at least when evaluating nuclear use by their own government.

Furthermore, in contrast to the common assumption that nuclear use will only be supported for consequentialist reasons, such as to enhance security, some nuclear norm pessimists argue and find evidence that support can also be based on a moral logic.<sup>33</sup> The reason why supporting nuclear use is assumed to be unethical is that morality is often understood through a liberal and cosmopolitan lens.<sup>34</sup> According to this perspective, morality must be altru-

26. Carpenter and Montgomery, "The Stopping Power of Norms."

27. Abigail S. Post and Todd S. Sechser, "Public Opinion, Cues, and the Use of Nuclear Weapons" (unpublished manuscript, 2022).

28. Lisa Langdon Koch and Matthew Wells, "Still Taboo? Citizens' Attitudes toward the Use of Nuclear Weapons," *Journal of Global Security Studies*, Vol. 6, No. 3 (2021), pp. 1–18, <https://doi.org/10.1093/jogss/ogaa024>.

29. Tyler Bowen, Michael Goldfien, and Matthew Graham, "Public Opinion and Nuclear Use: Evidence from Factorial Experiments," *Journal of Politics*, Vol. 85, No. 1 (January 2023), pp. 345–350, <https://doi.org/10.1086/720329>.

30. Press, Sagan, and Valentino, "Atomic Aversion."

31. Sagan and Valentino, "Revisiting Hiroshima in Iran."

32. Dill, Sagan, and Valentino, "Kettles of Hawks."

33. Brian C. Rathbun and Rachel Stein, "Greater Goods: Morality and Attitudes toward the Use of Nuclear Weapons," *Journal of Conflict Resolution*, Vol. 64, No. 5 (2020), pp. 787–816, <https://doi.org/10.1177/0022002719879994>.

34. Fiske and Rai, *Virtuous Violence*, p. 6; Joshua D. Kertzer et al., "Moral Support: How Moral



istic and “other-regarding.”<sup>35</sup> Because nuclear weapons harm others, this view holds that their use will not be perceived as ethical. Nevertheless, harm to others is not the only conception of morality. Violence may be viewed as ethical if it protects members of the in-group and punishes those who threaten to harm them.<sup>36</sup> In accordance with this view, several studies show that individuals who subscribe to this kind of moral philosophy are more likely to support the use of nuclear weapons.<sup>37</sup> Thus, public support for nuclear weapons use should not be seen as “indicative of the absence of morality rather than the presence of a different set of non-liberal ethics.”<sup>38</sup>

#### GAPS IN THE NUCLEAR NORM LITERATURE

One notable theoretical and empirical gap in the work by both nuclear norm optimists and nuclear norm pessimists is how the identity of the country conducting a nuclear strike affects public support for such an action. Scholars who believe in a strong norm or taboo against the use of nuclear weapons do not systematically or precisely distinguish between reactions to the use of nuclear weapons by a foreign government or one’s own government. Instead, the assumption is that nuclear use will generally be viewed extremely unfavorably no matter who conducts the attack. Theoretically, given that “world opinion” is an important hypothesized mechanism through which the nuclear non-use norm operates,<sup>39</sup> the lack of research on this topic by norm optimists is a notable omission.

The dearth of research on this topic is a particularly glaring lacuna because broader research on norms holds that foreign or third-party reactions to potential or actual violations of a norm are critically important.<sup>40</sup> The views of

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Values Shape Foreign Attitudes,” *Journal of Politics*, Vol. 76, No. 3 (2014), pp. 825–840, <https://doi.org/10.1017/S0022381614000073>.

35. Rathbun and Stein, “Greater Goods.”

36. Fiske and Rai, *Virtuous Violence*.

37. Rathbun and Stein, “Greater Goods”; Slovic et al., “Virtuous Violence from the War Room to Death Row”; Michal Smetana and Marek Vranka, “How Moral Foundations Shape Public Approval of Nuclear, Chemical, and Conventional Strikes: New Evidence from Experimental Surveys,” *International Interactions*, Vol. 47, No. 2 (2021), pp. 374–390, <https://doi.org/10.1080/03050629.2020.1848825>.

38. I do not argue that this alternative ethical perspective is optimal. I am engaging in a positive analysis of what the world is like rather than a normative analysis of what it should be like. Rathbun and Stein, “Greater Goods,” p. 791.

39. Tannenwald, *The Nuclear Taboo*, p. 47.

40. For examples, see: Friedrich Kratochwil and John Gerard Ruggie, “International Organization: A State of the Art on an Art of the State,” *International Organization*, Vol. 40, No. 4 (1986), pp. 753–775, <https://doi.org/10.1017/S0020818300027363>; Robert W. McElroy, *Morality and American For-*

foreign audiences can matter because states may fear losing allies, turning non-aligned states against them, provoking a militarized response from enemies, incurring economic sanctions, and harming their international reputation and status. Although it is foreign leaders who directly decide whether to impose sanctions, use military force, or break off an alliance, the views of foreign publics are critical as well. Previous studies—including those conducted directly on elites—establish that policymakers respond to and are constrained by public opinion. For example, Michael Tomz, Jessica Weeks, and Keren Yarhi-Milo find that members of the Israeli parliament were more willing to use military force when citizens supported such an action than when they opposed it. The study's survey experiment shows that Israeli leaders feared the political consequences of defying public opinion.<sup>41</sup>

Empirically, studies also demonstrate that political and military elites are highly concerned with how international audiences would view the use of nuclear weapons specifically. Such views played at least some role in preventing the use of nuclear weapons post-World War II.<sup>42</sup> In line with the logic of NSC 68, President Harry Truman was reluctant to use nuclear weapons during the Korean War because he feared how other states would react, especially U.S. allies.<sup>43</sup> Similarly, U.S. State Department official John Emmerson stated in a classified memo that nuclear use would cause international backlash and a "disastrous loss of confidence on the part of Western Europe."<sup>44</sup> During the Dwight Eisenhower administration, Secretary of State John Foster Dulles argued that using nuclear weapons in response to a new Soviet blockade on Berlin "would surely cost us our allies" and that "we'd be finished as far as present-day world opinion was concerned."<sup>45</sup>

Regarding the possibility of using nuclear weapons in Vietnam, Richard

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*eign Policy: The Role of Ethics in International Affairs* (Princeton, NJ: Princeton University Press, 1992); Diana Panke and Ulrich Petersohn, "Why International Norms Disappear Sometimes," *European Journal of International Relations*, Vol. 18, No. 4 (2012), pp. 719–742, <https://doi.org/10.1177/1354066111407690>; Nicole Deitelhoff and Lisbeth Zimmermann, "Norms under Challenge: Unpacking the Dynamics of Norm Robustness," *Journal of Global Security Studies*, Vol. 4, No. 1 (January 2019), pp. 2–16, <https://doi.org/10.1093/jogss/ogy041>.

41. Michael Tomz, Jessica L. P. Weeks, and Keren Yarhi-Milo, "Public Opinion and Decisions about Military Force in Democracies," *International Organization*, Vol. 74, No. 1 (2020), pp. 119–143, <https://doi.org/10.1017/S0020818319000341>.

42. Tannenwald, *The Nuclear Taboo*; Paul, *The Tradition of Non-Use*; Debak Das, "'The Courtroom of World Opinion': Bringing the International Audience into Nuclear Crises," *Global Studies Quarterly*, Vol. 1, No. 4 (December 2021), pp. 1–11, <https://doi.org/10.1093/isagsq/ksab028>.

43. Paul, *The Tradition of Non-Use*, p. 49.

44. *Ibid.*, p. 48.

45. Tannenwald, *The Nuclear Taboo*, p. 173.

Nixon stated that doing so would have resulted in “domestic and international uproar [that] would have damaged our foreign policy on all fronts.”<sup>46</sup> U.S. State Department Counselor (and later ambassador and assistant secretary of state) Douglas MacArthur said that using nuclear weapons to help the French during the 1954 battle of Dien Bien Phu would create a “great hue and cry throughout the parliaments of the free world.”<sup>47</sup> Gen. Matthew Ridgway, who became Supreme Allied Commander in Europe and the U.S. Army chief of staff, argued that using nuclear weapons “would so revolt free world opinion as to leave us, quite possibly, friendless and isolated in a hostile world.”<sup>48</sup> A prominent report commissioned by the U.S. government to consider the use of nuclear weapons during the Vietnam War concluded: “Whether or not U.S. first use of [tactical nuclear weapons] is countered by the Communists, the effect of first use on world opinion in general *and on our Allies in particular* would be extremely unfavorable. With the exception of Thailand and Laos, the action would almost certainly be condemned even in Asia and might result in the abrogation of treaty obligations by Japan (emphasis added).”<sup>49</sup>

In (formerly) classified wargames, reputational logics were also used to eschew the use of nuclear weapons.<sup>50</sup> In one game, players pointed to “world revulsion toward the use of nuclear weapons.”<sup>51</sup> The U.S. State Department even actively tried to shift foreign attitudes toward nuclear weapons in a more positive direction.<sup>52</sup> Not only does this effort demonstrate that the U.S. government believes that the views of foreign publics are important, it also shows that U.S. leaders anticipated that this audience would react negatively to the use of nuclear weapons. Finally, Debak Das uses elite interviews to show that Indian policymakers were highly concerned with international reactions during the Kargil War against Pakistan, which was the first instance of a direct war between two nuclear-armed states.<sup>53</sup>

These examples clearly establish that policymakers both care about how foreign audiences would view nuclear use and expect that support would be ex-

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46. Richard M. Nixon, *No More Vietnams* (New York: Arbor House, 1985), p. 102.

47. Paul, *The Tradition of Non-Use*, p. 53.

48. Matthew B. Ridgway, *The Korean War* (Garden City, NY: Doubleday, 1967), pp. 76, 247.

49. Freeman J. Dyson et al., *Tactical Nuclear Weapons in Southeast Asia* (Alexandria, VA: Institute for Defense Analyses JASON Division, 1966), p. 50.

50. Reid B. C. Pauly, “Would U.S. Leaders Push the Button? Wargames and the Sources of Nuclear Restraint,” *International Security*, Vol. 43, No. 2 (Fall 2018), pp. 151–192, [https://doi.org/10.1162/isec\\_a\\_00333](https://doi.org/10.1162/isec_a_00333).

51. *Ibid.*, p. 172.

52. Tannenwald, *The Nuclear Taboo*, pp. 177–179.

53. Das, “The Courtroom of World Opinion.”

tremely low. If support for nuclear use among foreign audiences is indeed low, then that would suggest the nuclear non-use norm is stronger than pessimists expect. But nuclear norm pessimists also do not take into account how variation in the country conducting a nuclear strike would affect individual-level public support. Instead, the country carrying out a nuclear strike is held constant<sup>54</sup> in their seminal experimental studies.<sup>55</sup> More theoretical and empirical work on this topic is thus needed to comprehensively assess the strength of the nuclear non-use norm.

#### IN-GROUP BIAS AND VIRTUOUS VIOLENCE THEORY

Two related literatures provide the building blocks for a theory about how country identity affects public support for nuclear use. The first is the literature on in-group bias. In-group bias is when individuals favor and more positively evaluate members of their own group (“us”) than members of out-groups (“them”). This bias affects a wide range of political phenomena,<sup>56</sup> from partisan dynamics and support for international trade<sup>57</sup> to voting at the United Nations<sup>58</sup> and attitudes about violence during civil war.<sup>59</sup> In-groups and out-

54. Press, Sagan, and Valentino, “Atomic Aversion”; Sagan and Valentino, “Revisiting Hiroshima in Iran.”

55. Several studies test public support for nuclear use in countries besides the United States. For examples, see: Naomi Egel and R. Lincoln Hines, “Chinese Views on Nuclear Weapons: Evidence from an Online Survey,” *Research & Politics*, Vol. 8, No. 3 (2021), pp. 1–8, <https://doi.org/10.1177/20531680211032840>; David M. Allison, Stephen Herzog, and Jiyoung Ko, “Under the Umbrella: Nuclear Crises, Extended Deterrence, and Public Opinion,” *Journal of Conflict Resolution*, Vol. 66, No. 10 (2022), pp. 1766–1796, <https://doi.org/10.1177/00220027221100254>; Doreen Horschig, “Israeli Public Opinion on the Use of Nuclear Weapons: Lessons from Terror Management Theory,” *Journal of Global Security Studies*, Vol. 7, No. 2 (June 2022), pp. 1–18, <https://doi.org/10.1093/jogss/ogac006>. But none of these experimental designs can disentangle how support varies depending on the identity of the country conducting a nuclear attack.

56. For a study that analyzes the impact of in-group bias in the nuclear realm, see Glenn Chafetz, “The Political Psychology of the Nuclear Nonproliferation Regime,” *Journal of Politics*, Vol. 57, No. 3 (August 1995), pp. 743–775, <https://doi.org/10.2307/2960191>.

57. Diana C. Mutz and Eunji Kim, “The Impact of In-group Favoritism on Trade Preferences,” *International Organization*, Vol. 71, No. 4 (Fall 2017), pp. 827–850, <https://doi.org/10.1017/S0020818317000327>.

58. Rochelle Terman and Erik Voeten, “The Relational Politics of Shame: Evidence from the Universal Periodic Review,” *Review of International Organizations*, Vol. 13 (2018), pp. 1–23, <https://doi.org/10.1007/s11558-016-9264-x>.

59. Jason Lyall, Graeme Blair, and Kosuke Imai, “Explaining Support for Combatants during War-time: A Survey Experiment in Afghanistan,” *American Political Science Review*, Vol. 107, No. 4 (2013), pp. 679–705, <https://doi.org/10.1017/S0003055413000403>; Jason Lyall, Yuki Shiraito, and Kosuke Imai, “Coethnic Bias and Wartime Informing,” *Journal of Politics*, Vol. 77, No. 3 (July 2015), pp. 833–848, <https://doi.org/10.1086/681590>; Douglas Page and Samuel Whitt, “Confronting War-time Sexual Violence: Public Support for Survivors in Bosnia,” *Journal of Conflict Resolution*, Vol. 64, No. 4 (2020), pp. 674–702, <https://doi.org/10.1177/0022002719867473>.

groups can form along many different cleavages. Categories such as race, religion, gender, class, and political party may all result in an “us versus them” dynamic. The common thread is that in-groups are based on some kind of “shared attribute.”<sup>60</sup>

A second relevant literature, and one that can help explain the logic of in-group bias, is VVT in psychology. VVT maintains that people typically engage in or support violence because they believe that it is moral—or “virtuous”—to do so. In other words, people view it as the right thing to do even if they do not inherently enjoy committing or observing violence and are traumatized by it. People believe that resorting to violence is sometimes the right thing to do because the use of or support for violence can help create, maintain, or enhance social relationships. For example, most would agree that using violence to protect your own child against the threat of an armed home invader is moral. According to the VVT framework, using violence in this case helps maintain the critical social relationship between parent and child. The broader moral motive driving this dynamic is *unity* with one’s in-group.<sup>61</sup> An in-group member’s use of violence to protect the larger group against a threat is likely to be perceived as a virtuous action that reinforces collective responsibility and common fate.<sup>62</sup> By contrast, an out-group member’s use of violence will be viewed as less virtuous because the same moral imperative of unity will not be at play. This difference reflects in-group bias. In summary, moral judgments are not “independent of the social-relational contexts in which they occur.”<sup>63</sup> Even if an action causes harm by giving preference to an in-group at the expense of an out-group, it can still be evaluated as moral if it helps create or regulate a critical social relationship.

As previously discussed, nuclear scholars have deployed the logic of in-group bias to help explain public support for nuclear use. Specifically, they have applied VVT and related psychological theories to explain why members of the public would support and even view as moral the use of nuclear weapons against out-groups.<sup>64</sup> Yet they have not explicitly theorized or tested

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60. Kalin and Sambanis, “How to Think about Social Identity,” p. 240.

61. Other critical moral motives in Virtuous Violence Theory (VVT) include hierarchy, equality, and proportionality. Tase Shakti Rai and Alan Page Fiske, “Moral Psychology in Relationship Regulation: Moral Motives for Unity, Hierarchy, Equality, and Proportionality,” *Psychological Review*, Vol. 118, No. 1 (2011), pp. 57–75, <https://psycnet.apa.org/doi/10.1037/a0021867>.

62. Fiske and Rai, *Virtuous Violence*, pp. 18–19, 23.

63. Rai and Fiske, “Moral Psychology in Relationship Regulation,” p. 57.

64. Rathbun and Stein, “Greater Goods”; Slovic et al., “Virtuous Violence from the War Room to Death Row”; Smetana and Vranka, “How Moral Foundations Shape Public Approval.”

what the logic of in-group bias and VVT indicates about the relationship between the identity of the country conducting a nuclear attack and public support for nuclear use. Developing a set of theoretical expectations on this topic is the task that I turn to next.

### *A Theory of Attacker Identity and Nuclear Weapons Use*

I argue that the identity of who conducts a nuclear attack significantly affects how the public evaluates the use of nuclear weapons. Specifically, the use of nuclear weapons by an in-group country should have greater overall public support and be viewed as more ethical than the use of nuclear weapons by an out-group country. My theory builds on the well-established tendency toward in-group bias and, specifically, VVT in psychology.

In the context of nuclear weapons use, which actor or actors constitute the in-group and which constitute the out-group? In other words, which “shared attribute[s]”<sup>65</sup> are germane? National identification is one shared attribute that history and prior research establish as creating in- and out-groups. The literature on nationalism is extensive and need not be reviewed in depth here. Suffice it to say that identifying with one’s own nation is a powerful force in international politics.<sup>66</sup> For example, simply presenting individuals with their country’s flag can increase their animosity toward foreign countries as well as their support for hawkish policies toward foreign countries.<sup>67</sup> The “rally ‘round the flag” phenomenon, whereby a country unifies and support for national leaders increases in response to a foreign threat or the use of force abroad, further speaks to the power of national identification.<sup>68</sup> Clearly, then, one’s own country is highly likely to be viewed as part of the in-group.

I further argue that not *every* foreign country is likely to be considered as part of the out-group. If in-groups are based on shared attributes, then allied

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65. Kalin and Sambanis, “How to Think about Social Identity,” p. 240.

66. For an overview of nationalism, see Harris Mylonas and Maya Tudor, “Nationalism: What We Know and What We Still Need to Know,” *Annual Review of Political Science*, Vol. 24 (May 2021), pp. 109–132, <https://doi.org/10.1146/annurev-polisci-041719-101841>.

67. Ran R. Hassin et al., “Subliminal Exposure to National Flags Affects Political Thought and Behavior,” *Proceedings of the National Academy of Science*, Vol. 104, No. 50 (2007), pp. 19757–19761, <https://doi.org/10.1073/pnas.0704679104>; Markus Kemmelmeier and David G. Winter, “Sowing Patriotism, But Reaping Nationalism? Consequences of Exposure to the American Flag,” *Political Psychology*, Vol. 29, No. 6 (December 2008), pp. 859–879, <https://doi.org/10.1111/j.1467-9221.2008.00670.x>.

68. For example, see John E. Mueller, “Presidential Popularity from Truman to Johnson,” *American Political Science Review*, Vol. 64, No. 1 (1970), pp. 18–34, <https://doi.org/10.2307/1955610>.

and partner countries may be considered members of the in-group given shared interests, ideologies, and identities with an individual's own country. I define allies narrowly as countries that have a formal defense pact with each other. I define partners as countries that have some kind of institutionalized and warm strategic relationship with each other. For instance, I consider the United States and France as allies because they are members of NATO. The United States and Israel are partners because they have a close strategic relationship and because the United States has designated Israel as a "major non-NATO ally."<sup>69</sup> Just as Republicans in the United States can form an in-group according to their shared interests, ideologies, and identity as party members, allied and partner countries may likewise consider one another as in-group members.

If allied and partner countries are considered part of the in-group, then the assumption embedded in NSC 68 might be incorrect. The assumption is that approval will be significantly lower if allies or partners use nuclear weapons than if one's own country does. The principal reason why this assumption may be wrong is that relatively strong disapproval of an ally's or partner's use of nuclear weapons would, according to VVT, threaten a key relationship and undermine the in-group's security. Consequently, I argue that to maintain unity, protect a vital relationship, and enhance the in-group's security, support for the use of nuclear weapons and the perceived morality of a nuclear attack will *not* be lower if conducted by an allied or partner country than by one's own government. Instead, the use of violence by allied and partner countries is likely to be viewed as relatively virtuous in this case. If true, this would be a significant blow to the nuclear non-use norm. Using nuclear weapons would not necessarily "cost us our allies" or leave countries "friendless and isolated in a hostile world," as many policymakers and nuclear norm optimists assume. This discussion suggests the following hypothesis:

H1: Individuals will be no less likely to approve of a nuclear attack or to view it as less ethical when conducted by an allied or partner country compared to one's own government.<sup>70</sup>

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69. See "Major Non-NATO Ally Status," U.S. Department of State, January 20, 2021, <https://www.state.gov/major-non-nato-ally-status/>.

70. My pre-registered expectation, which I documented before knowing the results of the survey experiments, was that the opposite hypothesis would hold. Pre-registering hypotheses helps ensure that researchers are transparent about their theoretical expectations before analyzing data. In this context, the perceived morality of a nuclear attack could be conceptualized as a mechanism



This hypothesis constitutes a relatively hard test of how far in-groups extend for several reasons. First, most people rank their nationality as a much more salient identity than, say, their country's affiliation with NATO. To the extent that nationality is a stronger identity than the formal alliances an individual's country is a member of, the public may evaluate the use of nuclear weapons by these countries more harshly than by its own country. Second, because partner countries that do not have formal defense pacts with an individual's own country are even less likely to be viewed as part of the in-group than formally allied countries, including them in this hypothesis is a particularly hard test for my argument. Third, because nuclear norm optimists argue that using nuclear weapons is morally revolting and may set a uniquely dangerous precedent, the public may be less likely to support nuclear use by an ally or by a partner or to show any degree of favoritism toward them. For example, the successful effort by the United States to prevent its ally, West Germany, from acquiring nuclear weapons fits with this argument.<sup>71</sup>

Although allied and partner foreign countries may be viewed as part of an individual's in-group, I argue that other foreign countries will not share this status. After all, countries tend to share more interests, ideologies, and identities with their allies and partner countries than with non-allied and non-partner countries. Given that non-allied and non-partner countries are not members of an individual's in-group and there is much less of a relationship to maintain, the VVT framework that I deploy suggests that the public will view their use of nuclear weapons as a relatively less virtuous use of violence. The moral imperative for unity will not be triggered to as great an extent, if at all. This logic leads to the following hypotheses:<sup>72</sup>

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that determines whether individuals support the attack. But it is impossible to disentangle whether an evaluation of the morality of a nuclear attack comes first, before a determination of support, or whether respondents first determine whether they support a nuclear attack and then form their opinion about the attack's morality to justify their support for or opposition to the attack. In other words, perceived morality may be a post-hoc justification for support rather than a mediator. Following VVT, I instead conceptualize perceived morality as simply another observable implication of my argument. If the use of nuclear weapons by an allied or partner country is viewed as a virtuous act of in-group protection, then perceived morality when allied or partner foreign countries use nuclear weapons should not be lower than when an individual's own government does.

71. For these three reasons, my initial, pre-registered expectation was that although allied and partner countries would be viewed as part of an individual's in-group to some extent, support would still be lower for nuclear use conducted by allied and partner countries than by an individual's own government.

72. Both H2 and H3 were pre-registered. Gerzhoy, "Alliance Coercion and Nuclear Restraint."

H2: Individuals will be less likely to approve of a nuclear attack and will view it as less ethical when conducted by a non-allied or non-partner country compared to their own government.

H3: Individuals will be less likely to approve of a nuclear attack and will view it as less ethical when conducted by a non-allied or non-partner country compared to an allied or partner country.

These hypotheses are a hard test for whether in-group bias exists because of the arguments made by nuclear norm optimists, especially those who believe in a nuclear taboo. If there is an absolute prohibition on the use of nuclear weapons and violations are not even considered,<sup>73</sup> then support for nuclear attacks among the public should be extremely low no matter the identity of the country conducting the attack. There should be no in-group bias when comparing support for nuclear use by one's own government to that by a non-allied or non-partner foreign country. Instead, support should be almost nonexistent in both cases. This logic may be why nuclear norm optimists do not systematically consider that individuals may react differently to the use of nuclear weapons depending on whether the country conducting the attack is one's own government, a foreign ally or partner country, or a non-allied or non-partner country.

Empirical support for H2 and H3 would provide mixed implications for the strength of the nuclear non-use norm. On the one hand, lower relative support for the use of nuclear weapons by non-allied or non-partner foreign countries could be interpreted as evidence in support of nuclear norm optimists. All else equal, lower relative support would imply that the constraints against nuclear use are greater than if higher support was found. It would also suggest that opposition to nuclear use is somewhat higher at the water's edge—a finding that prior studies have not uncovered because they focus on nuclear use by an individual's own government. On other hand, support for these hypotheses suggests that approval of nuclear use varies depending on who pushes the button, meaning that the nuclear non-use norm is not absolute.

More importantly, given that finding evidence of favoritism in the context of nuclear weapons use is a relatively hard test for in-group bias, I would also expect similar findings for conventional weapons use. Conventional weapons

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73. Tannenwald, "The Nuclear Taboo," p. 436.

use is a relatively easier test for in-group bias because the same across-the-board prohibition that is theorized by some scholars to hold for nuclear weapons use is not posited for the use of conventional weapons. This logic leads to the following hypothesis:

H4: Individuals will be less likely to approve of a conventional attack and will view it as less ethical when conducted by a non-allied or non-partner country compared to their own government.<sup>74</sup>

If H4 were to hold, then support for nuclear use by out-group countries might not follow a separate logic than support for the use of conventional weapons by out-group countries. Instead, the findings would indicate that support for the use of force—whether nuclear or conventional—by out-group countries is generally lower than support for the use of force by in-group countries. Therefore, there would be no incentive for countries to forgo nuclear use and instead employ conventional weapons to avoid disapproval among non-allied or non-partner countries. No matter whether countries used nuclear or conventional weapons, they would face relatively higher rates of disapproval among non-allied or non-partner countries.

All the above hypotheses concern relative support for the use of nuclear weapons because they focus on whether approval will differ depending on which country conducts the strike. Absolute support for the use of nuclear weapons is critically important as well. If absolute levels of approval are high, even when foreign countries conduct nuclear strikes, then that would suggest a weak nuclear non-use norm. Scholars who are relatively optimistic about the strength of the nuclear non-use norm would predict low absolute support for the use of nuclear weapons, even when the target state cannot threaten nuclear retaliation. By contrast, skeptics would anticipate higher absolute support than implied by a strong nuclear non-use norm or taboo.

Operationalizing these conflicting expectations is difficult, as any threshold of absolute support is subjective. Nonetheless, the following is a fair test of the nuclear non-use norm's strength in the context of absolute approval:

H5: Less than a majority of individuals should approve of a nuclear attack and view it as ethical.

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74. H4 was not pre-registered but follows logically from H2, which was pre-registered.

I choose 50 percent as the threshold for this test because prior nuclear research refers to this as a salient quantity.<sup>75</sup> It is also an intuitive threshold for understanding support in the political arena. For example, whether a majority of citizens plan to vote for a particular presidential candidate is informative. In one sense, this is an easy test for nuclear non-use norm optimists. If the norm against nuclear use is a strong tradition, or even a full-fledged taboo, then the approval rating for a nuclear strike should be significantly lower than 50 percent. On the other hand, for H5 the statistical burden of proof for nuclear norm optimists is to show that support is less than 50 percent. I do not have a separate hypothesis stating that approval should be *greater* than 50 percent. On balance, I believe this is a relatively easy test for the arguments of norm optimists, given the strong arguments that they make about the nuclear non-use norm's robustness. Following H2 and H3, my theory also necessarily implies that H5 is less likely to hold when a nuclear strike is conducted by an individual's own government or by the government of an ally or partner than by a non-allied or non-partner country.

### *Research Design*

To test these hypotheses, I conducted four survey experiments on members of the U.S. and Indian publics. These four studies constitute a test of my hypotheses at the individual level of analysis. Compared with historical case studies and public opinion polls, experiments allow researchers to hold salient elements of a scenario constant (e.g., the target of an attack, civilian casualties, and the military context) while varying other factors to isolate their impact (e.g., which country conducts a nuclear attack). More importantly, given that only one country has ever used nuclear weapons, experiments are an especially useful tool for analyzing how individual-level public opinion would vary depending on which country conducts a nuclear attack. After all, the sample size of non-U.S. countries that have conducted nuclear strikes is zero.

I designed and administered four survey experiments that made a simple modification to the seminal studies by Press, Sagan, and Valentino and by Sagan and Valentino. While these authors hold the country conducting a nuclear strike constant (the United States), I experimentally manipulate it. No

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75. Sagan and Valentino, "Revisiting Hiroshima in Iran," p. 45; Carpenter and Montgomery, "The Stopping Power of Norms," p. 167.

previous experimental study of which I am aware has randomized the country conducting the nuclear strike. There are two advantages to this design strategy. The first is comparability. By using the frameworks in these two articles, which have been used extensively in the literature on nuclear use, it is easier to directly compare my results with previous studies.<sup>76</sup>

The second advantage of this approach is that these two studies vary on several dimensions: (1) the target of the strike (a non-state actor versus a nation-state); (2) the benefits of the strike (ensuring destruction of a terrorist atomic weapons lab versus compelling surrender of a country to save lives that would be lost if warfare continued); (3) whether civilians were specifically targeted (no or yes); (4) civilian deaths (1,000 versus 100,000); and (5) whether survey respondents are evaluating the strike retrospectively or prospectively. Consequently, analyzing whether the results hold in these two contexts provides a useful “stress test” of external validity.<sup>77</sup>

As with the articles by Press, Sagan, and Valentino and by Sagan and Valentino, the main outcome measure in all four of my studies is the extent of approval for the nuclear strike on a 6-point Likert scale. I also ask respondents the degree to which they believe that a nuclear strike is ethical on a 6-point scale.

I conducted all studies in 2021 using samples recruited online through Lucid.<sup>78</sup> Lucid generates representative samples based on age, gender, ethnicity, and region.<sup>79</sup> Lucid has been shown to perform well replicating previous

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76. Rathbun and Stein, “Greater Goods”; Carpenter and Montgomery, “The Stopping Power of Norms”; Koch and Wells, “Still Taboo?”; Slovic et al., “Virtuous Violence from the War Room to Death Row”; and Smetana and Vranka, “How Moral Foundations Shape Public Approval.”

77. In accordance with previous literature, neither scenario involves the use of nuclear weapons against a nuclear-armed actor because the goal of these experiments is to test the strength of the nuclear non-use norm rather than of nuclear deterrence. For example, see Sagan and Valentino, “Revisiting Hiroshima in Iran”; Rathbun and Stein, “Greater Goods”; and Carpenter and Montgomery, “The Stopping Power of Norms.”

78. “Lucid Theorem,” Cint, 2021, [https://luc.id/academic-solutions/page/3/?et\\_blog](https://luc.id/academic-solutions/page/3/?et_blog). Study 1 was conducted in June, study 2 in July, study 3 in September, and study 4 in December. To mitigate the negative effects of respondent inattention, I included a pre-treatment attention screener to weed out inattentive respondents in accordance with best practices in the literature. For example, see Adam J. Berinsky, Michele F. Margolis, and Michael W. Sances, “Separating the Shirkers from the Workers? Making Sure Respondents Pay Attention on Self-Administered Surveys,” *American Journal of Political Science*, Vol. 58, No. 3 (July 2014), 739–753, <https://doi.org/10.1111/ajps.12081>.

79. For the Indian study, the sample is representative on age. It also tracks relatively well with actual party identification in India. See the online appendix for a discussion of the representativeness of study 3. There is no evidence suggesting that the core results from study 3 stem from demographic skews in the sample.

studies,<sup>80</sup> even during the COVID-19 pandemic.<sup>81</sup> In total, there are about 800 respondents in study 1 (about 200 per experimental condition), 900 in study 2 (about 225 per experimental condition), over 650 in study 3 (about 220 per experimental condition), and over 900 in study 4 (about 230 per experimental condition), which yields ample statistical power to detect differences between treatment groups.

#### STUDY 1: NUCLEAR TERRORISM

This study is conducted on members of the U.S. public, and its design is closely based on Press, Sagan, and Valentino's retrospective experiment.<sup>82</sup> It involves the discovery of an underground Islamic State atomic weapons lab, which precipitates a nuclear strike to destroy the lab. The nuclear attack results in 1,000 unintentional civilian deaths and 1,200 injuries. While Press, Sagan, and Valentino hold the country conducting the strike constant (the United States), I randomize which country carries out the nuclear attack among four alternatives: the United States (one's own country); France (a close treaty ally); Russia (an enemy); or Pakistan (a "frenemy," for lack of a better term).<sup>83</sup> Gallup polling data confirms that about 87 percent of the U.S. public has a favorable opinion of France, compared to just 22 percent for Russia and 21 percent for Pakistan.<sup>84</sup> All four countries have nuclear weapons and thus could

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80. Alexander Coppock and Oliver A. McClellan, "Validating the Demographic, Political, Psychological, and Experimental Results Obtained from a New Source of Online Survey Respondents," *Research & Politics*, Vol. 6, No. 1 (January/March 2019), pp. 1–14, <https://doi.org/10.1177/2053168018822174>.

81. Kyle Peyton, Gregory A. Huber, and Alexander Coppock, "The Generalizability of Online Experiments Conducted during the COVID-19 Pandemic," *Journal of Experimental Political Science*, Vol. 9, No. 3 (2022), pp. 379–394, <https://doi.org/10.1017/XPS.2021.17>.

82. The study is retrospective because the strike has already occurred when respondents are asked to evaluate it.

83. Note that this design cannot disentangle why some countries are allies or partners and some are not. Possible explanations include shared interests, regime type, or ethnicity, and each of these factors could have individual effects on support for nuclear use. Nonetheless, this design can still effectively test the broader question of to what extent support for nuclear strikes by allies or partners differs from support for nuclear strikes by non-allies or non-partners.

84. But the percentage of the U.S. public who view Russia unfavorably is higher than the percentage who view Pakistan unfavorably. Data on France and Russia is from 2021, whereas data on Pakistan is from 2016 (the last time Gallup asked the U.S. public about its views on Pakistan). Gallup polling on different countries' favorability ratings, which is conducted frequently, provides the best aggregate measure of how U.S. citizens en masse view foreign countries. Although favorability toward a country can certainly differ depending on the specific topic (e.g., security versus human rights versus democracy), aggregate favorability toward a country helps to indicate whether that country is generally perceived of positively or negatively when averaging across

plausibly conduct the strike. The threat of nuclear terrorism could also realistically endanger these four countries. By including one's own country (the United States), an ally of that country (France), and two non-allied foreign countries (Russia and Pakistan), all hypotheses except H4 can be tested. Given that U.S. citizens have relatively strong security incentives to support an attack against an Islamic State atomic weapons lab no matter the identity of the country who is pressing the nuclear button, and the principal consequences of the strike (i.e., civilian casualties and whether the lab is destroyed or not) are held constant, it is not obvious that support should be lower if the strike is conducted by Russia or Pakistan rather than by the United States or France.

In the context of Press, Sagan, and Valentino's retrospective experiment, it is easy to modify which country is conducting the nuclear strike. For example, the headline of their hypothetical news article states, "Red Cross Estimates 1,000 Dead in U.S. Nuclear Strike against Al Qaeda Atomic Bomb Lab in Syria." I simply replace "U.S." with "French," "Russian," or "Pakistani" to manipulate which country is conducting the strike and then apply this change to the entire vignette. In total, this yields a simple 4-factor between-subjects design.<sup>85</sup>

#### STUDY 2: HIROSHIMA IN IRAN

Study 2 closely follows the design of Sagan and Valentino's prospective experiment and is also conducted on the U.S. public.<sup>86</sup> The experiment entails a war with Iran that begins after the discovery of a covert nuclear facility. During the war, *all* of Iran's nuclear infrastructure and air force assets have been destroyed. The nuclear threat that Iran poses is thus less than imminent. But Iran is still resisting unconditional surrender. To coerce Iran to capitulate before more troops die in the ground conflict, a nuclear strike is being considered that would specifically target and kill an estimated 100,000 Iranian civilians.

Note that there are several features of this scenario that might make nuclear use less attractive compared with the scenario in study 1. First, the nuclear threat posed by Iran is ostensibly lower than that posed by the Islamic State

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these different issues. See "Country Ratings," Gallup, accessed March 27, 2024, <https://news.gallup.com/poll/1624/perceptions-foreign-countries.aspx>.

85. For an overview of the use of experiments in the social sciences, see James N. Druckman, *Experimental Thinking: A Primer on Social Science Experiments* (Cambridge: Cambridge University Press, 2022).

86. Study 2 is prospective because the strike has not yet occurred when respondents are asked to evaluate it.



because Iran's nuclear infrastructure has already been neutralized. Second, civilians are intentionally targeted in study 2 but not in study 1. Third, 100,000 civilians are expected to die in this scenario compared to 1,000 in study 1. Study 2 may thus serve as a harder test of the arguments of nuclear taboo skeptics than study 1.<sup>87</sup>

While Sagan and Valentino hold the country considering the strike constant (the United States), I randomize whether it is the United States (one's own country) or Israel (a close partner). I use Israel in this experiment rather than France, Russia, or Pakistan because Israel is much more likely to go to war with Iran over its nuclear program than these other countries. Therefore, the use of Israel makes this experiment more realistic. Gallup polling also suggests that Israel—like France—is generally viewed favorably by the U.S. public: on average from 2021 to 2023, over 70 percent of U.S. citizens have a very or mostly favorable view of Israel. Because a non-allied or non-partner country is not included in this study, only H1 and H5 can be tested.<sup>88</sup>

Besides overall support for the strike and the perceived morality of the attack, in study 2 I also ask respondents two additional questions. First, I ask which option they would prefer: to launch a nuclear attack or continue the ground war. Even if respondents approve of a nuclear attack, they may not *prefer* it. Second, I ask respondents whether they would prefer the option to conduct a nuclear strike or withdraw all soldiers from Iran. Sagan and Valentino did not ask respondents this question in their study. Including it in study 2 helps address a reasonable critique made by Charli Carpenter and Alexander Montgomery about how giving respondents only two options (conduct a nuclear strike or continue a costly ground war) is not very realistic.<sup>89</sup>

### STUDY 3: GENERALIZABILITY TO OTHER AUDIENCES

The third experiment uses the same basic scenario as study 1 but is conducted on citizens of India instead of the United States to probe external validity. Although studies conducted on the U.S. public are valuable given the outsized role that the United States plays in foreign affairs, the relative dearth of re-

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87. Sagan and Valentino, "Revisiting Hiroshima in Iran," pp. 53–54.

88. I also experimentally manipulated leader gender. For an example of a study that manipulates leader gender in a similar way, see Joshua A. Schwartz and Christopher W. Blair, "Do Women Make More Credible Threats? Gender Stereotypes, Audience Costs, and Crisis Bargaining," *International Organization*, Vol. 74, No. 4 (2020), pp. 872–895, <https://doi.org/10.1017/S0020818320000223>. This yields a 2 x 2 between-subjects design. See the online appendix for the full survey instrument and an explanation for why gender was manipulated.

89. Carpenter and Montgomery, "The Stopping Power of Norms," p. 150.

search about other countries is a major gap in the nuclear non-use norm literature.<sup>90</sup> India is an especially relevant country to survey because it is a nuclear weapons state and a major power. Its citizens' views on nuclear use are therefore substantively meaningful. In study 3, I again randomize the country carrying out a nuclear attack: India (one's own country), the United States (a strategic partner), or Pakistan (an enemy). Although India and the United States do not have a formal defense pact, they have a strategic relationship and have formed partnerships such as the Quadrilateral Security Dialogue (the Quad). Given that India and the United States are not as closely aligned as the United States and France or the United States and Israel, it is reasonable to consider study 3 a harder test of H1.<sup>91</sup>

#### STUDY 4: NUCLEAR VERSUS CONVENTIONAL WEAPONS USE

The fourth experiment also uses the same scenario as study 1 and is conducted on U.S. citizens. There are two primary differences from study 1. First, I only include the United States and Russia as countries carrying out a nuclear attack. Second, and more importantly, I randomize whether the country conducting the attack uses nuclear or conventional weapons. Doing so enables me to test whether any in-group bias that may exist when comparing support for a nuclear attack by the United States and Russia also holds for the use of conventional weapons (H4). This yields a 2 x 2 between-subjects experiment.

#### ARE THESE SCENARIOS FAIR TESTS OF THE NUCLEAR NON-USE NORM?

One potential objection to the validity of this design is that the survey scenarios used by Press, Sagan, and Valentino and by Sagan and Valentino may be "fairly unrealistic hard case[s]" for testing the nuclear non-use norm.<sup>92</sup> All survey experiments involve some level of abstraction. I agree that these vignettes strenuously challenge the nuclear non-use norm by suggesting that there are benefits to nuclear use. But I argue these are realistic scenarios that constitute an appropriate case for testing the strength of the nuclear non-use norm. They are realistic because terrorist groups and Iran are two of the most prominent U.S. enemies today and both have pursued nuclear weapons in the past.<sup>93</sup>

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90. Smetana and Wunderlich, "Nuclear Taboo 3.0," pp. 1076–1077.

91. Favorable views of the United States in India have varied from 50 percent to 75 percent in recent years. This is lower than favorable views toward France and Israel among U.S. citizens. See: Bruce Stokes, Dorothy Manevich, and Hanyu Chwe, "India and the World," Pew Research Center, November 15, 2017, <https://www.pewresearch.org/global/2017/11/15/india-and-the-world/>.

92. Carpenter and Montgomery, "The Stopping Power of Norms," p. 143.

93. Sagan and Valentino, "Revisiting Hiroshima in Iran," p. 22.

They are also appropriate cases for testing the robustness of the nuclear non-use norm because it is impossible to evaluate the strength of norms without determining “how much they constrain behavior when other values are at stake.”<sup>94</sup> It is easy to uphold the nuclear non-use norm during peacetime or when the use of such weapons provides no possible benefits. Whether people are willing to oppose the use of nuclear weapons when doing so offers potential advantages—as in the case of World War II—reveals the true strength of the norm. For example, the true test of the anti-torture norm’s strength was not before 9/11, but after 9/11 when violating the norm offered at least theoretical benefits to the United States.<sup>95</sup> The anti-torture norm failed that test. That the anti-torture norm might have been upheld if it had faced an “easier” test should not provide much reassurance.

#### WILL SURVEY RESPONDENTS BE HONEST?

Another potential concern with this design is the possibility of response bias, which occurs when survey subjects conceal their true beliefs about nuclear attacks.<sup>96</sup> Social desirability bias is one prominent example. It occurs when respondents avoid taking potentially unpopular stances (like supporting nuclear weapons use) for fear of some kind of social sanction (e.g., embarrassment) if their true opinion became known. Even in anonymous online surveys like this one, scholars find that respondents sometimes conceal their true beliefs.<sup>97</sup> New research finds no evidence that social desirability bias exists in surveys of the public about nuclear weapons use.<sup>98</sup> Consequently, social desirability bias is unlikely to distort the results of these studies.

A second reason why response bias could occur is demand effects, whereby respondents surmise researchers’ goals and adjust their answers to accord with those goals. For example, perhaps respondents will interpret some of the benefits of using nuclear weapons in the experimental scenarios as an indication that the researchers would like them to support nuclear weapons use. If this is the case, then survey subjects may report support for nuclear weapons

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94. Sagan et al., “Does the Noncombatant Immunity Norm Have Stopping Power?,” p. 175.

95. *Ibid.*, pp. 178–180.

96. Carpenter and Montgomery, “The Stopping Power of Norms,” pp. 149–151.

97. For example, see Matthew J. Streb et al., “Social Desirability Effects and Support for a Female American President,” *Public Opinion Quarterly*, Vol. 72, No. 1 (Spring 2008), pp. 76–89, <https://doi.org/10.1093/poq/nfm035>.

98. Christopher W. Blair, Jonathan A. Chu, and Joshua A. Schwartz, “The Two Faces of Opposition to Chemical Weapons: Sincere versus Insincere Norm-Holders,” *Journal of Conflict Resolution*, Vol. 66, Nos. 4–5 (May 2022), pp. 677–702, <https://doi.org/10.1177/00220027211057057>. This study does find evidence for social desirability bias in the context of public support for chemical weapons use in anonymous online surveys.

use even if they truly oppose it. Nevertheless, research by Jonathan Mummolo and Erik Peterson uncovers no significant evidence that demand effects exist in survey experiments.<sup>99</sup> They find that experimentally manipulating the amount of information provided to survey subjects about the research team's goals and hypotheses did not significantly affect treatment effects. Thus, demand effects are also unlikely to bias the results of these studies.

#### DO PUBLIC SURVEYS REVEAL ANYTHING ABOUT POLICYMAKERS' VIEWS?

Given that it is political elites who ultimately choose whether to use nuclear weapons or punish states that do, skeptics might wonder about the utility of survey experiments conducted on the public. Nevertheless, these surveys have significant value for two reasons. First, prior work shows that policymakers respond to and are constrained by public opinion.<sup>100</sup> Thus, studies conducted on the public have intrinsic value. Second, in a meta-analysis of 162 paired experiments on members of the public and elites, Joshua Kertzer finds that elites and the public react to experimental treatments in similar ways in the large majority of cases.<sup>101</sup> For example, over 98 percent of the 162 treatment effects that he analyzes have the same sign (i.e., whether the relationship between the independent and dependent variable is positive or negative) between members of the public and elites. Consequently, the results presented below may reflect how policymakers would view the use of nuclear weapons by a foreign country in relation to their own country. Only future studies conducted directly on policymakers could confirm this.

### Results

#### STUDY 1: NUCLEAR USE AGAINST A TERRORIST GROUP

The results for study 1 support my hypotheses and provide evidence that neither a nuclear taboo nor a very strong non-use norm exists among members of the public, even when foreign countries press the nuclear button.

First, in contrast to the expectations outlined by NSC 68 specifically and nu-

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99. Jonathan Mummolo and Erik Peterson, "Demand Effects in Survey Experiments: An Empirical Assessment," *American Political Science Review*, Vol. 113, No. 2 (2019), pp. 517–529, <https://doi.org/10.1017/S0003055418000837>.

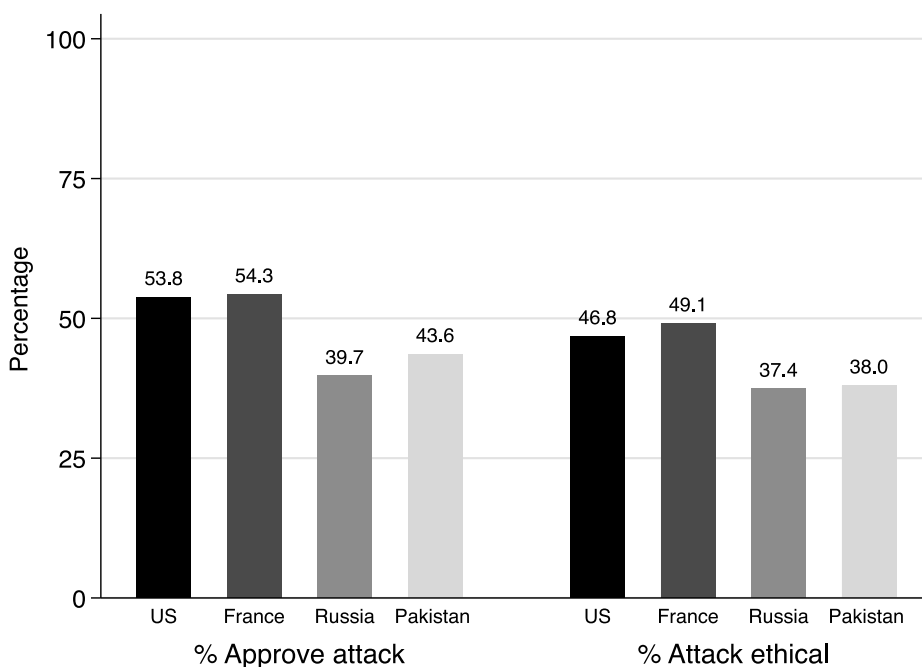
100. Jonathan A. Chu and Stefano Recchia, "Does Public Opinion Affect the Preferences of Foreign Policy Leaders? Experimental Evidence from the UK Parliament," *Journal of Politics*, Vol. 84, No. 3 (July 2022), pp. 1874–1877, <https://doi.org/10.1086/719007>.

101. Joshua D. Kertzer, "Re-Assessing Elite-Public Gaps in Political Behavior," *American Journal of Political Science*, Vol. 66, No. 3 (July 2022), pp. 539–553, <https://doi.org/10.1111/ajps.12583>.

Figure 1. U.S. Public Opinion on Nuclear Weapons Use against a Terrorist Group

Approval question: “How much do you approve or disapprove of the military operation described in this article?”

Ethics question: “How ethical or unethical was the military operation described in this article in your opinion?”



NOTE: The bar charts depict how approval for and the ethics of a nuclear attack differ depending on which country conducts the strike. For example, the first bar on the left shows that 53.8 percent of sampled members of the U.S. public approve of a nuclear strike by the U.S. government against a terrorist group with an atomic weapons lab. The second bar shows that 54.3 percent of sampled members of the U.S. public approve of a nuclear strike by the French government against a terrorist group with an atomic weapons lab. Results are from study 1.

clear norm optimists more broadly—but in accordance with H1 and my argument that allied countries will be considered in-group members—I do not find any evidence that approval rates among members of the U.S. public for a French nuclear strike are lower than for a U.S. nuclear strike. As figure 1 shows, approval rates are nearly identical for the two countries: 53.8 percent for the United States and 54.3 percent for France. For the perceived morality of

Table 1. U.S. Public Opinion on Nuclear Weapons Use against a Terrorist Group

Approval question: "How much do you approve or disapprove of the military operation described in this article?"

Ethics question: "How ethical or unethical was the military operation described in this article in your opinion?"

	Difference in approval (percentage points)	Difference in ethics (percentage points)
United States compared to France	-0.5	-2.3
United States compared to Russia	14.1***	9.4**
United States compared to Pakistan	10.2**	8.8*
France compared to Russia	14.7***	11.7**
France compared to Pakistan	10.7**	11.1**
Russia compared to Pakistan	-4.0	-0.6

NOTE: Table 1 depicts relative differences in approval for and the ethics of a nuclear attack depending on which country conducts the strike. For example, in row 2, a 14.1-percentage-point difference means that sampled members of the U.S. public are 14.1 percentage points more likely to approve of a nuclear strike conducted by the U.S. government against a terrorist group with an atomic weapons lab than of an identical strike conducted by the Russian government against a terrorist group with an atomic weapons lab. Results are from study 1.

\*  $p < 0.10$  \*\*  $p < 0.05$  \*\*\*  $p < 0.01$

a strike, the rates were 46.8 percent for the United States and 49.1 percent for France.<sup>102</sup> As depicted in table 1, the differences in approval of and the perceived morality of a nuclear strike by the United States or by France are not statistically significant.<sup>103</sup> Thus, the results support my argument that the use of nuclear weapons by allied foreign countries to combat security threats will not be viewed as less virtuous than use by individual citizens' own govern-

102. In accordance with previous studies, I collapse the 6-point measures of approval and perceived morality into binary measures to more clearly illustrate substantive effects. As demonstrated in the online appendix, the results are also robust to using the full 6-point measure, including respondents who failed a factual manipulation check, and in a regression that controls for a range of factors. See Sagan and Valentino, "Revisiting Hiroshima in Iran."

103. It is fascinating and somewhat surprising that U.S. citizens' approval rate for a nuclear strike by the United State is marginally lower than for a nuclear strike by France. Nevertheless, given that the difference is not statistically significant, this finding may be because of chance. To determine statistical significance in table 1 and in subsequent analyses throughout the paper, I utilize bootstrapping. This is a statistical technique whereby a single data set is resampled to create a large number of simulated samples. I utilize this technique because it makes fewer assumptions about the underlying distribution of the data than other methods of hypothesis testing. P-values are calculated from 2,000 bootstraps. A finding is statistically greater than 0 at the 1 percent level if at least 1,980 of the 2,000 bootstrapped estimates are greater than 0 and statistically greater than 0

ment.<sup>104</sup> As previously discussed, political and military leaders have historically worried that allies would react negatively to the use of nuclear weapons and even potentially abandon their partners. The results from study 1 suggest that this may not necessarily be the case—the nuclear non-use norm may be weaker than many optimists expect.

Second, the evidence supports my argument that the public perceives the use of nuclear weapons by non-allied or non-partner countries as a less virtuous use of violence (H2 and H3). As shown in table 1, approval for and the perceived morality of a nuclear attack by Russia or Pakistan is 9–15 percentage points less among U.S. citizens than for an identical nuclear attack by the United States or France. These findings suggest that the identity of which country conducts nuclear attacks conditions the constraints against nuclear use. Substantively, the results indicate that there is not an absolute prohibition on the use of nuclear weapons among the public. If such a prohibition did exist, then support for nuclear attacks should be extremely low no matter the identity of the country that conducted the attack. There should be no evidence of in-group bias. These results also provide strong evidence that there is in-group bias in public support for military force more generally. This is a hard case given arguments that there is a unique taboo against the use of nuclear weapons that does not extend to conventional weapons. Additionally, given that U.S. citizens have relatively strong security incentives to support an attack against an Islamic State atomic weapons lab no matter the identity of the country conducting the attack, it is particularly striking that in-group bias still holds for this scenario.

Third, an analysis of absolute support for the use of nuclear weapons also provides evidence for the arguments of nuclear norm pessimists that neither a nuclear taboo nor a very strong non-use norm exists among members of the public. In accordance with the arguments of nuclear norm pessimists and contrary to H5, there is not statistically significant evidence that less than a major-

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at the 5 percent level if at least 1,900 of the 2,000 bootstrapped estimates are greater than 0. For an analogous example, see Joshua D. Kertzer and Ryan Brutger, "Decomposing Audience Costs: Bringing the Audience Back into Audience Cost Theory," *American Journal of Political Science*, Vol. 60, No. 1 (January 2016), 234–249, <https://doi.org/10.1111/ajps.12201>.

104. Given that Joshua Kertzer finds that political elites differ from members of the public in terms of gender, education, income, and age, I also analyze in the online appendix whether the results are significantly weaker among members of the public who are more "elite-like." I do not find evidence that they are, which provides suggestive evidence that these findings may also hold among policymakers. For an example of a similar analysis, see Michaela Mattes and Jessica L. P. Weeks, "Reacting to the Olive Branch: Hawks, Doves, and Public Support for Cooperation," *International Organization*, Vol. 76, No. 4 (2022), pp. 957–976, <https://doi.org/10.1017/S0020818322000170>.



ity of citizens approve of a nuclear attack or view it as ethical when conducted by the United States or by France (see figure 1). Given the strong arguments made by nuclear norm optimists, setting a threshold of less than majority support was an easy test of their contentions. Therefore, the null finding for this test provides relatively powerful evidence in favor of nuclear norm pessimists. On the other hand, approval for and the perceived morality of a nuclear attack by Russia or Pakistan is statistically less than 50 percent, which supports H5. Still, the relatively high absolute levels of support for those countries' use of nuclear weapons—about two-fifths of respondents—are inconsistent with the existence of a nuclear taboo. Clearly, nuclear use is far from unthinkable for many members of the public, even when it is out-group foreign countries pushing the nuclear button.

Finally, the results from study 1 align with a key contention of VVT: support for the use of violence and the perceived morality of violence are closely connected. In supplemental analyses, I find that for respondents who believed that the strike was ethical, 89 percent approved of nuclear use.<sup>105</sup> For those who believed that the strike was unethical, just 17 percent approved of nuclear use.

#### STUDY 2: NUCLEAR USE AGAINST IRAN

Study 1 did not find any evidence that the public's approval of a nuclear strike is less for France, an ally, than it is for the United States. This contradicts arguments from nuclear norm optimists that citizens will strongly disapprove of allies and partners using nuclear weapons and even support abandoning them if they do. In study 2, I compare U.S. public opinion on either the United States or Israel using nuclear weapons against Iran. It might be expected that nuclear use in this context will be viewed less favorably given that 100,000 Iranian civilians are being intentionally targeted. In a bad sign for the strength of the nuclear non-use norm, study 2 yields similar results to study 1 (see figure 2). Furthermore, absolute support for the strike is quite high for both countries.

First, in accordance with H1 and my argument that partner countries will be considered in-group members, I do not find any evidence that approval by members of the U.S. public for an Israeli nuclear strike is less than for a U.S. nuclear strike.<sup>106</sup> Approval of nuclear attacks is not—as NSC 68 puts it—

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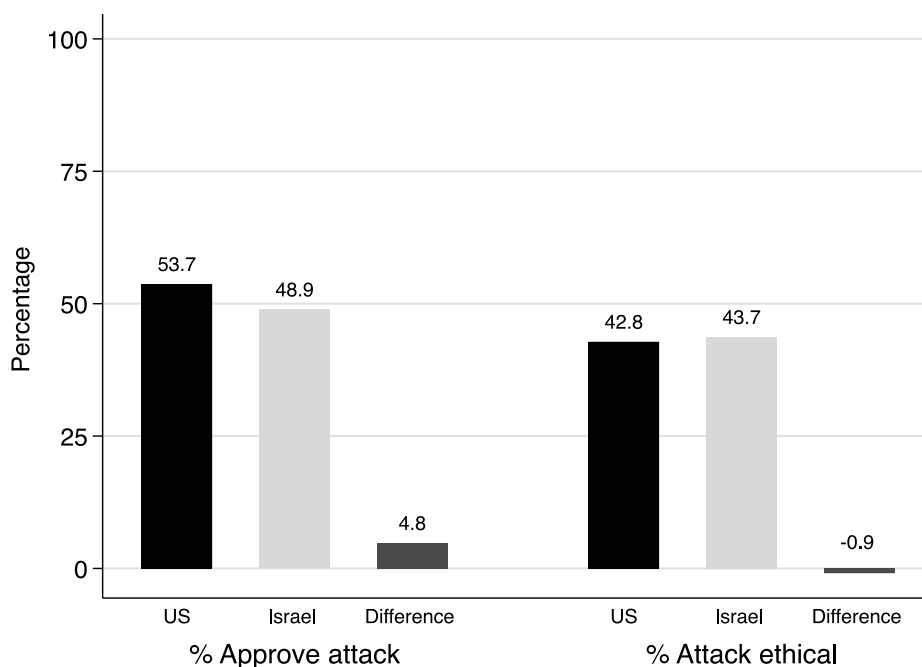
105. Analyses are available on request.

106. In the online appendix, I show that these null results are strongest when comparing U.S. and Israeli male leaders. More significant differences emerge when comparing female leaders, a dynamic that is ripe for additional research. I offer an initial explanation for this heterogeneity in the online appendix.

Figure 2. U.S. Public Opinion on Nuclear Weapons Use against Iran

Approval question: "Regardless of which option you preferred, if the decision was made to conduct the strike against the Iranian city, how much would you approve or disapprove of that decision?"

Ethics question: "Regardless of which option you preferred, how ethical or unethical do you think it would be if the decision was made to conduct the strike against the Iranian city in the situation described in the article?"



NOTE: The first bar shows that 53.7 percent of sampled members of the U.S. public approve of a nuclear strike by the U.S. government against Iran. The second bar shows that 48.9 percent of sampled members of the U.S. public approve of a nuclear strike by the Israeli government against Iran. The third bar indicates that sampled members of the U.S. public are 4.8 percentage points more likely to approve of a nuclear strike conducted by the U.S. government against Iran than an identical strike conducted by the Israeli government against Iran. Results are from study 2.

For the "Difference" column: \*  $p < 0.10$  \*\*  $p < 0.05$  \*\*\*  $p < 0.01$

"proportionately" lower when partner countries conduct nuclear strikes compared to when one's own government does. Moreover, study 2 is a relatively hard test for how far in-group boundaries extend. Israel (a partner country that does not have a formal defense pact with the United States) should be even less likely to be viewed as part of the in-group than formally allied countries.

Second, examining absolute approval for conducting a nuclear strike also suggests that the nuclear non-use norm is not as strong as some optimists propose. Support among the public for a nuclear attack is not significantly less than 50 percent for either a U.S. or an Israeli strike. That a majority of respondents in the case of a U.S. strike (53.7 percent) and a near majority in the case of an Israeli strike (48.9 percent) would approve of a nuclear attack is particularly strong evidence against the arguments of nuclear norm optimists. Recall that study 2 involves intentionally targeting Iranian civilians with nuclear weapons *after* Iran's nuclear infrastructure has already been neutralized and with the expectation that 100,000 civilians would be killed.<sup>107</sup> These results are inconsistent with a nuclear taboo or even a powerful norm or tradition of non-use.

Third, other results from study 2 are slightly more optimistic about the strength of the nuclear non-use norm. While the approval rating among the U.S. public for a nuclear attack is not statistically less than 50 percent for either a U.S. or an Israeli strike, only about 43 percent of respondents perceive a nuclear strike against Iranian citizens as ethical. This finding does not suggest that there is a particularly strong nuclear non-use norm, but it is still statistically less than a majority and supports H5. Figure 3 also shows that if respondents had to choose between launching the nuclear attack against the Iranian city or continuing the ground war, a majority would support the latter. In fact, respondents are about 13 to 14 percentage points less likely to prefer a nuclear strike to the ground war alternative than they are to approve of the nuclear option in general.<sup>108</sup>

Results for the question about whether respondents would prefer the option to conduct the nuclear attack or to withdraw all soldiers from Iran are also presented in figure 3. They show that even fewer respondents—only about one-third—would prefer the option to use nuclear weapons against Iranian civilians rather than to withdraw. The strong majority who prefer the option to withdraw entirely from Iran—before securing its surrender—rather than to use nuclear weapons provides some evidence for the arguments of nuclear norm optimists. On the other hand, general approval for a nuclear attack may still be the most salient measure from a policy perspective, given that policy-

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107. Note that absolute approval for a nuclear attack is quite similar in studies 1 and 2.

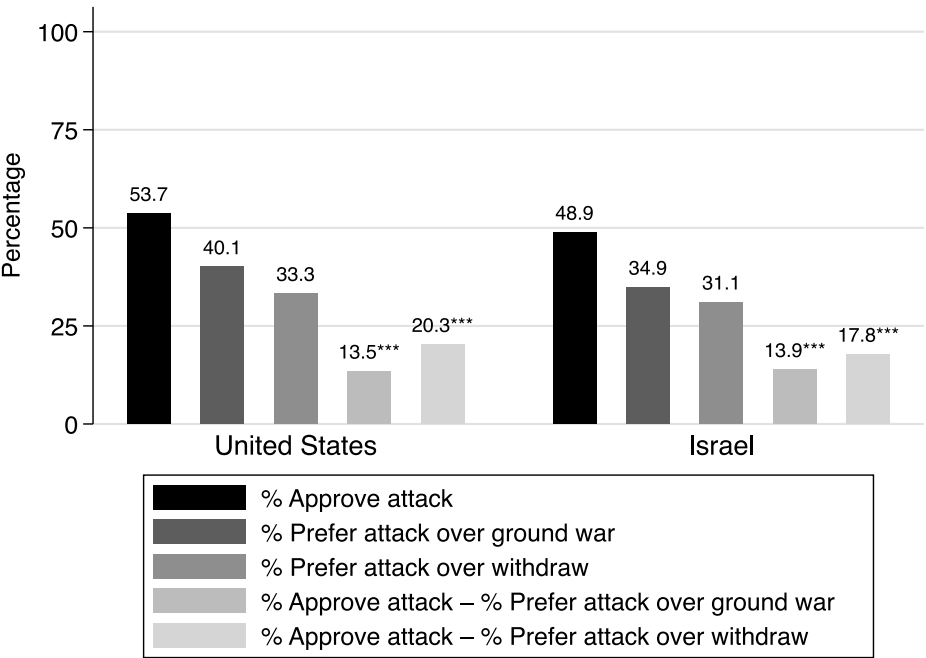
108. By contrast, Scott D. Sagan and Benjamin A. Valentino find no significant difference between these quantities in their study. This discrepancy could be because the nuclear non-use norm has somewhat strengthened in the last few years. Sagan and Valentino, "Revisiting Hiroshima in Iran," pp. 57–58.

Figure 3. Preference of the U.S. Public for a Nuclear Strike or Ground War against Iran or a Complete Withdrawal

Approval question: “Regardless of which option you preferred, if the decision was made to conduct the strike against the Iranian city, how much would you approve or disapprove of that decision?”

Prefer attack over ground war question: “Given the facts described in the article, if you had to choose between launching the strike against the Iranian city or continuing the ground war against Iran, which option would you prefer?”

Prefer attack over withdraw question: “Given the facts described in the article, if you had to choose between launching the strike against the Iranian city or withdrawing all soldiers from Iran before securing their surrender, which option would you prefer?”



NOTE: The second bar shows that 40.1 percent of sampled members of the U.S. public prefer a nuclear strike by the U.S. government against Iran rather than continuing the ground war against Iran. The fourth bar indicates that sampled members of the U.S. public are 13.5 percentage points more likely to approve of a nuclear strike by the U.S. government against Iran than they are to prefer a nuclear strike to the ground war alternative. Results are from study 2.

For the “Difference” columns: \*  $p < 0.10$  \*\*  $p < 0.05$  \*\*\*  $p < 0.01$

makers likely care less about which policy the public would have hypothetically preferred before the fact.<sup>109</sup> Moreover, the general approval numbers are quite telling because I asked that question *after* the questions about support for a nuclear strike in relation to continuing the ground war or withdrawing. The sequencing of questions means that respondents were reminded that there were other options besides using nuclear weapons, but a majority or near majority still approved of a nuclear attack anyway.

#### STUDY 3: GENERALIZABILITY TO THE INDIAN PUBLIC

Study 3 demonstrates that the findings from studies 1 and 2, which indicate a relatively weak nuclear non-use norm among the public, also hold among Indian citizens. Most strikingly, in accordance with H1, I do not find any evidence that the approval rate among members of the Indian public for a nuclear strike by the United States is lower than for a nuclear strike by India (see figure 4). Given that India and the United States are neither allies like the United States and France nor as closely aligned as the United States and Israel, this null finding provides relatively strong evidence that approval for a nuclear strike is not less for allied or partner countries than for one's own government. High absolute levels of support for a nuclear attack among Indian citizens also suggests a relatively weak nuclear non-use norm, even outside the United States.<sup>110</sup> This finding is consistent with the work of Janina Dill, Scott Sagan, and Benjamin Valentino.<sup>111</sup> Finally, in accordance with H2 and H3, as well as study 1, I find that support for a nuclear strike by one's own government (India in this case) or a partner country (the United States in this case) is significantly greater than approval for a nuclear strike by a non-allied or non-partner country (Pakistan in this case). Overall, study 3 demonstrates the generalizability of this article's results.

#### STUDY 4: APPROVAL FOR USING NUCLEAR VERSUS CONVENTIONAL WEAPONS

The results from study 4 further indicate the relative weakness of the nuclear non-use norm among the public by demonstrating that the dynamic of lower approval for nuclear use by non-allied or non-partner countries also holds

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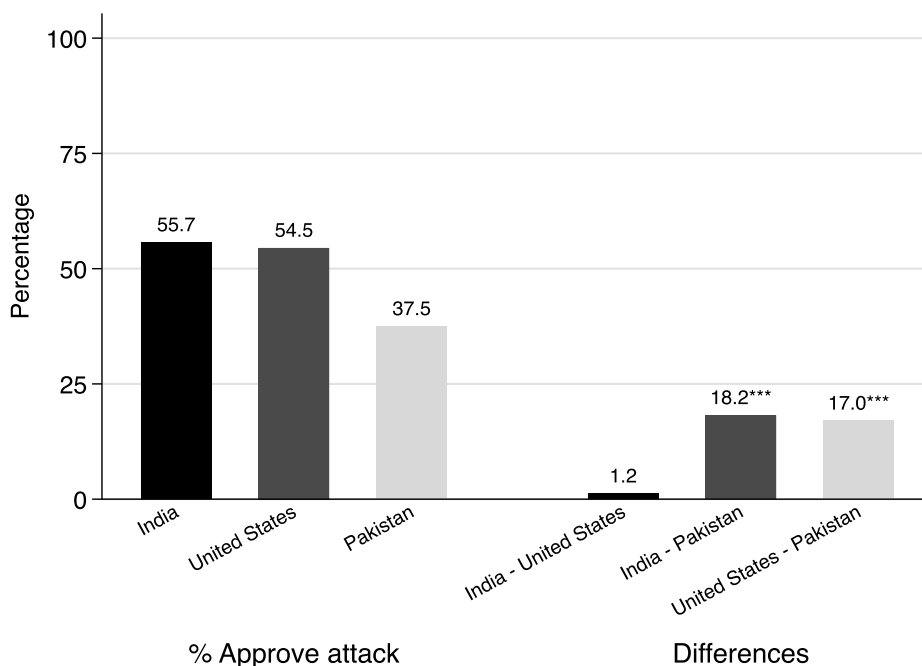
109. Ibid.

110. The results hold for a series of robustness checks described in the online appendix, and, as previously mentioned, there is no evidence that the core results from study 3 occur because of demographic skews in the sample. As in studies 1 and 2, there is also a strong correlation between the perceived morality of a nuclear attack among survey respondents and support for the attack.

111. Dill, Sagan, and Valentino, "Kettles of Hawks."

Figure 4. Indian Public Opinion on Nuclear Weapons Use against a Terrorist Group

Approval question: "How much do you approve or disapprove of the military operation described in this article?"



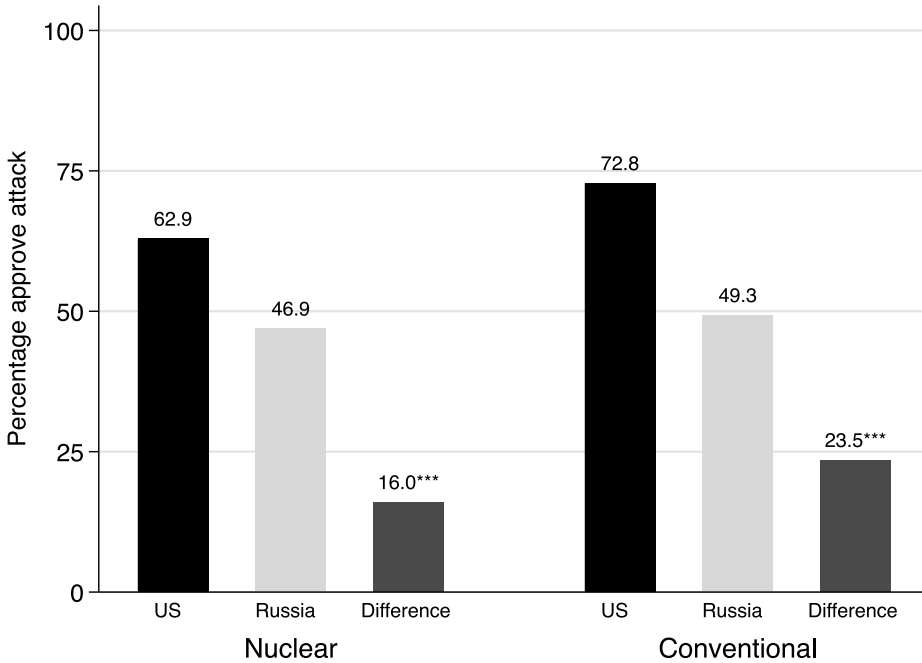
NOTE: Comparing the first and second bars, approval rates for sampled members of the Indian public are 55.7 percent for a nuclear strike by the Indian government against a terrorist group with an atomic weapons lab and 54.5 percent for an identical nuclear strike by the U.S. government. The fourth bar indicates that sampled members of the Indian public are 1.2 percentage points more likely to approve of a nuclear strike conducted by the Indian government against a terrorist group with an atomic weapons lab than an identical strike conducted by the U.S. government. Results are from study 3.

For the "Differences" columns: \*  $p < 0.10$  \*\*  $p < 0.05$  \*\*\*  $p < 0.01$

for the use of conventional weapons. Respondents are more likely to approve of U.S. nuclear strikes than Russian nuclear strikes, *and* they are more likely to approve of U.S. conventional strikes than Russian conventional strikes (see figure 5). Moreover, the difference in in-group bias between nuclear strikes (16 percentage points) and conventional strikes (23.5 percentage points) is not statistically significant. Lower support for the use of nuclear weapons by non-allied or non-partner countries (Russia in the case of study 4) therefore

Figure 5. Preference of the U.S. Public for a Nuclear Strike or Conventional Strike against a Terrorist Group

Approval Question: "How much do you approve or disapprove of the military operation described in this article?"



NOTE: Comparing the first and fourth bars, approval rates for sampled members of the U.S. public are 62.9 percent for a nuclear strike and 72.8 percent for a conventional strike by the U.S. government against a terrorist group with an atomic weapons lab. The sixth bar indicates that sampled members of the U.S. public are 23.5 percentage points more likely to approve of a conventional strike conducted by the U.S. government against a terrorist group with an atomic weapons lab than an identical conventional strike conducted by the Russian government. Results are from study 4.

For the "Difference" columns: \*  $p < 0.10$  \*\*  $p < 0.05$  \*\*\*  $p < 0.01$

does not indicate that the nuclear non-use norm is particularly strong at the water's edge. Rather, it shows that support for the use of force by out-group countries is generally lower than support for the use of force by in-group countries. Countries like Russia cannot escape a disproportionately negative reaction among the U.S. public for using conventional rather than nuclear weapons.



## Conclusion

My identity-based theory of support for nuclear weapons use combined with four survey experiments produced three striking results that challenge the arguments of nuclear norm optimists. First, I found that public approval is not significantly lower for the use of nuclear weapons by allies or strategic partners than by one's own government. This finding contradicts arguments from many policymakers and norm optimists that citizens will strongly disapprove of allies or partners that use nuclear weapons and may even want to abandon them if they do. Second, absolute levels of public support for nuclear use are quite high (37–54 percent) even when it is foreign countries pressing the nuclear button, which belies the existence of an absolute nuclear taboo. Moreover, many members of the public believe that the use of nuclear weapons can be ethical. Finally, I demonstrated that support for nuclear use depends in part on the identity of the attacker, which prior work does not consider. Public support is lower when non-allied or non-partner foreign countries conduct a nuclear attack than when one's own country or an allied or partner country carries out an identical nuclear strike. This dynamic also holds when analyzing support for the use of conventional weapons by non-allied or non-partner countries. Overall, these findings robustly challenge the arguments of nuclear norm optimists that there is a strong tradition, norm, or even taboo against the use of nuclear weapons among members of the public. More broadly, they contradict arguments that a "humanitarian revolution" has led to a widely held and deeply internalized norm against killing noncombatants.<sup>112</sup>

This project also has significant implications for policy. Given the results presented in this article and by nuclear norm pessimists more broadly, policymakers should be more active in their efforts to prevent nuclear use. If public opposition to nuclear use follows the logic of a taboo or a strong non-use norm, then policymakers could, potentially, adopt riskier strategies because doing so would still be relatively unlikely to lead to nuclear use. But public views toward nuclear use do not appear to follow the logic of a taboo or strong non-use norm. Given the relative lack of public constraints, policymakers should be less willing to raise the risks of nuclear use. For example, they should be averse to making nuclear threats, abandoning nuclear arms control agreements, engaging in nuclear arms races, and allowing nuclear prolifera-

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112. Thomas, *The Ethics of Destruction*; Pinker, *The Better Angels of Our Nature*.

tion. All these actions could increase the probability that nuclear weapons are used.

Rather than taking steps to reduce the risks of nuclear weapons being used, policymakers have done the opposite. Vladimir Putin and Donald Trump have made nuclear threats.<sup>113</sup> Russia suspended participation in inspections under the 2011 New Strategic Arms Reduction Treaty (New START).<sup>114</sup> China has initiated a large-scale investment to expand its nuclear arsenal.<sup>115</sup> Iran has made significant progress toward acquiring a nuclear weapons capability.<sup>116</sup> These developments, combined with the findings in this article that public opinion is less of a constraint against nuclear use than norm optimists argue, suggest that the risk that nuclear weapons will be used for the first time since 1945 is non-zero and should be taken seriously.

This article also highlights a number of promising avenues for future research. While much experimental work on the nuclear taboo focuses on the public, relatively few studies have examined the views of policymakers themselves.<sup>117</sup> Given the growing use of elite surveys and arguments that the nuclear taboo is “increasingly an elite phenomenon,”<sup>118</sup> scholars should analyze elites’ first- and second-order beliefs about nuclear use. Scholars should also consider whether updating policymakers’ second-order beliefs (e.g., their beliefs about what domestic and foreign publics believe about nuclear use) would influence their first-order preferences regarding nuclear use.<sup>119</sup> Although historically policymakers may have believed that foreign reactions

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113. See Nina Tannenwald, “Is Using Nuclear Weapons Still Taboo?,” *Foreign Policy*, July 1, 2022, <https://foreignpolicy.com/2022/07/01/nuclear-war-taboo-arms-control-russia-ukraine-deterrence/>.

114. See Shannon Bugos, “Russia Suspends New START,” *Arms Control Today*, March 2023, <https://www.armscontrol.org/act/2023-03/news/russia-suspends-new-start>.

115. See Emily Feng, “New Pentagon Report Claims China Now Has over 500 Operational Nuclear Warheads,” *NPR*, October 19, 2023, <https://www.npr.org/2023/10/19/1207156597/new-pentagon-report-claims-china-now-has-over-500-operational-nuclear-warheads>.

116. See Luis Martinez, “Iran Can Make Enough Material for Nuclear Device in ‘about 12 Days,’ US Official Says,” *ABC News*, February 28, 2023, <https://abcnews.go.com/Politics/iran-make-material-nuclear-device-12-days-us/story?id=97536371>.

117. For exceptions, see Paul C. Avey, “MAD and Taboo: U.S. Expert Views on Nuclear Deterrence, Coercion, and Non-Use Norms,” *Foreign Policy Analysis*, Vol. 17, No. 2 (April 2021), pp. 1–14, <https://doi.org/10.1093/fpa/oraa019>; Michal Smetana and Michal Onderco, “Elite-Public Gaps in Attitudes to Nuclear Weapons: New Evidence from a Survey of German Citizens and Parliamentarians,” *International Studies Quarterly*, Vol. 66, No. 2 (June 2022), pp. 1–10, <https://doi.org/10.1093/isq/sqac017>.

118. Nina Tannenwald, “Public Support for Using Nuclear Weapons on Muslims: A Response to Sagan, Valentino, and Press,” in Michal Smetana and Carmen Wunderlich, “Forum,” *International Studies Review*, Vol. 23, No. 3 (September 2021), pp. 1080, <https://doi.org/10.1093/isr/viab002>.

119. For an example of a study that does this, see Matto Mildemberger and Dustin Tingley, “Beliefs about Climate Beliefs: The Importance of Second-Order Opinions for Climate Politics,” *British*

to the use of nuclear weapons would be harsh, this view may not endure if it is a misperception of true public opinion, as the results in this study suggest. If policymakers are confronted with evidence that foreign reactions to nuclear use are not as severe as they previously expected, then policymakers may update their beliefs. On the other hand, perception can sometimes be more powerful than reality. For example, if policymakers continue to believe that disapproval of nuclear use among members of the public in allied countries will be extremely high, then that could deter countries from using nuclear weapons.

Future work should also assess whether elite cues could potentially shift who the public views as members of the in-group or out-group.<sup>120</sup> My expectation is that elite cues would have only a limited ability to alter perceptions of group identity for those countries that citizens feel strongly about and are more familiar with. For example, U.S. policymakers may be unable to significantly alter perceptions of the United Kingdom as an in-group country or North Korea as an out-group country. On the other hand, for countries that the public has less strong feelings about and knows less about—for example, India or Indonesia—perceptions of group identity may be more malleable.

Scholars should consider possible antecedent variables that may help to more fully explain the results found in this article. Specifically, they should identify the “shared attributes” that determine whether a country becomes an ally or partner. Put another way, what factors (e.g., race, religion, regime type, geography, and shared interests or values) determine whether a country becomes part of the in-group or the out-group? These factors are not exactly alternative explanations for my findings. Instead, they may exist earlier in the causal chain and help to explain why individuals value unity with some countries more than others, driving divergent perceptions of when the use of violence is more or less virtuous.

Would the results in this article vary depending on how strongly individuals value in-group loyalty? Prior work demonstrates that support for nuclear use is greater among individuals who support policies that involve harming those who are perceived as deserving punishment, such as applying death sentences

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*Journal of Political Science*, Vol. 49, No. 4 (2019), pp. 1279–1307, <https://doi.org/10.1017/S0007123417000321>.

120. For research on the role of elite cues in the nuclear realm, see Stephen Herzog, Jonathan Baron, and Rebecca Davis Gibbons, “Antinormative Messaging, Group Cues, and the Nuclear Ban Treaty,” *Journal of Politics*, Vol. 84, No. 1 (January 2022), pp. 591–596, <https://doi.org/10.1086/714924>; Post and Sechser, “Public Opinion, Cues.”

to convicted felons.<sup>121</sup> It stands to reason that the principal results in this article would also be stronger for those members of the public who embrace in-group loyalty.<sup>122</sup>

Future work should also analyze the external validity of the results in this article to a scenario involving two nuclear-armed actors.<sup>123</sup> While public support for the use of nuclear weapons by in-group countries should still be relatively higher than for use by out-group countries, I expect that absolute support for nuclear use would be lower given the fear of nuclear retaliation. I also anticipate that a similar dynamic would hold if respondents were “primed” with vivid information about the consequences of a nuclear strike<sup>124</sup> or with details about international law.<sup>125</sup>

Analyzing how variation in the *target* country affects support for nuclear use is another avenue for future research. Presumably, the results should be the opposite of what was found in this study: support for nuclear use against in-group targets should be *lower* than for out-group targets.

More work should also be done on how the strength of the nuclear non-use norm has evolved and, perhaps, weakened over time. In particular, the passage of time since 1945 may help to explain the weakening of the norm. Prior studies demonstrate that graphic information about the costs of a nuclear attack can generally lower support for nuclear use<sup>126</sup> and that the atomic bombing of Japan is an especially dramatic and salient example of these costs.<sup>127</sup>

Finally, scholars should analyze how other aspects of identity—such as the race, gender, partisan affiliation, and foreign policy disposition of individual leaders—influence support for nuclear use.<sup>128</sup> As this article has demonstrated, the identity of who presses the nuclear button is important for understanding the constraints—or lack thereof—against nuclear use.

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121. Sagan and Valentino, “Revisiting Hiroshima in Iran”; Rathbun and Stein, “Greater Goods”; Slovic et al., “Virtuous Violence from the War Room to Death Row.”

122. I did not measure these factors in this study given survey space constraints and to avoid priming respondents before being presented with the treatment.

123. For examples of work along these lines, see Sukin, “Experimental Evidence on Determinants”; and Smetana and Onderco, “From Moscow with a Mushroom Cloud?”

124. Koch and Wells, “Still Taboo?”

125. Carpenter and Montgomery, “The Stopping Power of Norms.”

126. Koch and Wells, “Still Taboo?”

127. Jones, *After Hiroshima*.

128. For an example of an article that analyzes how identity and nuclear weapons intersect, see Matthew Fuhrmann and Michael C. Horowitz, “When Leaders Matter: Rebel Experience and Nuclear Proliferation,” *Journal of Politics*, Vol. 77, No. 1 (January 2015), pp. 72–87, <https://doi.org/10.1086/678308>.