

From Moscow with a Mushroom Cloud?

Russian Public Attitudes to the Use of Nuclear Weapons in a Conflict with NATO

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Keywords

Russia; NATO; nuclear weapons; survey experiment; public opinion; moral foundations theory

Abstract

This article presents findings of an original survey experiment on public attitudes toward nuclear use conducted on a representative sample of Russian citizens. We randomly assigned our participants to experimental treatments with vignettes describing a military conflict between Russia and NATO in the Baltics, where Moscow considered a limited nuclear “escalate-to-deescalate” strike to avert defeat. Our findings show that Russians are significantly more averse to nuclear strikes than to the corresponding use of conventional missiles. The participants disapproved similarly of a demonstrative nuclear explosion in an unpopulated area and of nuclear strikes in a more escalated scenario. We also found associations between the moral values of individuals and strike support corresponding to earlier studies in the United States. Finally, our participants reported similar concerns about both nuclear and conventional strikes, with the worry about civilian casualties and the suffering of victims at the top of the list across experimental treatments.

Accepted for publication in the *Journal of Conflict Resolution* in July 2022.

Introduction

A decade ago, Press, Sagan, and Valentino (2013) made a splash in our field with an original survey experiment on public attitudes toward nuclear strikes. Their findings demonstrated that American citizens were significantly less averse to the military use of nuclear weapons than previously thought, setting off a new wave of research into the nuclear nonuse norm, or the “nuclear taboo.” Unlike earlier historical accounts of high-level decision-making (Tannenwald 2007; Paul 2009; Sauer 2015), this new wave has been fielding large-N surveys to examine public attitudes toward the use of nuclear weapons under different experimental conditions (Sagan and Valentino 2017; Haworth, Sagan, and Valentino 2019; Rathbun and Stein 2020; Koch and Wells 2020; Montgomery and Carpenter 2020; Smetana and Vranka 2021; Bowen, Goldfien, and Graham 2022; see Smetana and Wunderlich 2021 for a review). However, most of these studies have mainly focused on the United States; only recently have scholars started to conduct these experiments to investigate (non)use attitudes in other nuclear-armed countries (Sukin 2020; Egel and Hines 2021; Dill, Sagan, and Valentino 2022; Horschig 2022; Allison, Herzog, and Ko 2022).

Arguably, the key nuclear-armed country for which we currently lack this kind of experimental evidence is the Russian Federation. Russia possesses by far the largest nuclear arsenal among non-Western countries, and it is the only actor that can compete with the United States in the number of nuclear warheads and their delivery systems (Kristensen and Korda 2022). Russia’s annexation of Crimea in 2014 led to the dramatic deterioration of East-West relations, and great power competition has returned as the main strategic concern in the “third nuclear age” (Smetana 2018; Cooper 2021; Futter and Zala 2021). Since February 2022, Russia has been involved in full-scale war in Ukraine, during which Moscow made both explicit and implicit nuclear threats (for a chronology, see Arndt & Horowitz, 2022). This war further

highlights the significance of the Russian case and underlines the need to gain new insights into Russian views on the use of nuclear weapons.

To address the lack of such studies in the Russian context, we conducted a survey experiment on public attitudes toward nuclear use on a representative sample of 1,507 Russian citizens. Rather than merely replicating earlier experimental work in a different national setting, our aim was to design an original survey revolving around fictional but realistic scenarios that reflect the urgent geopolitical concerns in the contemporary international security environment. Our participants received vignettes describing a military conflict between Russia and NATO countries in the Baltics. Many Western analysts argue that this is where the threat of Russian nuclear use primarily lies nowadays: facing conventionally superior NATO armies, Moscow could conduct a limited nuclear strike to “de-escalate” the conflict, compel NATO to meet the Russian leadership at the negotiating table, and ultimately score a political victory (Davis et al. 2019; Kroenig 2018; Kühn 2018; Sokov 2014; Zysk 2018; Cimbala and McDermott 2016; Luik and Jermalavicius 2017; Schneider 2018; Fink and Oliker 2020).¹ Given that nuclear weapons have not been used in warfare since 1945 and their employment would certainly be seen as an extraordinary measure by the Russian public, our scenarios portray a high-stakes situation where nuclear use could conceivably prevent a strongly undesirable outcome – a military defeat in a prominent, great power conflict.

Our first aim in the experiment was to examine the baseline difference in support for nuclear and conventional strikes and explore the elasticity of Russian views on nuclear use with respect to the expected collateral damage and the shifts in conflict intensity. To this end, we

¹ Some scholars argue that the Western understanding of “escalate-to-deescalate” strikes does not fully correspond to the actual Russian nuclear strategy (Ven Bruusgaard 2021; Oliker and Baklitskiy 2018; Tertrais 2018). Nevertheless, it remains a prominent concept in Western strategic thinking and strongly influenced, for example, the 2018 U.S. Nuclear Posture Review (Smetana 2018).

randomly assigned our participants to experimental treatments and investigated the differences in their support for (1) a nuclear strike against a NATO military base and the corresponding use of conventional missiles; (2) a nuclear strike against the military base and a purely demonstrative nuclear explosion; (3) and a nuclear strike when the conflict remains limited outside of the borders of Russia and when it escalates to attacks on the Russian territory proper.

Our second aim was to engage with the recent literature on public attitudes toward nuclear use in the United States that draws on the Moral Foundations Theory (MFT) from moral psychology (Rathbun and Stein 2020; Smetana and Vranka 2021). In particular, we intended to examine whether the association between moral foundations of individuals and the public aversion to the use of nuclear weapons also holds in Russia as a non-Western country or whether this is a culturally-specific dynamic in the West. Moreover, building on Smetana and Vranka (2021), we investigated whether the MFT approach allows us to identify any specific moral barriers with respect to nuclear strikes or whether the relationship between moral values and strike support is essentially identical for nuclear and conventional weapons.

Finally, our third aim was to explore the reasoning behind our participants' approval or disapproval of the use of nuclear weapons in our scenarios. We asked them to evaluate the relative importance of twelve potential concerns, which reflect the various theoretical explanations of nuclear nonuse in world politics. We also examined to what extent these concerns are specific to nuclear weapons and how the relative importance of these concerns differs between those participants who approved of a nuclear strike in our scenarios and those who disapproved of it.

Our findings show a clear pattern of a strong aversion to nuclear weapon use among Russian citizens, with an overwhelming majority preferring to face the prospect of military defeat than to agree with a nuclear “de-escalatory” strike against a NATO base in Poland. The disapproval of nuclear strikes remains stable even in the treatments where these weapons were

stripped of some of their main negative side effects (as in a demonstrative explosion over an unpopulated area) or when a war in the Baltics spilled over into Russian territory. With respect to the MFT, we found that, as in the United States, the “individualizing foundations” were associated with higher aversion toward nuclear use and the “binding foundations” with lower aversion – but we also demonstrate that these associations were not nuclear weapons-specific and applied correspondingly to conventional missile strikes. Finally, we found that the participants in our nuclear and conventional conditions reported very similar concerns when they were considering the use of force in our scenarios, with the worry about civilian casualties and suffering of victims at the top of the list across experimental treatments.

Beyond the contribution to the scholarly literature on public attitudes to nuclear use, these findings should be pertinent for policymakers in NATO countries. Earlier studies have shown that the Russian public tends to support the Kremlin’s military adventurism (Kolesnikov 2016; Gudkov 2019), and, at the same time, sees the Russian nuclear arsenal as an increasingly important aspect of the country’s great-power status (Wagner 2021). In this context, the complex nuclear modernization, saber-rattling, as well as the demise of the key pillars of arms control architecture have only reinforced Western fears that Russia is prepared to use nuclear weapons as a coercive tool in a future conflict on NATO’s eastern flank. Our findings, however, suggest that if the Russian leadership would want to use nuclear weapons in a conflict with NATO, even in a very limited way as a demonstration of resolve, it would likely face a strongly disapproving domestic reaction. Obviously, this does not mean that public opinion would be the only (or even the most important) factor in Moscow’s decision-making process regarding nuclear employment. Yet, as we discuss later in this paper, prior research has convincingly shown that public views on foreign policy do matter for elite decision-making in Russia – and, in fact, increasingly so. As such, a deeper understanding of public attitudes in Russia can be an

important addition to our attempts to decipher Russian strategy through the reading of official documents and the ambiguous statements of Vladimir Putin and his decision-making circle.

We proceed as follows. First, we review existing public opinion polls on Russian views on nuclear weapons. Second, we formulate our theoretical expectations and hypotheses. Third, we introduce the experimental design for our study. Fourth, we present the results of our analyses. Fifth, we provide a broader discussion of the scholarly and policy implications of our findings. We conclude with a summary of findings and recommendations for further research.

Russian views on nuclear weapons

During the Cold War, Soviet citizens were mostly kept in the dark about developments in the nation's nuclear weapons policy. The image of a nuclear apocalypse was less present in the Russian national psyche than in the West, not least given the absence of "Soviet nuclear Armageddon stories" (Deriglazova & Rozhanovskaya, 2020, p. 131). Particular aspects of the Soviet nuclear program were not a common subject of discussion among the public. This, however, changed after the dissolution of the Soviet Union, when defense matters, including nuclear policy, have become featured more frequently in the Russian news. As Kolesnikov (2016, p. 1) notes, "peddling threats, external and internal, including the threat of war, to the Russian people is a key tool of the Putin regime's political strategy." Accordingly, the public views on these matters have gradually become a relevant factor in the decision-making of the leadership in Moscow (Zimmerman 2002).

Over the years, pollsters such as the Russian Public Opinion Research Center (VTsIOM) and the Levada Center have provided some limited insights into Russian views on nuclear weapons. First, there is a consistent finding that "Russians like their nuclear weapons" (Sokov, 2016, p. 204), mainly because the possession of a nuclear arsenal gives them a sense of security and importance (Akhtamzyan 2006). In longitudinal polling between 1999 and 2018, a growing share of the population considered "military might, including nuclear weapons" an attribute of

Russian greatness (Levada Center 2019). The view that nuclear weapons are an indispensable aspect of Russian identity has been on the rise in the past two decades, with an increasing number of Russians who “see military strength and nuclear weapons as the main symbol of international prestige and pride” (Wagner, 2021, p. 162).

Second, Russians are fairly supportive of nuclear arms control and not particularly in favor of expanding their nuclear arsenal (Akhtamzyan 2006; Steinbruner and Gallagher 2008; Wagner 2021). Only about one third of Russians believes that nuclear weapons should target any particular state permanently (Akhtamzyan, 2006).

Third, Russians are only somewhat concerned about the threat of a nuclear war. In a 2006 poll, about 29% of respondents believed that it was likely that a foreign country would use nuclear weapons against Russia (Akhtamzyan, 2006). In a 2015 poll, about 13% of Russians reported fearing a nuclear war, yet more than half of them feared a war between Russia and NATO (Sokov, 2016). Positive views on nuclear weapons rose sharply after NATO’s 1999 bombing of Yugoslavia (Deriglazova & Rozhanovskaya, 2020). The United States remains seen as the largest nuclear threat after nuclear-armed terrorist groups (Akhtamzyan, 2006; Deriglazova & Rozhanovskaya, 2020).

To the best of our knowledge, there are no contemporary polls examining to what extent the Russian public would approve of the use of nuclear weapons in a conflict with NATO. While Russians have been increasingly supportive of their country’s possession of nuclear weapons and see NATO as a major threat, it is not clear whether these attitudes translate to support for actual nuclear strikes. As Walker (2010) points out, there are distinct norms in world politics that regulate the possession and the use of nuclear weapons, and the aversion to the military employment of nuclear weapons does not preclude enthusiastic support for maintaining nuclear arsenals. Overall, our field lacks studies that would make an inquiry into the strength and the nature of “atomic aversion” in Russia – one of the gaps our paper is trying to fill.

Theoretical expectations

Scenarios of nuclear use

Our first aim in the experiment is to investigate the baseline difference in Russian public attitudes toward nuclear and conventional missile strikes. This will allow us to uncover to what extent Russians perceive the extraordinary nature of nuclear weapons when compared to attacks that are also strategic in their aims and would likewise result in a high number of casualties but are still perceived as “conventional” in the parlance of world politics. Building on Press, Sagan, and Valentino (2013), we expect that on average, Russian citizens will see the use of a nuclear weapon against a military target in a conflict with NATO significantly less approvingly than the use of conventional missiles. Even if these attitudes do not correspond to a full-fledged “unthinkable” taboo shared by virtually everyone, we believe that most citizens would see the use of nuclear weapons as an extreme, last measure option that would be considerably less approved of than conventional strikes absent of the corresponding stigma.

→ *H₁: Russian citizens are more averse to the limited use of nuclear weapons in a military conflict with NATO than to the use of conventional missiles.*

Another aim of our experiment is to examine the elasticity of Russian views when a nuclear strike is stripped of its main negative side effects – that is, the dramatic loss of civilian life. In line with the findings of Bowen, Goldfien, and Graham (2022), we would expect that the public aversion to nuclear use would be significantly reduced under these conditions. It is, however, also possible that large swaths of the public see nuclear use as unequivocally wrong under any circumstances, and would not, therefore, become more accepting of nuclear use even when these negative characteristics disappear.

In the U.S. context, there were so far mixed findings on the elasticity on public views with respect to civilian deaths. In Sagan and Valentino (2017), there was no significant change

in support for nuclear strikes between conditions that described 100,000 and 2 million civilian fatalities. Haworth, Sagan, and Valentino (2019) similarly found that strikes resulting in 15,000 and 1 million fatalities saw a comparable level of public support. However, Koch and Wells (2020) found that vivid information about the harm to civilians that results from a nuclear strike decreases public support. Similarly, Smetana and Vranka (2021) found that a higher number of civilian fatalities lowers both the approval of and preference for nuclear use.

With respect to the real-world relevance of our inquiry, Russian strategic thinking indeed envisages the possibility of conducting a purely demonstrative nuclear strike that would result in no (or very few) casualties and would have no (or very little) direct operational impact on the battlefield situation (Johnson 2018). Some analysts, therefore, suggest that rather than using nuclear weapons against NATO assets, Russia might consider demonstratively exploding a nuclear weapon in an unpopulated area as an alternative form of coercive pressure (Luik and Jermalavicius 2017; Kühn 2018). If the Kremlin believes that such a demonstration would be significantly more acceptable for the relevant audiences (including the Russian public) than a direct strike against a military target, it might be tempted to explore this option in a conflict with NATO.

→ *H₂: Russian citizens are more averse to the use of a nuclear weapon against a NATO military target than a demonstrative nuclear explosion in an unpopulated area.*

We can also gain another important insight into the elasticity of Russian views by comparing the level of support for nuclear use under different levels of conflict intensity – that is, to examine whether we can see a significant shift in attitudes when there is a recognizable shift in the conflict escalation. In the U.S. context, Haworth, Sagan, and Valentino (2019) found that the escalation of the situation (a North Korean attack on a U.S. ship, in addition to a long-range

missile test) does increase public support for a nuclear strike against North Korea. In a partial replication of Sagan and Valentino (2017), Smetana and Vranka (2021) found that a higher number of expected fatalities among American troops drives the support for nuclear use up.

Our scenarios would accordingly test for the elasticity of public support in a higher-stakes conflict situation. Arguably, understanding public support for nuclear use under different escalation scenarios carries potentially very important strategic implications. Some experts on Russian nuclear strategy argue that Moscow's actual threshold for using nuclear weapons has been ambiguous (Fink 2017). In line with the latest formulation of the Russian declaratory policy (Putin 2020), Moscow might refrain from nuclear strikes in a limited conflict outside of its borders but resort to nuclear use once the Russian territory proper comes under attack. If the Kremlin believes that direct attacks on Russian soil make the use of nuclear weapons significantly more justified in the eyes of the public, it may perceive less of a normative barrier to conduct a nuclear strike on the higher rung of the escalation ladder.

→ *H₃: Russian citizens are more averse to the use of nuclear weapons in a limited military conflict with NATO outside of Russian borders than in an escalated conflict where the Russian territory is under attack.*

Moral foundations and (non)use attitudes

Another aim of our experiment is to follow up on the recent research in the United States that demonstrated the relationship between individuals' moral values and their support for nuclear strikes (Rathbun and Stein 2020; Smetana and Vranka 2021). These studies draw on the Moral Foundations Theory (MFT), which identifies building blocks of morality shared by individuals across cultures: prevention of harm and caring for the vulnerable (*care/harm*), fairness and reciprocity (*fairness/cheating*), loyalty to one's in-group (*loyalty/betrayal*), respect for authorities and social hierarchies (*authority/subversion*), and maintenance of purity and avoidance of social contamination (*sanctity/degradation*) (Graham et al. 2013). While these

five moral foundations are supposedly universal, their relative importance varies both within and across cultural domains. Research in moral psychology (Graham, Haidt, and Nosek 2009; Graham et al. 2011) suggests that while the first two “individualizing foundations” correspond to the liberal understanding of morality in the West, many non-Western cultures have rely strongly on the remaining three “binding foundations”, which are associated with attitudes and behaviors benefiting larger (in-)groups (Haidt and Joseph 2004).

According to Rathbun and Stein (2020, 796), “[n]uclear weapons are symbols as well as explosive devices, and their symbolism should increase their perceived utility when seen through the lens of nonliberal ethical values [...] in contrast, the symbolic qualities of nuclear weapons should be repellent from the perspective of the individualizing foundations, which emphasize the rights and well-being of others.” In the U.S. setting, individualizing foundations were indeed associated with a higher aversion to nuclear strikes and binding foundations with a lower aversion. A study of Russian attitudes can reveal to what extent these associations are culturally-specific to the United States as a Western country or if they similarly hold in non-Western Russia.

- ➡ *H₄: Russian citizens’ individualizing moral foundations are associated with higher aversion to the use of nuclear weapons.*
- ➡ *H₅: Russian citizens’ binding moral foundations are associated with lower aversion to the use of nuclear weapons.*

However, Smetana and Vranka (2021) also found that there was no significant interaction between the type of strike and moral foundations in their study of U.S. attitudes. As such, they note that they “did not find any evidence of any specific moral foundations-related barriers connected with the use of nuclear or chemical weapons, suggesting that the public does not necessarily separate them as a qualitatively distinct category of immoral

weapons” (Smetana and Vranka 2021, 385). Drawing on these findings, we formulate the following hypothesis to test whether we can find a similar pattern in the study of Russian attitudes.

→ *H₆: There is no significant interaction between Russian citizens’ moral foundations and the type of weapon used in a military strike.*

Reasoning behind strike (dis)approval

The exploratory part of our survey will examine the self-reported reasoning of our participants behind their approval or disapproval of the strikes in our scenarios. Building on Press, Sagan, and Valentino (2013), we assume that our participants might be concerned about the *international reputation* of the perpetrator and the setting of a *dangerous precedent*, as well as the concern that nuclear use is *immoral* and results in too many *civilian casualties*. To some extent, these concerns reflect the theoretical debate between the “nonuse tradition” (Sagan 2004; Paul 2009) and the “nuclear taboo” literature (Tannenwald 2007).

We also explored some additional considerations that are commonly discussed in nuclear scholarship and could be possibly relevant in our respondents’ reasoning. They include concerns about *nuclear retaliation* or *conventional retaliation*, in line with literature that identifies nuclear (Jervis 1984; Waltz 1981) and conventional (Ludvik 2019; Sherrill 2018) deterrence as the key causal factor in nonuse decisions. In addition to the worry about civilian casualties, some individuals may also be concerned about other negative side effects of nuclear use, such as disproportionate amount of *enemy casualties* and widespread *environmental destruction* (Bowen, Goldfien, and Graham 2022). The concerns that any use of nuclear weapons is incompatible with *international law* and would cause great *suffering* to individuals have been at the forefront of the Humanitarian Initiative to ban nuclear weapons globally (Borrie 2014). The retribution motive corresponds to the concern that the enemy *deserves to be*

punished for its actions (Sagan and Valentino 2017; Rathbun and Stein 2020). Finally, some individuals might reason that nuclear use is meaningless because it would have *no effect* on what the enemy does (Mueller 2012).

Experimental design

We designed a survey experiment fielded to a representative sample of Russian adult citizens by a polling company IPSOS between May 13 and 25, 2021. Our sample consisted of 1,507 participants, approximating the population of the Russian Federation in gender, age, and regional diversity. Our sample includes both supporters of the current leadership in Moscow and its opponents, with most respondents positioned somewhere in the middle of the scale and 15% of respondents strongly disapproving of the Russian government. The survey consisted of eight parts: socio-demographic items; the Moral Foundations Questionnaire (MFQ); a vignette with one of the versions of the treatment; questions about strike approval and preference; evaluation of individual concerns; questions about leadership approval and attitudes toward other countries; survey debrief.²

To investigate support for nuclear strikes under different experimental conditions, we randomly divided our participants into four treatments. A short vignette included one of the versions of a fictional scenario describing protests of the Russian minority in Latvia that had been violently suppressed by the Latvian army. To protect the Russian minority, the Russian army crossed the borders and occupied the Latgale region, leading Riga to invoke Article V and asking NATO allies for military assistance. The first wave of NATO forces then clashed with the Russian army at Latgale's western borders, with heavy losses on both sides after several days of fighting.

² See an online Appendix 1 for the socio-demographical composition of our sample and Appendix 2 for all survey items.

Further description of the scenario differed across treatments. In condition A (the “limited nuclear” condition), Russian generals proposed to use a single nuclear weapon against a NATO military base in Poland to demonstrate Russian resolve and force NATO representatives to meet with their Russian counterparts and negotiate peace terms favorable to Moscow. On one hand, we noted that without this nuclear strike, Russia would risk a humiliating defeat, would have to withdraw its forces, and leave the Russian minority in Latvia to its fate. On the other hand, the strike would likely result in a high number of fatalities as collateral damage. The condition B (the “limited conventional” condition) was identical, except that 50 conventional missiles were proposed instead of a single nuclear weapon against the base.³ Condition C (the “demonstrative nuclear” condition) was identical to A, except that the generals proposed to explode a nuclear weapon in an unpopulated area in the North Sea instead of using it against the NATO base; as such, there was no anticipation of collateral damage. Finally, the condition D (the “escalated nuclear” condition) was identical to A, except the original conflict situation has escalated further: the subsequent wave of NATO forces reclaimed Latgale, pushed Russian forces out of Latvia, and launched missile strikes against targets in Russian territory.

Following earlier nuclear nonuse experiments, we were interested in examining both our participants’ approval and preference with respect to these strikes. For the approval part, the participants indicated how much they would agree or disagree with the strike described in the scenario on a six-point Likert scale from 1–strongly agree to 6–strongly disagree. For the preference part, we asked whether they would prefer an alternative method of strike if they were

³ We thereby followed Press, Sagan, and Valentino (2013), who compared the use of 100 conventional missiles with the use of 2 nuclear missiles.

to choose; in A, B, and D, they chose between using a single nuclear weapon or 50 conventional missiles, in C, they chose between a direct and a demonstrative strike.

For our inquiry into the relationship between moral foundations and strike approval, our participants filled in the MFQ, a standardized survey tool to measure individuals' scores in five moral foundations (Graham et al. 2011).⁴ To control for potentially confounding variables, we also added some additional items that we would control for in the regression analysis. In line with earlier scholarship, we included questions about gender, age, income, and education as standard socio-demographic measures. We did not include the usual questions about political affiliation, given that Russia is a country that does not allow for free competition among independent political parties. Instead, we asked the participants about their approval of the leadership of Russia on a five-point scale from 1—strongly disapprove to 5—strongly approve. Moreover, we asked how “cold” or “warm” the participants felt toward several countries (the United States, Poland, Latvia, the Czech Republic, the Netherlands, China, and Ukraine) on a slider from 0 (“coldest”) to 10 (“warmest”). While we were primarily interested in attitudes toward Poland, as a country that hosted the NATO base in our scenarios, we included several other countries to detract attention and limit the priming effect by the preceding scenario.

To examine the relative importance of individual concerns, we asked the participants about the reasoning behind their agreement or disagreement with the strike and asked them to evaluate the relative importance of twelve concerns on a five-point scale from 1—not at all important to 5—very important. Since we asked the same set of questions across conditions, we were able to compare directly the concerns of individuals in both nuclear and conventional treatments. The survey concluded with a short debrief section to counteract possible conditioning effects of our experiment, in line with recent calls for a more responsible approach

⁴ The MFQ, including a Russian translation, is available at <https://moralfoundations.org>.

to public surveys portraying the use of military force (Carpenter, Montgomery, and Nylen 2020).

Results

Strike approval and preference between conditions

In the data analysis, we first compared the level of approval in “limited nuclear” (A) and “limited conventional” (B) treatments. Following Press, Sagan, and Valentino (2013), we dichotomized the six-point scale to 0 (“approve”) and 1 (“disapprove”). As we show in Figure 1, 45% of participants approved of a conventional strike and 55% disapproved. For a nuclear strike, approval dropped to 27% and disapproval rose to 73%. The difference between the conditions was statistically significant ($\chi^2(1) = 26.7, p < .001$).

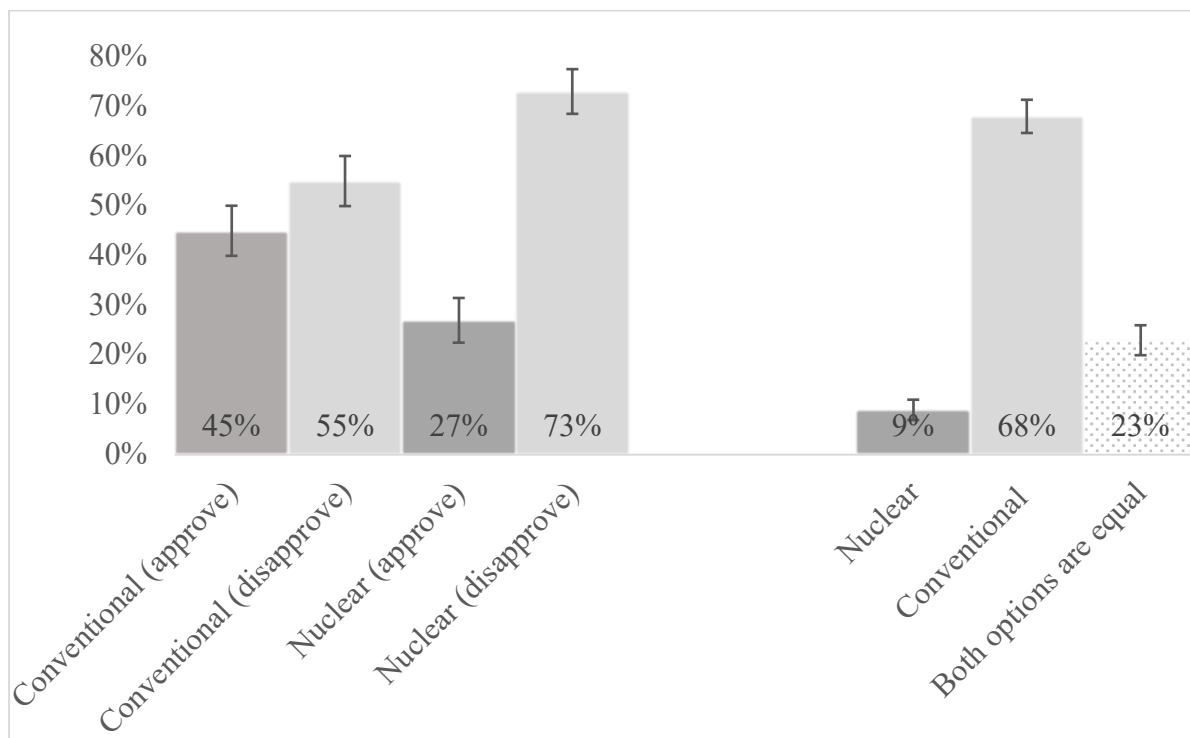


Figure 1. Approval of and preference for conventional and nuclear strikes. Error bars: 95% CI. $N_{(\text{approval})} = 753$, $N_{(\text{preference})} = 459$.

Next, we examined the preferences of our participants once they were asked whether they would choose a nuclear or a conventional strike. Figure 1 shows that 9% preferred the nuclear

option, 68% the conventional option, and for 23%, both options were equal. All differences were significant at $p < .001$. As such, we gain empirical support for our hypothesis H_1 that Russian citizens are more averse to the limited use of nuclear weapons in a conflict with NATO than to the use of conventional missiles.

We repeated the same procedure for the treatments involving a nuclear strike against a NATO base (A) and a demonstrative nuclear explosion in an unpopulated area in the North Sea (C). As we show in Figure 2, the level of approval was identical in both conditions ($\chi^2(1) = 0.0019, p = 0.965$): 27% of respondents agreed with nuclear use and 73% disagreed.

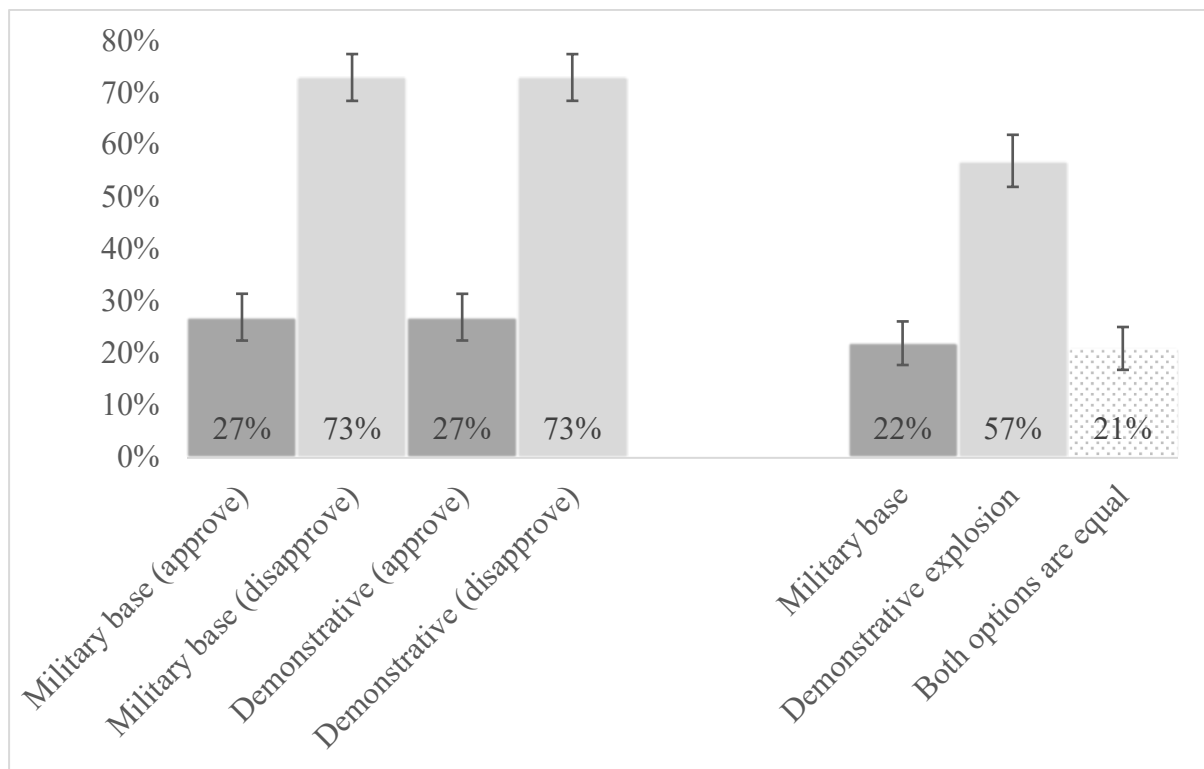


Figure 2. Approval of and preference for a nuclear strike against a military base and a demonstrative nuclear explosion. Error bars: 95% CI. $N_{(\text{approval})} = 752$, $N_{(\text{preference})} = 255$.

Yet, Figure 2 also shows a clear preference for a demonstrative explosion once the participants were provided with both options: 57% preferred the demonstrative explosion, 22% the strike against the military base, and 21% saw both options as equal. The difference between the demonstrative option and the two remaining options was statistically significant ($p < .001$). As such, we gain only partial empirical support for H_2 : while the strike approval in the two

conditions was identical, if given a choice, Russians clearly prefer a demonstrative strike over a direct attack.

Finally, we repeated the same procedure to compare the level of strike approval in the original “limited conflict” scenario (A) and in a more pressing “escalated conflict” scenario (D). As we show in Figure 3, the nuclear strike in a limited scenario was only slightly less approved (27%) than in an escalated scenario (29%). The difference was not statistically significant ($\chi^2(1) = 0.47, p = 0.492$).

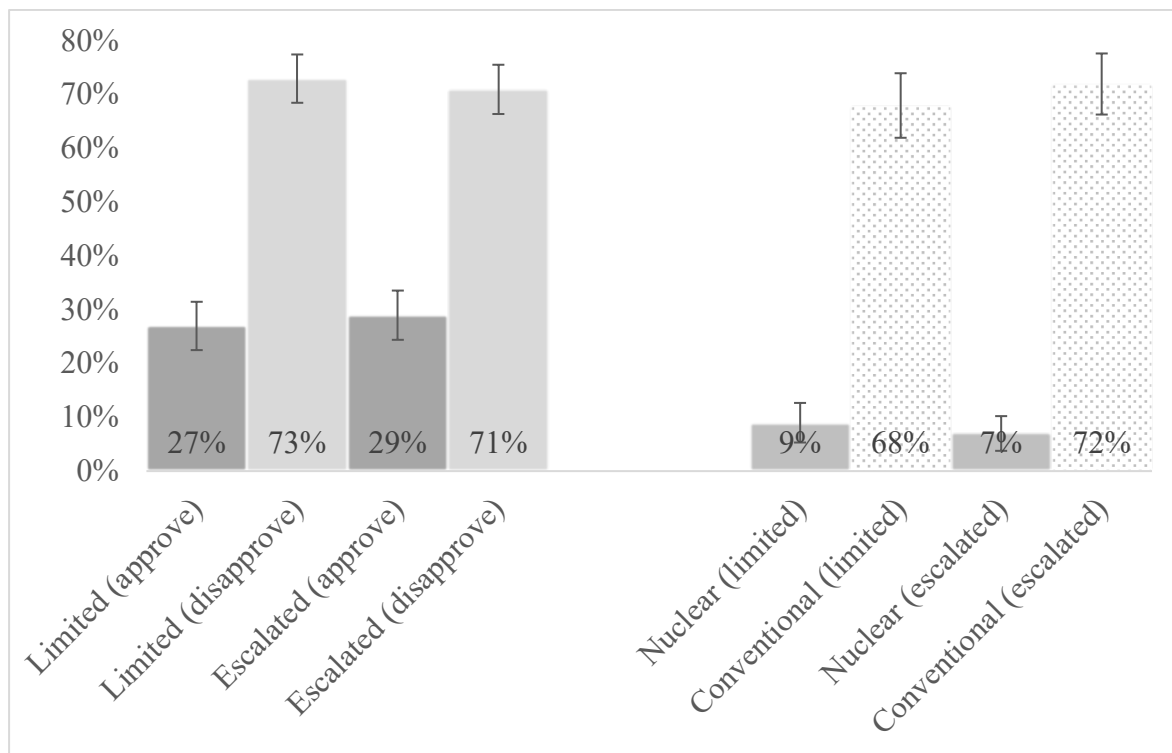


Figure 3. Differences in approval of and preference for a nuclear strike in limited and escalated scenarios. Error bars: 95% CI. $N_{(\text{approval})} = 752$, $N_{(\text{preference})} = 472$.

As for strike preference, in a limited scenario A, 9% of participants preferred the nuclear option, 72% preferred the conventional option, and for 19%, both options were equal. In an escalated scenario D, 7% preferred nuclear, 68% conventional, and 25% either option. The difference in strike preference between A and D was not statistically significant ($\chi^2(2) = 2.46, p = 0.293$). As

such, we did not gain empirical support for H_3 that Russian citizens become less averse to the use of nuclear weapons in an escalated conflict where the Russian territory is under attack.

Regression analysis

Next, we conducted a binominal logistic regression with approval (0) or disapproval (1) of a military strike as a dependent variable. In Model 1a, we included the basic sociodemographic variables (gender, age, education, and income) and the type of strike (nuclear–conventional) as predictors. As we show in Table 1, the regression coefficients for the type of weapon used in the strike remained significant. Moreover, the model shows that women judged the use of a military strike less approvingly than men. Other sociodemographic predictors were not significantly related to strike approval.

To see whether the effects of sociodemographic predictors are associated with the specific type of strike, we examined the interaction between the condition and other predictors (Model 1b). Our findings show that there was a significant interaction between gender and the type of strike: women were, on average, more averse to military strikes than men, but the difference was particularly large in the conventional domain. In the nuclear domain, the attitudes of women and men become more similar. We also found an income-related interaction: participants with a lower monthly income were more supportive of nuclear use than those with a higher income, while the attitudes are reversed in the conventional scenario. Model 1b fitted the data significantly more ($\chi^2(4) = 9.67, p = 0.046$), than the previous Model 1a without the interaction terms.

Table 1. Approval of a military strike (logit)

	Model 1a	Model 1b	Model 2a	Model 2b	Model 3
Predictor	Coef. (SE)	Coef. (SE)	Coef. (SE)	Coef. (SE)	Coef. (SE)
Condition (nuclear – conventional)	0.778*** (0.126)	1.209 (0.621)	0.825*** (0.130)	0.088 (0.677)	0.820*** (0.132)
Gender (female – male)	0.512*** (0.120)	0.983*** (0.232)	0.428*** (0.123)	0.437*** (0.124)	0.381** (0.127)
Age	0.126 (0.067)	0.093 (0.131)	0.106 (0.069)	0.109 (0.069)	0.168* (0.071)
College education	0.162 (0.122)	-0.004 (0.230)	0.153 (0.124)	0.151 (0.125)	0.197 (0.127)
Income (monthly > 30k RUB)	-0.055 (0.121)	0.390 (0.227)	-0.046 (0.123)	-0.042 (0.124)	-0.048 (0.126)
Condition * Gender	–	-0.653* (0.272)	–	–	–
Condition * Age	–	0.034 (0.153)	–	–	–
Condition * College education	–	0.231 (0.272)	–	–	–
Condition * Income	–	-0.626* (0.269)	–	–	–
Individualizing foundations (IF)	–	–	0.881*** (0.125)	0.849*** (0.224)	0.716*** (0.131)
Binding foundations (BF)	–	–	-0.570*** (0.126)	-0.711** (0.231)	-0.286* (0.141)
Condition * IF	–	–	–	0.044 (0.269)	–
Condition * BF	–	–	–	0.196 (0.274)	–
Attitude toward Poland	–	–	–	–	0.118*** (0.022)
Leadership approval	–	–	–	–	-0.211*** (0.054)
Intercept	-0.566* (0.287)	-0.849 (0.534)	-1.825*** (0.397)	-1.309* (0.609)	-2.127*** (0.440)
Model fit (R^2_{McF})	0.034	0.039	0.063	0.064	0.091

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

In the next step, we tested our hypotheses concerning moral foundations. In line with Rathbun and Stein (2020), we reduced the five MFQ variables to two higher order factors: “individualizing foundations” (IF), averaging scores from care/harm and fairness/cheating subscales, and “binding foundations” (BF), averaging loyalty/betrayal, authority/subversion, and sanctity/degradation. The mean score of our participants’ IF was 3.5, whereas the mean score of BF was 2.99, in line with other studies of moral foundations in non-Western countries.⁵

We included IF and BF as additional predictors to Model 1a. The resulting Model 2a shows that both were significantly associated with the approval of military strikes: in line with our hypotheses, the participants who scored high on IF were less likely to agree with the strike (H_4) and those who scored high on BF were more likely to agree (H_5). Model 2a fitted the data significantly better ($\chi^2(2) = 54.07, p < 0.001$) than the previous Model 1a without the moral foundations.

Model 2b then shows that there were no significant interactions between the moral foundations and the experimental condition, suggesting that moral foundations are likely associated with a general level of support for military strikes irrespective of whether they are nuclear or conventional. We, therefore, gain empirical evidence for H_6 : while IF are associated with higher aversion to nuclear use and higher scores in BF with lower aversion, these associations are not nuclear weapons-specific and similarly apply to conventional strikes.

⁵ Note that some MFQ studies use a 1–6 scale rather than a 0–5 scale. If we had used the former, the mean score would be 4.5 for IF 3.99 for BF. This is in line with Dogruyol, Alper, and Yilmaz (2019), who found that the mean scores in WEIRD (Western, Educated, Industrialized, Rich, and Democratic) countries were 4.91 (IF) and 3.94 (BF), whereas in non-WEIRD countries 4.63 (IF) and 3.96 (BF).

Finally, we further expanded the model with moral foundations (2a) by including two additional predictors: “warmness” toward Poland, as a country that was the target of the strike; and approval of the leadership of Russia, which would necessarily decide on the conduct of the strike. As we show in Model 3, both these factors were statistically significant ($p < 0.001$): a “warmer” attitude toward Poland reduces the likelihood of strike approval, while a higher approval of the Russian leadership increases it. The inclusion of these two predictors somewhat reduced the regression coefficient of BF (which can be explained by the leadership approval logic partially driving the authority dimension of the “binding” morality), but both IF and BF remained statistically significant in the model. Finally, age became significant in Model 3, with older participants being more averse to the use of military strikes. Altogether, Model 3 fitted the data significantly more ($\chi^2(2) = 51.0, p < 0.001$) than the previous Model 2a. Table 2 sums up the results with respect to each hypothesis.

H_x	Hypothesis	Conditions	Approval	Preference
H_1	<i>more averse to the limited use of nuclear weapons than conventional missiles</i>	A – B	Yes	Yes
H_2	<i>more averse to nuclear use against a military target than a demonstrative nuclear explosion</i>	A – C	No	Yes
H_3	<i>more averse to nuclear use in a limited conflict than in an escalated conflict</i>	A – D	No	No
H_4	<i>individualizing moral foundations associated with higher aversion to nuclear use</i>	All	Yes	–
H_5	<i>binding moral foundations associated with lower aversion to nuclear use</i>	All	Yes	–
H_6	<i>no interaction between moral foundations and the weapon type</i>	All	Yes	–

Table 2. Empirical support for each hypothesis (summary results).

Reasoning behind strike (dis-)approval

Finally, we analyzed the self-reported concerns of our participants regarding the strikes described in our scenarios. We centered the ratings of the importance of the concerns by subtracting the mean rating for the given participant from the rating of each concern. Figure 4 shows the concerns for all participants in a descending order, with the concern about civilian casualties being rated as the most important on average.

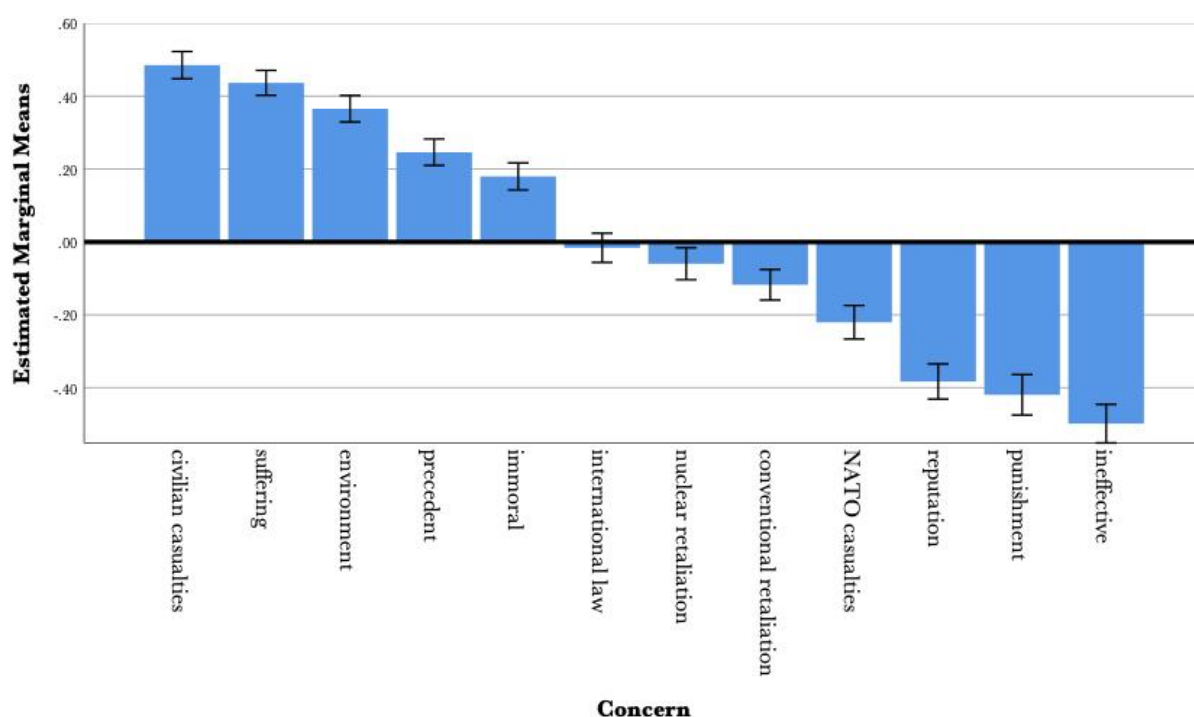


Figure 4. Relative importance of concerns across conditions. Error bars: 95% CI. $N = 1,507$.

Notably, there were no statistically significant differences between nuclear and conventional conditions ($p = 0.397$; see an online Appendix 3 for a more detailed analysis). This suggests that Russian citizens share similar concerns when they are considering the use of force in a military conflict, the type of weapon notwithstanding.

Figure 5 shows the differences between those who approved of and those who disapproved of nuclear use in our experiment. Overall, there were significant differences between the two groups ($p < 0.001$). For both groups, the concern for civilian casualties was

still a dominant one, although it was clearly stronger for those who disapproved of the strikes. There were also more pronounced differences: those who approved of the strikes were more concerned about both nuclear and conventional retaliation, about Russia's international reputation, the effectiveness of the strike, and the desire to punish NATO forces for their actions. Those who disapproved of the strikes, on the other hand, were more concerned about NATO casualties, about the breaking of a precedent, about the immorality of the strikes, international law, impact on the environment, and the victims' suffering.

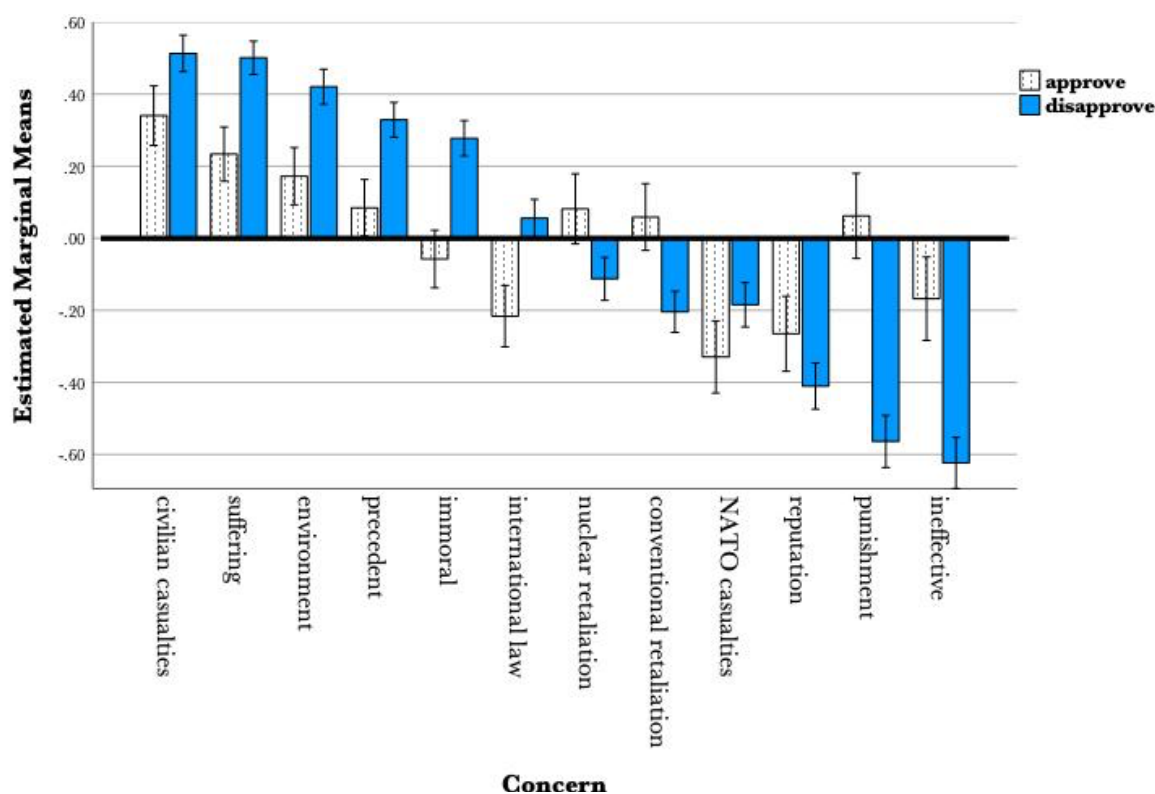


Figure 5. Relative importance of concerns for those who approved of and those who disapproved of the use of nuclear weapons. Error bars: 95% CI. $N = 1,129$.

Discussion

If “Russians like their nuclear weapons,” as Sokov (2016, p.204) claims, they certainly like much less the idea of their military use. Our findings suggest that a significant majority of

Russian citizens would disagree with a limited “de-escalation” nuclear strike in a conflict with NATO even when such a move would help Moscow to avert defeat. The data show that this is not merely a principled pacifist stance; when dozens of conventionally-armed missiles were proposed for an analogous strike on a NATO base, almost half of our participants supported it. Moreover, only a very small fraction (less than 10% in every relevant condition) of our respondents would prefer the nuclear over the conventional option if given the choice. These results provide us with empirical support for our baseline expectation that even if Russian citizens see nuclear weapons as an important aspect of their country’s identity, they are generally averse to the idea of their use.

To our surprise, the number of participants who disagreed with nuclear use held steady even when the nuclear explosion was “merely” demonstrative in an unpopulated area. In fact, a simple comparison of the results in treatments B and C show that there was significantly higher support for a conventional strike resulting in a high number of deaths among NATO soldiers and Polish civilians than for a nuclear explosion absent of collateral damage. At the same time, we saw that most respondents indicated that they had been concerned about civilian casualties, and that they are clearly able to differentiate between the two types of nuclear use: were they to choose, a large majority would prefer a demonstrative explosion. What to make of these findings?

Our interpretation is that most Russians are categorically against the first use of nuclear weapons in a conflict with NATO, and their views, therefore, do not seem to be particularly elastic with respect to the expected number of fatalities or, as we saw in the comparison of treatments A and D, to a discernible escalation of the conflict. At present, we have no data to see to what extent this aversion to first use is absolute. Perhaps, we would see a shift in attitudes if the conflict escalated further and the very existence of Russia was in jeopardy, if the enemy used other weapons of mass destruction in the conflict, or targeted large civilian population

centers rather than military targets. From a policy perspective, however, our findings provide an important indication that the Kremlin probably cannot count on public support for a nuclear “escalate-to-deescalate” strike under the scenarios of a conflict on NATO’s eastern flank that are commonly discussed in the West.

How do Russian attitudes compare with those of the public in Western countries? As noted in the introduction, we need to be cautious about these comparisons as we did not engage in a direct replication of earlier studies. That said, at first glance, Russians do appear to be somewhat more averse to the use of nuclear weapons than Americans. For example, Sagan and Valentino (2017) found that about 59% of Americans would approve of a nuclear strike that results in 2,000,000 Iranian civilian deaths if it saved 20,000 U.S. troops. Still, more fitting is the comparison with a study by Haworth, Sagan, and Valentino (2019), where half of U.S. respondents approved of nuclear strikes against North Korea in response to its missile test, even though the strike would result in a large number of civilian fatalities and there was also a chance that Pyongyang would retaliate with nuclear weapons. Koch and Wells (2020) found close to 40% support for a nuclear strike against an unnamed nuclear-armed state’s city that hosts its nuclear arsenal, and public insensitivity to the varying levels of retaliation risk. The level of approval in our study appears to be comparable with a recent study in Germany, where 12% of the public agreed with a nuclear “de-escalatory” strike in a conflict between NATO and Russia in the Baltics, 61% disagreed, and 27% did not know (Onderco and Smetana 2021).

Our study also contributes an important finding concerning the application of the MFT, a promising theoretical framework to study moral intuitions relevant to our field (Price and Sikkink 2021). Graham et al. (2011) previously found that while the MFT has universal applicability, there are substantial cross-cultural variations across regions, particularly with respect to the differences between Western and non-Western countries. Like the earlier experiments conducted in the United States (Rathbun & Stein 2020; Smetana & Vranka 2021),

we found that in Russia, moral foundations are associated with support for military strikes – but also that there are no significant interactions between moral foundations and the specific type of strike. This suggests that while scores in moral foundations do serve as a reliable predictor of nuclear (non)use attitudes, these associations are not linked to nuclear weapons *per se*, but they are perhaps primarily associated with an overall “hawkishness” in foreign policy (Kertzer et al. 2014). These findings could also imply that neither Americans nor Russians have developed *specific* moral barriers with respect to nuclear weapons, but they see nuclear use (perhaps in any form, as shown in the demonstrative condition) simply as a dramatic extension of the conventional use of military force and are mindful of the exceptional impact of nuclear strikes without intuitively linking this impact to some specific moral concerns.

At the forefront of self-reported concerns about the use of force were civilian casualties, the suffering of victims, and the impact on the environment. Incidentally, these “liberal” concerns are today at the forefront of the global “humanitarian initiative” to ban nuclear weapons (Borrie 2014; Rosendorf, Smetana, and Vranka 2021), which recently culminated in the adoption of the Treaty on the Prohibition of Nuclear Weapons (Considine 2019; Müller and Wunderlich 2020). The imperative to minimize civilian casualties in war corresponds to the research of Dill and Schubiger (2020), who found it to influence greatly public views on the use of force. Our findings somewhat stand in contrast to Press, Sagan, and Valentino (2013) and Sagan and Valentino (2017), who identified the strategic considerations – setting a dangerous precedent – at the forefront of American citizens’ concerns (only the fourth most important concern in our study). The concerns that follow from deterrence literature – that is, the risk of nuclear or conventional retaliation – clearly played a much smaller role in the self-reported reasoning of our participants.

It is important to stress that we found no statistically significant differences in the relative importance of concerns between participants in nuclear and conventional conditions.

This finding suggests that the basic structure of concerns holds irrespective of the weapon type, and the concerns, therefore, appear to be primarily tied to the use of military force as such – in line with our finding about the relationship between moral foundations and strike support discussed above. Overall, it seems that the very nature of moral intuitions and concerns do not differ significantly with respect to nuclear and conventional weapons. At the same time, as seen in our experimental scenarios, most individuals still clearly differentiate between nuclear and conventional strikes and have internalized the image of nuclear weapons as a form of military force so drastic that it trumps the use of conventional missiles even in cases when they are told that the strike is merely demonstrative, absent of direct casualties. Further studies, perhaps including focus groups in addition to large-N surveys, are certainly needed to unravel the complex internal process behind these attitudes.

A comparative analysis of the concerns of those who approved and those who disapproved of nuclear strikes provides some interesting speculations about the factors behind participants' nuclear (non)use attitudes. Most importantly, those who disagreed with the strikes had been much more concerned about the suffering of victims, environmental impact, the logic of precedent, morality, and international law. Those who agreed with the strikes, on the other hand, seemed to put relatively more weight on the concerns about retaliation, Russia's reputation, and weapon effectiveness. Moreover, for these participants, a desire to punish NATO for its actions was relatively much more important – in line with the work of Sagan and Valentino (2017) and Rathbun and Stein (2020), who found that that retribution was a powerful driver behind the willingness to support nuclear use.

Although we did not explicitly formulate any hypotheses regarding the socio-demographic factors, we wish to highlight an intriguing association between gender and the attitude toward military strikes in our study. Russian women are clearly more averse to *any* kind of proposed military strikes in the conflict, in line with earlier research on a “gender gap” in

views on the use of military force in the West (Eichenberg 2016; Clements and Thomson 2022). Russian men seem to differentiate more between the two types of strikes: while they seem to be relatively supportive of conventional strikes, their disapproving views become much closer to those of Russian women in the nuclear domain – an interesting finding that, in our view, warrants further research.

Once again, it is important to note that all our scenarios portrayed the *first* use of nuclear weapons. This is in line with the “nuclear taboo” literature that frequently stresses that the “taboo” applies to the first use of nuclear weapons and that there are possibly lower normative constraints with respects retaliatory second strikes (Tannenwald 2007, p. 57). Similarly, the concept of the nuclear nonuse “tradition” is explicitly built on the idea of a strategic pattern where it is in the interest of all relevant actors not to disrupt it by being the first to employ nuclear weapons – once the tradition is broken, all bets are off (Paul 2009).

Finally, a reader may be wondering to what extent public opinion on these issues is even relevant in Russia. Despite being a non-democratic country, prior research has demonstrated that the views of the Russian public do matter for elite decision-making. In fact, the manufacturing of domestic consent in foreign and defense policy has become increasingly important for the ruling elite in Moscow over the years. As Gudkov (2019) argues, there is a link between militarism, foreign policy adventurism, and the suppression of domestic dissent in contemporary Russia (see also Snegovaya 2020; Sirotkina and Zavadskaya 2020). The shaping of public opinion on nuclear weapons, along with other defense issues, has become the key tool in President Putin’s toolbox (Wagner 2021; Kolesnikov 2016) – which is why, for example, nuclear missiles are regularly paraded on Victory Day in Moscow, and shops sell t-shirts with quips like “*Sanctions? Don’t make my Iskandar laugh*” (Deriglazova and Rozhanovskaya 2020, 154). The importance of public opinion in contemporary Russia also corresponds to more general claims about the relevance of public views for non-democratic

regimes. As Frye (2019, 971) argues, “[b]ecause mass revolts are a key threat to autocratic regimes, and because policy success depends in part on popular support, autocratic rulers have strong incentives to shape public opinion” and “monitor public opinion closely and devote considerable resources to sway popular sentiment” (for an elaboration of this argument, see Wilson, 2005).

Conclusions and avenues for further research

In February 2022, a full-scale conventional war has returned to the European continent, with Russia invading Ukraine and repeatedly issuing nuclear threats aimed at deterring NATO involvement. The sheer size of the Russian nuclear arsenal and its political and strategic importance for the Kremlin have made the possible use of nuclear weapons in the region a pertinent concern among Western experts and policymakers alike.

To the best of our knowledge, our paper is the first to employ experimental survey methodology to examine Russian public attitudes toward nuclear weapon use. To some extent, our findings may be reassuring: even though Russians are generally supportive of their country’s nuclear arsenal and see it as a symbol of Russia’s great-power status, we found that they are simultaneously strongly averse to their military use.

From a broader scholarly perspective, our paper is a unique contribution to the literature on attitudes toward nuclear use by examining the views of the public in a non-Western and non-democratic country. To this end, we would like to propose three promising avenues for follow-up research. First, Russia is a rather specific country with respect to nuclear weapons: it has possessed a nuclear arsenal since the late 1940s and, together with the United States, crafted the key pillars of the global nuclear order. Over the decades, the adoption of arms control institutions and practices brought Russia closer to Western nuclear states in many pertinent aspects (Holloway 2016; Potter and Bidgood 2018). While Russia remains a pertinent non-Western country for the study of nuclear nonuse norms, future research should go further and

explore to what extent the attitudes toward nuclear use are similar in non-Western countries with shorter nuclear histories and lower levels of the institutionalization of the rules of nuclear order – such as India or Pakistan.

Second, future research should address the sources of cross-national variation in nuclear nonuse attitudes. It is reasonable to expect that divergent historical experiences, culture, and generally views on the use of force in world politics may help to explain the differences among countries. Scholars should employ survey experiments using directly comparable scenarios to test these claims against empirical evidence and identify the key causal factors.

Third, researchers interested in exploring the “nuclear taboo” in the Russian Federation should follow closely the latest attempts to survey Russian elites on matters of foreign policy (Rivera and Zimmerman 2019). Whether there are significant differences in public and elite attitudes and how can we explain them are today among the central questions of interest in survey research in our field (Hafner-Burton, Hughes, and Victor 2013; Kertzer 2022; Smetana and Onderco 2022). The gaps in Russian elite and public attitudes toward nuclear use remain uncharted territory and an exciting area for future research.

However, on this note, we should also add a word of caution, as scholars ought to be very careful about conducting surveys and analyzing survey data in Russia. Our survey, conducted almost a year before the Russo-Ukrainian war, was designed and approved by an institutional ethics board, and we have high confidence in the validity of our findings. Yet, after the 2022 Russian invasion of Ukraine, conducting surveys on questions which might seem politically sensitive has become extremely challenging in Russia, and further survey experiments could face serious scientific as well as ethical pitfalls. The scientific ones relate to the reliability of survey data, given the social desirability bias and the reluctance of respondents to participate in the study or provide answers fully in line with their views. The ethical issue is whether we should, in the current situation, even present the Russian respondents with sensitive

questions when there is a hanging threat of serious legal repercussions for expressions of opinions that are deemed disloyal by the Russian state. In short, Russia's war in Ukraine made future survey research in Russia very difficult for the foreseeable future – if not impossible.

Acknowledgements

We thank Kristin Ven Bruusgaard, Matthew Kroenig, Alexander Lanoszka, Nikolai Sokov, Marek Vranka, and Ondrej Rosendorf for their comments on the survey draft, and to Scott Sagan, Wolfgang Wagner, Lauren Sukin, Rebecca Davis Gibbons, Lisa Koch, Doreen Horschig, Stephen Herzog, Tyler Bowen, Hanna Notte, Jan Ludvik, Vojtech Bahensky, and two anonymous reviewers for their feedback on earlier versions of this paper. We gratefully acknowledge funding from the Charles University Research Centre program PRIMUS/22/HUM/005 (Experimental Lab for International Security Studies – ELISS). Moreover, Michal Onderco acknowledges the support of the research project “PRORUSS: Russian policies of influence in the populist-pragmatic nexus” (302250) funded by the Research Council of Norway.

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