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AN ILLUSIONAL NUCLEAR TABOO: MECHANISMS OF DOMESTIC ATTITUDINAL PATTERNS FOR EXTREME METHODS OF WAR

by

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A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy in the School of Politics, Security, and International Affairs in the College of Sciences at the University of Central Florida

Orlando, Florida

Spring Term 2021

Major Professor: Güneş Murat Tezcür

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ABSTRACT

This dissertation studies public attitudes toward nuclear weapons. When do people become more willing to endorse a preemptive nuclear strike against a foreign country? Utilizing theoretical insights from international relations, comparative politics, and social psychology and original experimental survey data from Israel and the U.S., this dissertation aims to answer these questions. Influential strands of scholarship argue that both the public and political elites have internalized anti-nuclear norms. The critics, however, assert that the moral nuclear taboo lacks robustness. The dissertation joins this debate by offering a novel theoretical framework informed by terror management theory (TMT) and suggests that people are more likely to support extreme forms of warfare (e.g., nuclear strikes) when reminded of their own mortality. Thus, consequentialist factors, such as perceived utility, and psychological factors, such as moral foundations theory and TMT can be causal mechanism in the support for nuclear weapons. The findings support this argument as respondents who are treated with increased salience of their own mortality are more likely to support the use of nuclear weapons. Further, the results show that political ideology, threat perception, and religion are all significant factors in shaping individuals' attitudes towards the use of nuclear weapons. Lastly, the work suggests that Israelis in particular tend to support hawkish national security options at the aggregate level. There is a positive effect of conflict events on Israelis' support for hawkish policies. Overall, this dissertation makes a substantial contribution to our current understanding of public opinion on the use of nuclear weapons in a first strike and why nuclear weapons disarmament, elimination, and non-proliferation is deeply challenging.

Für meine Liebsten,

Tyler, Mama, Larsi, Oma Hella und Opa Hans

ACKNOWLEDGMENTS

I thought completing this dissertation would be the most difficult task but finding adequate words to express my deeply felt appreciation for those that helped and supported me along the way was much more challenging. A dissertation is often perceived as an individual effort. On the contrary, this project was a team effort that could not have been completed without many special people in my life. It took a village for me to get here. Below, I want to acknowledge a few of the many that shaped this project and helped me through it.

First and foremost, I would like to thank my dissertation chair, Dr. Güneş Murat Tezcür. There are hardly the right words to express my appreciation to have had you as my dissertation chair. And not only that but your choice of me as your teaching and research assistant. I don't think I was aware at the time of what it meant for me and my path to take upon these incredible opportunities. Without your direction throughout this entire process, I would simply not be where I am today. You kept me on track, you pushed my boundaries, and you encouraged me. Most of all, you showed me that I'm capable of more than I think. I always appreciated your honesty, timely feedback, and unmatched pace of work. I wish anyone who enters a PhD journey a supervisor like you. Your life and accomplishments are undoubtedly an inspiration to me and so many others.

I also thank my other dissertation committee members, Dr. Konstantin Ash, Dr. Andrew Boutton, Dr. Gilad Hirschberger, and Dr. Kelsey Larsen for their feedback and guidance. I truly appreciated all of your valuable knowledge, expertise, perspectives, and input during my research. Albeit still a dissertation with many flaws, it is now stronger and more compelling as a result of your comments during my dissertation defense and the according revisions.

A special thanks also goes to Kerstin Hamann for providing her wisdom throughout this process—never without some much-needed German humor—and Kyrie Ottaviani for her unwavering assistance and endless patience for guiding me through UCF's bureaucratic jungle. Others who deserve recognition at the University of Central Florida (UCF) are Dr. Robert Bledsoe, Dr. Thomas Dolan, Dr. Terri Fine, Dr. Roger Handberg, Dr. Barbara Kinsey, Dr. Nikola Mirilovic, Dr. Jonathan Powell, and Dr. Kenicia Wright; thank you all for your time, advice, and open ears on this project and others.

I am grateful to external comments on earlier drafts of some parts of this dissertation by Jamie Arndt (University of Missouri), Cathy Cox (Texas Christian University), Aaron Ettinger (Carleton University), Eran Halperin (Hebrew University of Jerusalem), Or Honig (Tel Aviv University), Jeffrey Kaplow (College of William & Mary), Mark Landau (University of Kansas), Jacob Passel (Middle East Institute), Patricia Shamai (University of Portsmouth), Michal Smetana (Charles University), and Heather Williams (King's College). I thank attendees and scholars that provided feedback at conferences and colloquiums at which earlier versions of chapters of this dissertation were presented.

Next, I would like to thank my early mentor, Dr. Joseph Helman, who is responsible for triggering my interest in the study of nuclear weapons. Your ability to stimulate discussions both in and out of the classroom remains unchallenged. I am forever grateful for the privilege to have been one of your students at New York University. Thank you for encouraging me to pursue my PhD and shaping my future.

I would like to thank Cory and my host family, the Herremas, for getting me into college in the United States; for turning my horrendous school English into a decent college essay that ended up shaping my professional and academic career. I apologize that I didn't listen to you

when you advised against getting degrees upon degrees. I promise this is the last one ③. I'd also like to thank the Amabiles, Hinzes, Mihalows, and Uhlemanns for their support - as well as everyone that donated to my GoFundMe campaign to get me into the PhD program.

There were also many colleagues that became friends. Foremost, Dr. Sandor Fabian with his wife Beatrix and daughter Bibor who were invaluable to this whole process of nearly four years at UCF. You kept me sane, motivated me, and were there when I needed you the most. Thank you to my original cohort, including Tutku Ayhan, Davide Dell'Isola, Jennifer Hudson, Santosh Sapkota, and Michael Yekple, for all shared successes, laughter, and uncensored outlets for grad school grievances. I thank Logan Kerschner, my "nuclear colleague" at UCF, for stimulating discussions, editorial help, recommendation letters, and connecting me with his network, as well as Dr. Chris Faulkner for his assistance with the inner workings of academia, comps exams, and applications. Thank you to all other colleagues and friends that I had the pleasure of meeting during my time at UCF and in Orlando - I'm excited to see what life has in store for all of you.

My colleagues and friends lead me to my family—my German loved ones. I want to thank my mum. You have been my biggest cheerleader throughout all of this. You are the strongest, most selfless person I know. I'm beyond grateful for your unwavering encouragement to "go my way." Not only did you listen to my academic ...talk, but you tried to Google Translate my articles, jumped on calls when it was in the middle of the night in Germany, and reminded me of what matters most in life: family. You are everything and more. I thank my brother Lars for his untiring support in my unconventional path. It is especially nice to know that you are proud of me. I'm excited for our sibling relationship that has grown over the past years. We both experienced many changes in our lives since I started this program, and I'm so

incredibly happy for the both of us today. My grandparents, Oma Hella and Opa Hans, for always reminding me where I come from. It was always good to know that you were worried about my well-being. Even if you weren't able to support me academically, you were able to do so emotionally. I thank my best friend Bine, who has been my ride or die since 2008. Professionally growing with you has been one of the best things. Thank you for being there for the good and the bad during these four years. Your brutal honesty was much needed to contrast American roundabout ways. I could not have done this without all five of you. From the bottom of my heart, thank you.

I also want to thank my dad. I'm sorry I didn't take a more straightforward path and studied "Lehramt" or "Medizin." But it's your fault for talking international politics to me at such a young age and getting me interested in the field. I like to believe you'd still be proud of me today and relieved that I didn't listen—as I found my passion. Not only did you instill a hunger for knowledge in me, but you taught me how to be an honest and caring human being. Most of all, you inspired me to teach. Your example as an educator was second to none. You were a role model like no other. I hope I can always continue to make you proud. My heart still aches for many of the milestones that you missed. I thought not having you walk me down the aisle would hurt the most. But now I realized it is not being able to share this degree.

Last but surely not least, I thank the love of my life, my husband Tyler. (Deep Breath.) No real words exist to describe the gratitude I have for you. You've been by my side with your love, patience, understanding, and support. You are a constant encouragement to me (even after hundreds of rejections). You should probably be listed as the research assistant of this project as I would probably still be getting my surveys and data sorted out if it wasn't for you. I'm excited

for our path forward and to see what's next in our lives' journey. As you have been here for me, I will be there for you. Ich liebe dich mein Schatz.

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LIST OF ABBREVIATIONS

ACI Armed Conflict and Intervention (Dataset)
AICE American-Israeli Cooperation Enterprise

CBS Israeli Central Bureau of Statistics

CoE Causes of Effects

CSAQ Computerized Self-Administered Questionnaire

EoC Effect of Causes

GTD Global Terrorism Database

IAEA International Atomic Energy Association

INES Israeli National Election Study IRB Institutional Review Board

JCPOA Joint Comprehensive Plan of Action

NI Negotiations Index

NPT Treaty on the Non-Proliferation of Nuclear Weapons

MFT Moral Foundations Theory
MDT Moral Disengagement Theory

MS Mortality Salience

MTurk Amazon Mechanical Turk

PLO Palestine Liberation Organization

TMT Terror Management Theory

TPNW Treaty on the Prohibition of Nuclear Weapons

UCDP Uppsala Conflict Data Program

UN United Nations

WMDs Weapons of Mass Destruction

CHAPTER 1: INTRODUCTION

This dissertation studies public attitude on the use of force and more specific nuclear weapons.¹ What factors influence public and elite willingness to support the usage of nuclear weapons? What causes individuals to disregard moral concerns for the use of nuclear weapons? Despite the many efforts to reduce the significance of nuclear weapons in foreign policy, they are central to several nuclear-armed states and alliances' unconventional deterrence strategies, a tool for nuanced tactics of nuclear hedging, and a matter of scholarly debate.

Numerous polls have shown that publics are largely against the production, existence, and use of nuclear weapons. Global anxieties about nuclear weapons are higher than at any time since the Cold War: 79% of the population of Britain, France, Italy, Germany, the United States, and Israel felt that nuclear weapons make the world a more dangerous place ("Global Poll Finds Varied Views on Nuclear Weapons" 2007, 968). U.S. public approval of the decision to use the atomic bomb in 1945 has significantly decreased over time (Moore 2015). The 2017 Treaty on the Prohibition of Nuclear Weapons (TPNW) had gained widespread support when it was introduced to the United Nations General Assembly ("Treaty on the prohibition of nuclear weapons" 2017).

Corroborating the apparent aversion and polling results, influential strands of scholarship have argued that both political elites and the public have internalized anti-nuclear norms (<u>Bin 2011</u>; <u>Bunn 1999</u>; <u>Carranza 2018</u>; <u>Tannenwald 2018b</u>, <u>2018a</u>, <u>2005</u>, <u>1999</u>, <u>2007</u>; <u>Quester 2005</u>; <u>Rublee 2009</u>; <u>Schelling 2005</u>). Scholars suggest normative inhibitions against the use of first-

1

¹ All supplemental data for this dissertation can be accessed here: https://drive.google.com/drive/folders/1ALcilniFK85AYm1XH8BSOHyxk-99PX_9?usp=sharing.

strike nuclear weapons and nuclear testing. Leaders, as well as the public, have shared expectations and standards of right and wrong with a normative belief. However, recent scholarship that employs experimental methods to explore public opinion challenges this conventional wisdom about the robustness of anti-nuclear and weapons of mass destruction (WMD) norms.

Confronted by direct human interaction via telephone or face-to-face interviews, people are unlikely to express their support for nuclear weapons. Out of concern of being judged as cruel, people tend to express dovish views in regard to those weapons. However, anonymous online surveys not pressuring people into giving a socially desirable answer and employing experimental designs have found that publics are not as averse to nuclear weapons as found by regular polls (Press, Sagan, and Valentino 2013; Sagan and Valentino 2017; Sagan, Dill, and Valentino 2018)—especially when the weapons provide advantages over conventional weapons. When the American public was provided with hypothetical threat scenarios, respondents would support the dropping of a nuclear bomb to a similar extent that they did in 1945 against Japan. (Sagan and Valentino 2017). Having to decide between a ground attack and a nuclear strike against Iran today, 40.3–55.6% (depending on the experimental scenario) of the U.S. public would support the latter, knowing that approximately 100,000 Iranians would die.

Noticeably, the aversion toward nukes seemingly decreases once publics are confronted with realistic threats from terrorists or state actors in online experimental surveys. People become more willing to use extreme force as their perceived threat to security increases

(Carpenter and Montgomery 2019; Sang Kim 2019; Smetana and Vranka 2020; Post and Sechser

² Approximately 110,000–210,000 people had lost their lives in the attacks on Hiroshima and Nagasaki. See https://thebulletin.org/2020/08/counting-the-dead-at-hiroshima-and-nagasaki/.

2017). At the same time, causal mechanisms characterizing support for the use of nuclear weapons remain underexplored; only a few are brought forward in the literature. These include moral foundations theory (Smetana and Vranka 2020), elite cues (Post and Sechser 2017), perceived utility (Press, Sagan, and Valentino 2013), troop protection, and war aims (Sagan and Valentino 2017) and military effectiveness and compatriot partiality (Sagan, Dill, and Valentino 2018). The latter three do not consider the psychological aspects of humans' decisions to use force. What influences some individuals to adopt pro-nuclear positions in realistic threat scenarios needs further analysis. Using experimental studies provides the opportunity to randomize background characteristics to put a causal focus on an isolated treatment. For the core of this dissertation, I utilize such studies and test whether some people receiving a particular scenario and treatments are more supportive of preemptive nuclear strikes than the ones not receiving it.

To see if external conclusions can be made on public attitude, I use two cases: Israel and the United States. This gives the work a comparative component to explore whether such supportive motivations for nuclear weapons hold up across different samples. Does a reminder of death increase the support for the use of extreme force in one population but not another? Israel's political discourse oftentimes frames the threats from its neighboring adversaries as existential ones (Michael 2009; Wæver 2009). That can heighten overall threat perception and suggest that Israel is a rather unique case.

³ The term 'existential threat' is an elusive one. Michael defines an existential threat as "a subjective political concept that reflects the conceptualization of a collective sense of security or insecurity in a hostile environment (2009)." However, other scholars emphasize that is a complex multidimensional phenomenon (Hirschberger et al. 2016). In this work, 'existential threat' refers to the conceptualization used in the TMT literature: individuals' anxiety over the existence of their worldview.

To reduce the risk of the use of nuclear weapons, it is crucial to understand the motivations of support for such in different contexts. Exploring this phenomenon will advance scholarly literature and policymaking. Scholars have spent decades exploring the challenges to nuclear weapons disarmament, elimination, and non-proliferation. This dissertation will center on analyzing some of the roots of these obstacles. It will advance the current push to explore public opinion on the use of force in survey experiments. Such experimental studies inherently have policy implications. A large branch in the literature has manifested that public opinion affects foreign policymaking. Hence, an exploration of the attitudes from publics of nuclear weapon countries can increase policymakers' understanding and anticipation of events and interaction in international affairs.

Following this introduction, Chapter 2 reviews the literature on why studying public opinion is important, general patterns of public opinion toward the use of force, the more specific nuclear taboo, and the main theoretical framework of this dissertation. In the core Chapters 3 and 4, the dissertation adopts a micro-data analysis. The chapters explore under which circumstances people support the first strike of a nuclear weapon. I test a distinct causal mechanism that can explain support for the use of force and, more specifically, nuclear weapons. The extant interdisciplinary literature suggests that moral foundations theory, including deference to authority and in-group loyalty (Smetana and Vranka 2020), can explain why people are willing to violate the nuclear non-use norm. I add to this newer scholarship by exploring a case other than the United States and arguing for an additional psychological alternative that impacts individuals' attitudes. Employing an original survey experiment with the Israeli adult population (N=1022) and a convenience sample of individuals living in the U.S. (N=591), my research builds on the terror management theory (TMT) to develop an explanation of why some people do

not adhere to the norm. I suggest that respondents reminded of their mortality are more likely to support nuclear weapons than those that are not. In an age of populism characterized by the rise of nationalist leaders with authoritarian tendencies, this finding is a source of significant concern.

In Chapter 5, I examine the change in Israelis' attitudes—specifically, support for the use of force—and investigate whether this change corresponds to the severity of conflict-related events, operationalized as a number of Israeli casualties in the context of the Israeli-Palestinian conflict. This research is based on a collection of public opinion data published between 1984 and 2018. In this chapter, I argue that, on average, half of the Israeli public supports militaristic foreign policy options. Further, I find that the effect confirms that support for policies that include the use of force is responsive to such conflicts—under the condition that the casualties are Israelis. This chapter provides findings that are broadly consistent with the effects of the mortality salience in the previous chapters. The conflict events in this chapters might cause reminder of death. Chapter 6 offers a summary of the new insights of this dissertation into the study of public opinion on the use of force. It explains the policy relevance, addresses some of the shortcomings of this study, and makes recommendations for further research.

CHAPTER 2: PUBLIC OPINION ON THE USE OF FORCE AND NUCLEAR WEAPONS

The vast nuclear security literature has looked closely at international relations to predict mechanisms of nuclear proliferation, nuclear deterrence, and nuclear disarmament. That closely responds with Kenneth Waltz's famous argument on the three levels of analysis in world politics that the international system—the third image—is the most influential among all three, individuals and state being the other two (1959). From reasons of national defense to deterrence, international factors in nuclear security have historically received more attention than the domestic and individual ones. A tendency that could be observed in international relations and also the proliferation of literature in the past decades is the neglect of the first and second images: individuals and domestic makeup of states.

More recently, research on individuals and the domestic public is seemingly making a comeback. A growing scholarship argues that the first image shapes the second and third (Byman and Pollack 2002) and that individuals indeed play a key role in international relations (Kertzer 2016; Fuhrmann and Horowitz 2015; M. Horowitz and Stam 2014; M. Horowitz, McDermott, and Stam 2005; Saunders 2011; Berkemeier 2018; Colgan 2013; Whitlark 2017; Schneider 2019). The study of domestic factors and, specifically, the public have been given more considerable attention in political science and international relations. This work will pick up the first image but considers all to be influential in the study of nuclear security. The following literature review is divided into four sections. First, I take a step back and briefly reflect on the importance of public opinion in foreign policy. Second, I explore the divisions among domestic actors. I then review the taboo literature of weapons of mass destruction

(WMDs) and, more specifically, the norm against the use of nuclear weapons. Lastly, I bring forward the TMT framework and explain its applicability to this study.

Does the Study of Public Opinion Matter?

How exactly public opinion affects foreign policy and policymakers' decision-making has been widely discussed in the literature, with various implications for politics. Is public opinion driven by foreign policy, or does the public's attitude drive foreign policy? The literature is very divided on this question. Some scholars argue that voters and ordinary citizens know little about foreign policy, which gives leeway to leaders (Almond 1960; B. Cohen 1978; Erikson and Tedin 2015; Kull, Ramsay, and Lewis 2003; Wildavsky 1966). Others suggest that public opinion shapes elections, constrains foreign policy, and affects leaders' decisions when in office (Leeds 2003, 1999; Mansfield, Milner, and Rosendorff 2000; McGillivray and Smith 2000; Oneal and Russett 2001). Yet another group suggests that while there is a relationship between public opinion and foreign policy, it is not direct but recursive (Arian and Olzaeker 1999). According to this theory, if a country is in a crisis, then public opinion has a small effect on policy. In an ordinary state, public opinion has a bigger effect.

Recent literature explores the differences among publics in different regime types. Public opinion in democracies seems to be carrying more weight than in autocracies and, therefore, might give scholars and politicians more insights into the relationships between states. Michael Tomz, Jessica Weeks, and Keren Yarhi-Milo argue that public opinion influences foreign policy

⁴ For recent comprehensive reviews of this discussion, see (<u>Gelpi 2017</u>; <u>Kertzer and Zeitzoff 2017</u>; <u>Milner and Tingley 2015</u>).

⁵ A weakness of the theory might be that it treats 'a crisis' as an exogenous factor, caused by external factors and actors. However, it might at times be manufactured by leaders for political reasons.

in democracies and, with that, advance the scholarly debate by providing experimental evidence (2018). The authors assume two pathways through which the public can influence foreign policy (2018, 3-4). One is the responsiveness that assumes leaders act according to public opinion out of fear of political costs. This seems to be closely related to the theory of audience costs in democracies. The other is the selection of candidates that represent the public's preferences over foreign policy issues. An experimental study of 87 current and former members of the Knesset (Israeli parliament) provided several national security crises stories to the respondents and found that policymakers are more likely to use military force if the public is supportive of such an approach. The selection pathway was tested through experimental components in surveys of citizens in the United States and Israel.

Scholars have further examined the impact of public opinion on foreign policy in times of international crises and wars. They argue that states are unlikely to go to war if the public does not consent to it (Reiter and Stam 2002), domestic interest groups must ultimately ratify an international agreement or provide some other form of government backing (Putnam 1988), and mass public opinion in general sets broad limits to elites' foreign policy choices (Risse-Kappen

_

⁶ Audience costs assumes that democratic leaders will be punished by voters of the domestic audience if they fail to follow through on threats. Hence, such leaders are careful about making threats they cannot or will not follow through on, which affects how they signal their resolve in international crises (see for example Fearon 1994; Baum 2004; Leeds 2003, 1999; Schultz 1998). Audience cost theories were partially used to explain why democratic governments appear to be less prone to international conflict than, for example, autocracies. A large branch in the literature has explored this democratic peace theory (Doyle 1983; Gowa 2011; Huth and Allee 2002; Maoz 1998; Morrow 2002; Rousseau et al. 1996; Russett 1994) through structural and normative mechanisms. The proponents of the latter (Doyle 1986; Owen 1994; Dixon 1993) argued that democratic peace can be explained through the norms and values that democratic leaders share. Proponents of the structural explanation emphasize democratic structure and institutions that constrain democratic leaders from the use of force (De Mesquita and Lalman 2008; Rummel 1983; Small and Singer 1982).

1991). But how much policymakers and leaders take public opinion into account varies for each individual. For instance, according to empirical historical records, former U.S. President Dwight Eisenhower had a different attitude toward public opinion than his predecessor Harry Truman. Although he highlighted the importance of nuclear weapons amid the Soviet threat, he also mentioned the importance of public opinion in U.S. disarmament decisions (Tal 2008, 53-54). The Bush administration similarly cared for public opinion and wanted its support. The government framed the 2003 Iraq invasion as one to disarm Saddam Hussein of his WMDs, knowing that the public with its normative inhibition against such weapons would support his action. Whether for electoral or other reasons, public opinion did play a role for President Bush and he only went ahead with the invasion, once public support was there. Robust conclusions on how public opinion influences nuclear policy and use are difficult to determine, as there are not many empirical examples. In 1945, the public was not consulted before the use of the bombs.

This dissertation builds on the literature that asserts that public opinion on national security matters for foreign policymaking in democratic systems. The ongoing debate over *whether* public opinion matters in foreign policy should have been settled some time ago. Although the dispute over the degree of influence will endure, the fact that the public does impact policymakers is hardly disputable. This work agrees with recent scholarship that "the role of public opinion as a meaningful factor in the dynamics of international relations deserves more general theoretical attention and empirical evaluation" (Goldsmith and Horiuchi 2012, 556). The study of public opinion on the use of force in democracies is ongoing and remains important, as reflected in the number of publications (Gelpi 2017, 1926). As this work explores public opinion in two democracies, public opinion can be assumed to be important and influential in this context. Of specific interest to this work is the public's opinion on nuclear weapons.

Hawks, Doves, and the Use of Force

The literature divides domestic actors into hawks and doves. Hawks are commonly perceived as highlighting competitiveness, dividing between "our" and "their" national security interests, and emphasizing the use of considerable military strength (Russett 1991, 516; Kahneman and Renshon 2009). In contrast, doves highlight cooperation, diplomatic solutions, and political compromise in contrast to the use of military force to protect national security (Weeks and Mattes 2019, 58). Mueller (1970) suggests that the hawk-dovish explanations for elite and public support is too simplistic and introduces three dimensions: tendency to support party and party leader's decisions, supporting the president's decision, and acting upon one's own belief.

According to him, only the latter can be associated with a hawkish or dovish identity.

Feldman argues that hawkish-dovish distinction is just two of many criteria that people can employ to generate political evaluations if they judge on the simple mechanism of what is right or wrong (1988, 418). He adds that some people's *core* beliefs might be an absorption of some elements of the political culture through processes of socialization and reinforcement of societal norms used in the political debate. If true, the political rhetoric then shapes what is perceived as one's "core" belief. Then there would be no such thing as a core since it is believed to be a constant, but the political discourse in a society can change. One possible separation can be made between people who have a sophisticated evaluation of politics and are influenced to a lesser extent by socialization and continual reinforcement by the norms. This work assumes that it is people's beliefs that influence hawkish and dovish attitudes. Accordingly, it relies on terror management theory (TMT), a socio-psychological theory, for its main theoretical framework.

However, one has to be aware of paradoxical, at times confusing Israeli political attitudes. Although most Israelis define themselves on the right of the political spectrum, they

often support policies that are associated with the left such as a two-state solution with Palestinians. Rightists frequently support political compromise and conflict resolution. Hence, when this work refers to "hawks" it speaks of the political dimension that includes support for militant policies that namely include the use of force. Albeit imperfect, political hawkishness in this dissertation and specifically Chapter 5 limits itself to the support for violent measures in conflict. In the end, Israelis may be supportive of conflict resolution, but unlikely to compromise for their own security. Since hawks are highly influential (Kahneman and Renshon 2009), such attitudes may lead to challenges of the nuclear taboo that is discussed below.

While early scholars were critical of the public's ability to form coherent attitudes on issues of foreign policy (Almond 1960; Converse and Apter 1964; Lippmann 1922), later scholarship found the public to be systematic and consistent in its response to military casualties (Mueller 1973, 1970), more stable toward foreign policy than previously assumed (Achen 1975), and in possession of sophisticated internal structure (Wittkopf 1990; Hurwitz and Peffley 1987; Hurwitz, Peffley, and Seligson 1993). In addition, scholars found that the American public attitude on foreign policy did not drastically shift but only changed in response to international events (Page and Shapiro 1982; Shapiro and Page 1988). In short, the public was found to be rational in its attitude toward foreign policy. The public responded to conflict events in a reasonable way, changing their opinion from support to opposition of a conflict after they hear about the events and costs (Scott Gartner and Segura 1998). That rational and reasonable approach does not identify dovishness. In fact, the public oftentimes responds with hawkish

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⁷ For a discussion of this political identity crisis, see https://www.washingtonpost.com/opinions/2019/02/14/israels-political-identity-crisis-goes-beyond-left-or-right/.

attitudes toward conflict. That was the case with the 1991 and 2003 Persian Gulf wars, operations in response to terrorist attacks, initiation of war to prevent future threats, and the Korean and Vietnam wars (<u>Liberman 2006, 714</u>; <u>G. Barzilai and Inbar 1996</u>; <u>Arian 1995</u>; <u>Mueller 1973</u>).

Several scholars analyzed the causal mechanism under which the public supports the use of force. The literature identified that public support depends on economic interests (Kolko 1969; Magdoff 1969; Williams 1988), protection of vital national interest (Rielly 1987), and the "principal policy objective" (Jentleson 1992). After an exploration of eight case studies in the 1980s and the 1990–91 Persian Gulf War, Jentleson suggests that the public's support depends on the "principal policy objective" of the use of force (1992): if the goal was to restrain rather than remake the governments of a country, the public was much more likely to support the use of military force. Later, in a series of surveys that explored American public opinion on the Iraq War, Gelpi, Feaver, and Reifler suggested that attitude is dependent on the likelihood of success of the involvement in a war (2009, 2006). Most of this scholarship that explores public support for war and the use of force brings forward consequentialist, categorical, and rational logics. It asserts that the public derives its opinion based on threats to collective U.S. security. That disregards basic, psychological instincts, including the for one's individual security and survival.

WMD Taboo: Logic of Consequences or Appropriateness?

Sagan, Press, and Valentino argue that the aversion against nuclear weapons is "the logic of consequences, not the logic of appropriateness, [that] dominates in this issue area (2013, 190)" of the taboos. The debate is heavily based on interest-driven realist versus norm-driven idealist foreign policy (March and Olsen 1998). Constructivist scholars identified general taboos on the use, possession, and proliferation of WMDs, such as chemical, biological, and nuclear weapons,

and provide an intellectual framework for the movement to ban landmines (<u>Bin 2011</u>; <u>Bunn 1999</u>; <u>Carranza 2018</u>; <u>Tannenwald 2018b</u>, <u>2018a</u>, <u>2005</u>, <u>1999</u>, <u>2007</u>; <u>van Courtland Moon 1989</u>; <u>Quester 2005</u>; <u>Rublee 2009</u>). Others also specify the conditions under which these taboos become fragile (<u>Dolan 2013</u>; <u>Shannon 2000</u>). The literature suggests normative inhibitions against the use of nuclear weapons in a first strike and nuclear testing.

According to Tannenwald's theory, leaders, as well as the public, have shared expectations and standards of right and wrong with a normative belief (1999, 2007). In her landmark study, Tannenwald argues that nuclear weapons have been stigmatized as being unacceptable, joining two other taboos: cannibalism and incest. Her empirical evidence includes the non-use since 1945, the US deciding against the use of nuclear weapons when fighting non-nuclear armed states (i.e. during the Korean and Vietnam Wars), and political statements that expressed anti-nuclear sentiment (1999, 2007). Dean Rusk, former U.S. Secretary of State, stated: "Under no circumstances would I have participated in an order to launch a first strike, with the possible exception of a massive [Soviet] conventional attack on West Europe (quoted in Tannenwald 1999, 453)." In addition to the taboo established among elites, Tannenwald also suggests that it includes a public opinion through an overall global revulsion towards the atomic bomb (2005). The public's aversion influences elites and reinforces the taboo further. And while the taboo has become increasingly under pressure, Tannenwald asserts that it remains at the core of a normative order (Tannenwald 2018b).

Famous scientists that assisted in the discovery of nuclear fission and the development of the atomic bomb were divided on the weapons from the beginning. Albert Einstein and members of the Manhattan Project expressed dissent toward them early on. Thomas Schelling—a pioneer of the study of strategic behavior and deterrence—similarly celebrated the taboo in his 2005

Nobel Prize Speech (<u>Schelling 2005</u>) and Barack Obama famously promoted a nuclear-free world in his historic Prague speech (<u>Obama 2009</u>). The taboo is seemingly further reiterated by the non-use of the atomic bomb since 1945.

In support of the norms' literature, many polls on public opinion on violence, war, weapons of mass destruction, and other sensitive issues show that people are reluctant in their support of such means of warfare. For example, in 2007, the Angus Reid Institute and Simons Foundation explored national variations in attitudes towards nuclear weapons: merely 11.7% of Germany, 15 % of France, and 24.9 % of the U.S. said the use of nuclear weapons in war is justified ("Global Poll Finds Varied Views on Nuclear Weapons" 2007). Israel was on the higher end with 34.9%. Another Pew Research poll found that American and Japanese support for the use of nuclear weapons in Hiroshima and Nagasaki had decreased from 1945 to 2015. In 1945, 85% of Americans approved of the attacks, with 56% in 2015 that believe it was justified (Stokes 2015). The percentages of critics of the decision to use the bomb also increased by 19% in October 1945 to about 40% in 1994 (Heuser 2014, 183). A baseline question, before treatments, in my surveys for this work confirms the aversion toward nuclear weapons that are found in polls and agrees to a basic existing norm and moral inhibitions. Among Israeli and U.S. respondents in this work, 66.5% did not approve the use of a nuclear weapon, 22.5% approved it, and 11% neither approved nor disapproved.

The taboo was further expanded from WMDs to conventional weapons and the use thereof against nonmilitant persons. This taboo against the killing of noncombatants was termed a humanitarian revolution (Pinker 2011, 2018). Pinker asserts that human psychological nature has moved away from violence and that states and individuals can live peacefully together under the right circumstances. The nuclear taboo then becomes part of a much broader phenomenon

that explains not only the non-use of nuclear weapons after 1945 but the general decrease in violence. However, Pinker's argument rests on the fact that there have been no major wars between great powers for over 70 years. Several scholars challenged Pinker's work, stating that he overemphasized a positive trend and did not abide by the foundations on statistical theory (Cirillo and Taleb 2015),⁸ overlooked the substantial spatial and temporal variation in war (Mann 2018), reflected on a subjective experience (Gray 2015), and did not take into account people's actual suffering through engaging in a quantitative instead of a qualitative study (Szalai 2018).

Although the aversion camp of scholars and major polls have supported the notion of norms, others have challenged the robustness of such normative taboos in recent years (<u>Davis Gibbons and Lieber 2019</u>; <u>T. V. Paul 2010</u>; <u>Price 1997</u>). While the proponents of the taboo argument have suggested that states and individuals have internalized a norm against the use of nuclear, chemical, and even conventional weapons and violence more generally after the World Wars, opponents have questioned the validity and robustness of such normative notions and allocated much of the non-use of nuclear weapons to a prudent, deterrent tradition as a result of strategic interaction of nuclear powers (<u>Sagan 2004</u>; <u>T.V. Paul 2009</u>) and lack of real threat scenarios (<u>Sagan and Valentino 2017</u>; <u>Press, Sagan</u>, and <u>Valentino 2013</u>).

Public Attitude Towards (Non-) Use of Nuclear Weapons: The Recent Literature

The non-use of nuclear weapons since 1945 remains a central topic of inquiry in political science. The earlier wave of scholarship suggests that this non-use can be explained by a norm-based prohibition, the nuclear taboo (<u>Tannenwald 1999</u>), or tradition of non-use (<u>T. V. Paul</u>

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⁸ For a complete account of Taleb's critique and Pinker's response, see (Beauchamp 2015).

2010). Recent studies involving anonymous online experimental surveys cast doubt about the robustness of the nuclear taboo and non-use norm. Robustness here—and in the dissertation overall—does do not invalidate the nuclear non-use norm but rather challenges the durability of it. The second wave asserts that this aversion to nuclear weapons as found by regular polls might not show the whole picture (Press, Sagan, and Valentino 2013; Sagan and Valentino 2017; Sagan, Dill, and Valentino 2018). People might be generally averse to nuclear weapons but that can change. For example, the U.S. public's willingness to use nuclear weapons and kill foreign civilians has not changed much since the use of the atomic bombs in Hiroshima and Nagasaki in 1945 (Sagan and Valentino 2017). Even after respondents were primed with the ethics of targeting civilians, still 46% preferred a nuclear strike (Sagan et al. 2020, 173).

The Sagan-Valentino landmark work generated a new round of survey experiments on the use of nuclear weapons, broadly confirming the weakness of the norm against nuclear weapons (Sang Kim 2019; Smetana and Vranka 2020; Post and Sechser 2017; Rathbun and Stein 2020; Koch and Wells 2020; Sukin 2020; Haworth, Sagan, and Valentino 2019). Challengers to this camp, however, suggest that respondents indeed adhere to international norms such as the nuclear taboo (Carpenter and Montgomery 2020) and that there is still an aversion, but it is conditional on the presence of cues from elites, social networks, and the political discourse (Post and Sechser 2017, 12). Carpenter and Montgomery took issue with Sagan and Valentino's survey design, arguing that they omitted a mentioning of the illegality of the use of force and

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⁹ For a comprehensive discussion of the early nuclear taboo literature, see (<u>Smetana and Wunderlich 2021</u>).

provided only positive cues in a scenario, eliciting biased framing effects. ¹⁰ Similarly, Press, Sagan, and Valentino present respondents with cues only *in favor* of using nuclear weapons and lack a control group that did not receive any treatment. A researcher cannot know which treatment frame (or both) shapes attitudes if one compares only the two treatment conditions to each other instead of to a control group (Gaines, Kuklinski, and Quirk 2007, 8-9). Another methodological flaw appears in Post and Sechser's study that presents respondents with a dichotomy between support and non-support for a nuclear strike and no option to *neither agree nor disagree with a strike*, forcing a response (2017, 18-19).

A recent review of the mentioned non-use scholarship termed the *second wave* of taboo scholars (Smetana and Wunderlich 2021). While the first constructivist wave had focused on qualitative analyses of elite decision-making, this camp used large-N quantitative methods, particularly survey experiments, to explore public attitudes. There is little doubt about how much elite views matter, but the scholarship also provides evidence on the importance of public opinion on foreign policy. Tannenwald even argues that public opinion has been a critical factor constraining the use of nuclear weapons by U.S. leaders (2007). The existing dimensions, however, remain undertheorized in both waves. The second wave does not adequately explore

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¹⁰ Carpenter and Montgomery also challenge Sagan and Valentino regarding the civilian immunity norm (2020, 154). My work does not test the robustness of this norm but focuses on the non-use norm by providing a hypothetical scenario to respondents that excludes casualty measures. Reminding respondents of estimated casualty rates tests people's threshold at which they are reducing or increasing their support for a nuclear strike. While that is an interesting exploration in itself, it distracts from the non-use norm. In addition, casualty rates are difficult to accurately access and remain mere estimates.

¹¹ For recent comprehensive reviews of this discussion, see (<u>Gelpi 2017</u>; <u>Kertzer and Zeitzoff 2017</u>; <u>Milner and Tingley 2015</u>).

the psychological causal mechanisms that explain why people have supported the use of nuclear weapons irrespective of the taboo.

Instead, it proposes a logic that suggests that the strategic merit of nuclear strikes is an isolated predictor of the support for nuclear weapons. In other words, the studies suggest that individuals make decisions of (dis-) approval based on perceived utility and rational, expected outcomes, including winning the war, saving one's own soldiers, saving lives in the long-term, and protecting compatriots. This, however, suggests an exclusively consequentialist logic of the effects of military operations and ignores basic psychological instincts. This work suggests that it is a combination of both, consequentialist and psychological logics that suggest numerous factors as causal mechanism for support of the use of a nuclear weapon.

Regarding the limitations of the second wave, the same scholars propose an agenda for a necessary third wave of nuclear taboo research (Smetana et al. 2021). Smetana and Vranka are among the first scholars to consider psychological factors in non-use research (2020), based on moral foundations theory (MFT). MFT recognizes six basic moral foundations that cause individuals to perceive the morality of certain actions differently (Graham, Haidt, and Nosek 2009; Graham et al. 2013; Haidt 2007). Binding moral values—the ones that refer to the well-being of larger groups—are loyalty, respect for authority, and sanctity, while individualizing moral values—such that refer to the behaviors that can harm or benefit individuals—are caring and fairness.

Smetana and Vranka use MFT to explain approval of nuclear strikes and suggests that those scoring high on binding moral values are more likely to approve a nuclear strike than those scoring high on individualizing moral values. They explain this by arguing that those scoring high on the latter consider the numbers of fatalities among in- and outgroup and then judge the

morality of a strike. The ones scoring high on binding values care more about their in-group fatalities and turn to disproportional retributive policies (2020, 12). Another psychological study of moral concerns confirmed that retribution, deference to authority, and in-group loyalty are associated with support for the use of nuclear weapons (Rathbun and Stein 2020). They confirm both, the second and third wave. The argue that Smetana and Vranka's findings on binding values holds up but also add that the same individuals care about military effectiveness and casualties (2020, 789). Both, rational factors, such as perceived utility, and psychological defenses, such as MFT can explain nuclear support. This work builds on the idea that there are several factors at play in explaining individuals support for a nuclear first strike.

A general limitation of the public opinion literature is the lack of a comparative component among different samples. Besides Sukin (2020) and Sagan, Dill, and Valentino (2018), the existing studies explore the American public in isolation. The latter authors survey the British, French, Israeli, and U.S. publics. The French are about as equally willing as the American public to use nuclear weapons in destroying a terrorist target. The Israeli public shows the highest support for the use of nuclear weapons. In the United States, Israel, and France, the publics even deemed nuclear weapons to be more effective than conventional weapons, presenting a challenge to the nuclear weapons taboo. While the British is consistently the least willing to support the use of the atomic bomb, support is still fairly high at 45.5% (Sagan, Dill, and Valentino 2018, 10). The treatments in the survey included different casualty rates of foreign civilians. Over a quarter of respondents in all four countries were willing to use a nuclear strike that would have killed approximately 100,000 foreign civilians if 3,000 compatriot casualties from a terrorist attack could have been prevented, suggesting a high threshold for ethical restraint to use extreme force.

While Sagan, Dill, and Valentino's study provide key findings to understand conditions that weaken the taboo, it has its limitations. The opponent in the survey (terrorists) cannot retaliate in kind, which potentially biases the results toward more support from the public. Second, the Israel survey does not include Israeli Arabs but only Israeli Jews. This is because Arabs have very limited leverage over the direction of Israeli politics. While this is consistent with self-identification of a Jewish state, it potentially inflates overall public support. It suggests that the Israeli public is more hawkish than the American one and ignores the opinion of about 20.9% of the general population and one-sixth of the electorate. While Arabs have limited influence on the government's decisions on defense-security issues in Israel, and exclusion from surveys that characterize themselves as national-representative of a country's population should not ignore such a significant ethnic minority. Lastly, the Dill, Sagan, and Valentino focus again on the logic of perceived utility—that citizens prioritize the effects of a military operation for the preservation of human life and sparing compatriots over foreign civilians—rather than basic, psychological instincts that were to date only acknowledged by Smetana and Vranka and Rathbun and Stein.

Theoretical Framework: Terror Management Theory (TMT)

What causal mechanism can explain support for the use of extreme force and specifically nuclear weapons? Having a favorable attitude toward these weapons contradicts moral rules as it would not only inflict harm on the welfare of others (Ben-Nun Bloom 2014), but these weapons are inherently indiscriminate, largely uncontrollable, and instruments of mass destruction on an unparalleled scale in human history with radiation effects that persist for generations after their detonation. However, individuals violate their moral standards under certain conditions and justifications. TMT (Greenberg et al. 1997) provides one of such explanatory frameworks. The

theory suggests that humans—along with animals—are uniquely self-conscious about the inevitability of death. Humans know that they will die, and there is nothing they can do to prevent that. Usually, the thought of inevitable death is pushed to the unconsciousness.

The increased awareness of mortality creates paralyzing existential terror: "the emotional manifestation of the self-preservation instinct in an animal intelligent enough to know that it will someday die" (quoted in Gordon and Arian 2001, 208). To avoid such terror, humans subscribe to order, permanence, and stability in their conceptions of the universe or worldviews. This is termed a *cultural anxiety-buffer* (Greenberg et al. 1992, 212). In other words, the inevitability of death causes human frustration and has led humans to devise symbolic solutions—such as cultural worldviews—to a physical problem (Pyszczynski, Solomon, and Greenberg 2015). Such as worldview can give a person a sense of being important in a meaningful universe. By investing such a symbolic structure that is greater and more enduring than the one's physical self, people may attain a sense of symbolic immortality—the sense that something about them will survive physical death.

While their faith in their worldview based on stability mitigates the fear of death, reminding people of their finite existence, termed mortality salience (MS), stimulates existential terror. People's worldview is suddenly confronted by a different conception of reality. It is anticipated that the cultural anxiety-buffer buffer is removed when people are reminded of their mortality. One's own world view creates protection from death anxiety. A different worldview can feel threatening then. As a result, people are motivated to be aggressive and even annihilate others that challenge defensive death-denying beliefs. Hence, people prompted to think about their own death are likely to be less concerned about the negative impacts of the use of defense mechanism, including nuclear weapons, than people not thinking about death. The use of a

nuclear weapon addresses this personal fear of death. Hence, people become willing to use a nuclear strike for defensive reasons because the opponent in a realistic scenario threatens their terror management defenses.

Despite the extensive literature and studies that used TMT as explanatory mechanism, there are critiques of the theory. It is still a prospective rather than a definite framework. Some critiques suggest that worldview-defense systems are mere coalitional computations (such as fear) since evolution would have not produced such adaptions (Kirkpatrick and Navarrete 2006). Other critiques question the commonly used MS manipulation to assert that it does not produce any reliable changes in self-reported affect, challenging this affect-free claim (Lambert et al. 2014). TMT should be approached with these shortcomings in mind. Nevertheless, the hundreds of studies that used the theory raise confidence to some degree in the applicability of the theory.

When TMT is used in survey experiments subjects are usually reminded of their own death and are asked to describe their feelings (<u>Ullrich and Cohrs 2007</u>). The primers that remind someone of his or her own death can be naturally occurring deaths (<u>Jonas et al. 2002</u>) or, for example, deadly car accidents (<u>Nelson et al. 1997</u>). Table 1 summarizes relevant studies of previous behavioral responses in reaction to MS inductions and shows how this work fits in. ¹² If respondents perceive high MS, their support for one's own country and culture is elevated, with more parochial positions. This has enabled TMT to explain why peace efforts in the context of war and violence are hampered. This fear of death is something that one cannot fully cope with or comprehend. It triggers a distal death defense that resides beneath the consciousness (<u>Greenberg et al. 2000</u>).

¹² For a comprehensive summary and analysis of scholarly articles that used TMT, see (<u>Burke</u>, Martens, and Faucher 2010).

Table 1: Induction of Mortality Salience and Behavioral Responses in Security Studies

IV (Conflict, Event, Value)	Behavioral Response/Societal Reaction
Disengagement Plan (<u>Hirschberger and Ein-Dor</u> 2006)	Greater support for violent resistance against disengagement plan
Allegiance to Leader (Landau et al. 2004; F. Cohen et al. 2005)	Increased support for U.S. President G.W. Bush
Motivation for Military Service (<u>Taubman-Ben-Ari</u> and Findler 2009)	Higher level of motivation to join military
Military Might (<u>Pyszczynski</u> et al. 2006)	Support from conservative students for military interventions
Cultural Worldview and Values (Greenberg et al. 1990; Rosenblatt et al. 1989)	Intensification of positive evaluation of ingroup member and negative evaluation of outgroup member
Adherence to Nuclear Non- Use Norm	Increased support for the use of nuclear weapons in a first strike

Some scholars have more specifically explored the connection between the perceived existential threat among Israelis and their support for a pre-emptive strike against Iran (Hirschberger, Pyszczynski, and Ein-Dor 2009). The authors conducted two studies among Israeli undergraduate students¹³ and found that (1) support for violence increases under MS when the perceived intent from the opponent is considered extremely hostile and that (2) participants decrease support for a strike when they consider the consequences—such as a retaliatory attack—of an Israeli pre-emptive strike. This is consistent with a realist logic.

¹³ The limit to undergraduate students led to an oversampling young adults and therefore poses limits to the external validity of the findings.

The findings in this dissertation suggest that many individuals are willing to eschew the norm against the use of nuclear weapons in a first strike when they feel threatened. Given the literature, theoretical framework, and state-of-the-art research on the topic, it makes three contributions to the nuclear taboo research. To begin, the first and second wave did not explore the micro-foundations of public opinion. Instead of simply asking why individuals might support the use of nuclear weapons, this work joins the third wave of research and provides novel information on the effects of a specific causal mechanism, highlighting the impact of one specific factor on the dependent variable.

This effect of causes (EoC) approach (Smith 2014) estimates the average effects of one specific factor on the dependent variable. For this study that translates to the effect of mortality salience (MS) on the support for nuclear weapons use in a first strike. I use two different samples for this approach. This is in contrast to the more commonly used causes of effects (CoE). This approach makes generalizations about larger populations by explaining the effect of a causal factor (Gelman and Imbens 2013), answering broad "why" questions. For example, a CoE would ask "Why is there public support for nuclear weapons?" It is an identification of an observed issue answered with reverse causal inference. EoC on the other hand asks forward causal questions: "What might happen if I introduce a trigger of MS?" EoC is more suitable for experimental studies and focuses on the impact of single factors. The nuclear taboo research so far has largely explored CoEs such as demographics, noncombatant casualty rates, and public discourse that suggests patterns of increased or decreased support for nuclear weapons.

Second, to understand the EoC, this work applies an interdisciplinary approach that introduces a theory that otherwise has not been discussed in connection with the use of nuclear weapons. Just how Smetana and Vranka explore a theory of social psychology (2020), I borrow a

theoretical framework from social and evolutionary psychology—TMT—that affects behavioral responses. Testing TMT includes a reminder of people's finite existence, which stimulates existential terror. This explores whether the stimulation increases people's support for the use of force. Bridging disciplines can provide a better understanding of the psychological aspects of human beings that cause them to increase support of nuclear weapons. Alongside with MFT, TMT can provide a viable alternative that is based on psychological mechanism to explain support for a nuclear strike. Third, I investigate public opinion on the use of nuclear weapons outside the United States, in Israel. With the exception of an experiment in South Korea (Sukin 2020) and a working paper (Sagan, Dill, and Valentino 2018), the existing research studies the American public in isolation. Yet, the geopolitical situation in the Middle East, including Israel's undeclared nuclear arsenal and Iran's controversial nuclear developments, make such questions very salient and relevant.

CHAPTER 3: ISRAELI PUBLIC OPINION ON THE USE OF NUCLEAR WEAPONS: LESSONS FROM TERROR MANAGEMENT THEORY¹⁴

Introduction

"I wish it [the atomic bomb] would never be used," "I think nuclear weapons are a last resort," and "The consequences of such a bombing are too extensive and unacceptable. There's no choice but to find another solution," are sentiments expressed by three respondents in the survey I conducted among the Israelis. Yet, the same three respondents also supported a nuclear first strike in a threat scenario. Individuals seemingly abandon their original inhibitions. What is it then that causes individuals to support the use of a nuclear weapon in a first strike? An original survey experiment builds on recent scholarship by exploring why this nuclear norm is fragile. Through the use of terror management theory (TMT), this chapter explores why some people are more hawkish than others and willing to support the first use of a nuclear weapon. TMT suggests that humans are uniquely self-conscious about the inevitability of death and therefore subscribe to permanence and stability in their conceptions of the universe. By using TMT, people are reminded of their finite existence, which stimulates existential terror, while their faith in their worldview based on stability mitigates the fear of death. Existential terror influences and simultaneously increases respondents' support of nuclear weapons.

With the exception of a few articles, most recent studies propose a utilitarian logic that suggests that strategic merit and logic of consequences are isolated predictors of the support for nuclear weapons, ignoring basic affective instincts, such as survival. The first and second waves

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¹⁴ Earlier versions of this chapter were presented at the University of Central Florida's departmental colloquium in December 2020 and International Studies Association Annual Conference in April 2021.

¹⁵ The Hebrew version is available upon request.

of the nuclear taboo literature bring forward consequentialist and categorical logics from which the public derives its opinion. These camps consider the field of international relations in isolation, however. This chapter joins a third wave that considers an interdisciplinary approach and suggests that psychological in addition to consequentialist factors are critical for non-use research. The main finding suggests a challenge to the durability of the nuclear taboo. Increasing the consideration of the usage of extreme weapons has wide-ranging implications. It is a rather disturbing finding, especially in times when the Middle East sees authoritarian and populist tides and increasing regional tensions and geopolitical rivalry between Iran and Israel. An understanding of the public's support for the possibility of nuclear weapons use is necessary. The chapter provides two additional findings on religious dimensions. First, Israeli Arabs are less likely than Israeli Jews to support nuclear weapons. Israeli Jews also find it morally more acceptable to use a nuclear weapon. Second, religious-nationalist Israelis are more likely to support the use of a nuclear weapon than more liberal Israelis.

This chapter proceeds in five parts. The first section introduces the hypotheses, for which the main one is derived from the theoretical TMT framework. I then outline the research design of the survey experiment. Thereafter, I present the results, suggesting that mortality salience is a distinct causal mechanism that can explain support for the use of nuclear weapons. The final two sections discuss the policy implications of my findings and make recommendations for future scholarship.

 $^{^{16}}$ See https://www.nytimes.com/2021/03/26/world/middleeast/israel-iran-shadow-war.html and https://www.nytimes.com/2021/04/11/world/middleeast/iran-nuclear-natanz.html?searchResultPosition=5.

Overall, this research advances a current understanding of why nuclear weapons disarmament, elimination, and non-proliferation are deeply challenging. If the majority of the electorate is reminded of their mortality and in turn supports aggressive military policy, a leader might be more intrigued to take such action with public support. Further, if people's anxieties make them supportive of nuclear weapons use, we need to ask ourselves how one can prevent and address this angst. If we want to continue a 75-year-old tradition of non-use of nuclear weapons, we need to understand public opinion on these weapons.

<u>Hypotheses</u>

To this date, TMT has seen a limited application to explore the extent of the public's support for extreme use of force and specifically the use of nuclear weapons. In most previous studies, respondents who were primed about the utility of nuclear weapons were merely asked about their willingness to support the use of nuclear weapons. Research have mostly prioritized the utilitarian logic to argue that people will use weapons when it has strategic benefits, such as saving the lives of U.S. soldiers (Sagan and Valentino 2017) or destroying a bunker, killing terrorist leaders inside (Post and Sechser 2017). However, there is not just a utilitarian, logical, or rational argument to be made but also one that is informed by much more basic affective instincts.

This work tests the existing conceptualization of survival instincts through a reminder of death, MS. TMT—which has been applied across different populations—suggests that human beings generally subscribe to a cultural anxiety buffer (CAB), meaning that they establish a system of order, permanence, and stability that ensures their worldview and dismisses thoughts about death (Greenberg et al. 1997). MS creates existential anxiety of one's own worldview and increases the defense of such (Pyszczynski et al. 2006; Pyszczynski, Solomon, and Greenberg

<u>2015</u>). In other words, as CAB is removed, existential terror among individuals is stimulated, and a survival instinct is triggered (Figure 1). This existential fear can be a motivator for both violence and reconciliation (<u>Bar-Tal 2007</u>; <u>Hirschberger and Pyszczynski 2011</u>). The concern of the effect of a defense decreases as long as security and survival are ensured. When respondents feel threatened and concerned over their lives, they are looking for a fast, effective way to defend themselves and protect their worldview.

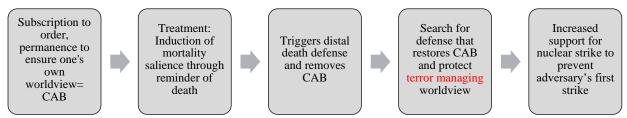


Figure 1: Causal Pathway of MS and Support for a Nuclear Strike

A nuclear first strike can be perceived as providing such an option when realistic threat is high by preventing an adversary's offensive attack that threatens terror management defenses and potentially denying retaliatory capabilities. At the moment of longing for survival, a nuclear strike can offer an option to manage terror most successfully if an opponent either has no nuclear capability or a strike promises to destroy such (as in this survey's scenario). In other words, the opponent (here Iran) is threatening one's worldview that normally manages terror. Hence individual's resort to an aggression towards whatever it is that challenges their defensive death-denying beliefs. A previous study has shown that MS among Israelis increases support for a preemptive strike against Iran for retributive justice reasons and not because of cost-benefit utility (Hirschberger, Pyszczynski, and Ein-Dor 2015). Individuals likely dismiss thoughts about the consequences of the strikes as long as they are perceived to provide protection. In order to ensure one's survival, individuals violate their moral standards.

H1: In a comparison of Israeli respondents, those being reminded of their death are more likely to support the use of nuclear weapons than those that are not.

Israel is a particularly suitable case study for the analysis of public opinion on the use of force because respondents' daily lives are directly impacted by foreign policy, which suggests a well-informed public on issues of foreign policy. Israel is also a country where a nuclear Iran would present a life-and-death threat to Israel. Hence, a security threat in Israel is frequently linked to the perception of an existential threat. As Iranian nuclear proliferation efforts and Israeli Iranian tensions continue to play an important role, the Israeli public's opinion on the use of force can quickly gain importance. Among the nuclear-armed states, the consideration and risk of the use of a nuclear weapon might be more likely in Israel than most of the others.¹⁷ Israel's nuclear ambiguity¹⁸ and Iran's controversial nuclear developments make such questions about the use of nuclear weapons very salient and relevant. Yet, this topic has been understudied. Foreign policy issues play a crucial role for Israelis. The Israeli elections (with historically high voter turnout) emphasize that the electorate votes on foreign policy issues (Hermann and Yuchtman-Yaar 2002, 598) and considers policies on national security a key voting issue (M. Shamir and Arian 1999). Tomz, Weeks, and Yarhi-Milo surveyed the Israeli (and US) public to highlight the large extent to which foreign policy matters when citizens vote for parties and candidates (2018).

Secondly, there have been few recent academic studies that asked Israelis about their opinion on the use of nuclear weapons (e.g., <u>Sagan</u>, <u>Dill</u>, and <u>Valentino 2018</u>). A few numbers about Israeli support for a nuclear strike are available through public opinion polls. In 1986,

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¹⁷ While there are also tensions between India and Pakistan, the quality of doing a national-representative survey in either one of these countries posed a logistical challenge at the time.

¹⁸ In a seminal, comprehensive work on the Israeli nuclear weapons program, Avner Cohen chronicles its development (<u>1998</u>). In his second, detailed account on Israel's policy of nuclear ambiguity, Cohen argues that the policy of secrecy no longer serves Israel's interest and that it is incompatible with a liberal democracy and international norms (2010).

36%; 1987, 53%; 1988, 52%; 1991, 88%; and 1993, 67% of Israeli Jews said the use was justified "under certain circumstances." However, these polls were conducted over twenty years ago and tell little about the current stage under a realistic threat of public attitude in the country, and also fail to speak on the causal mechanism of support. A few recent studies explored the effect of a specific existential threat—the memory of the Holocaust—on Jews' support for a preemptive strike against Iran's nuclear facilities (Canetti et al. 2018; Study 1 in Hirschberger et al. 2017). They found that a Holocaust prime significantly increased support for a pre-emptive attack. However, the pre-emptive strikes in both studies did not clearly refer to nuclear strikes and was likely interpreted by the respondents as conventional military action. The existential threat to Israel is the reason for many TMT studies on the Israeli public. The MS treatment has worked well in Israel.

Lastly, Israel's universal conscription makes questions about the use of force more salient (Yarhi-Milo, Kertzer, and Renshon 2018). Hence, "Israeli citizens should be more likely to be accessing actual beliefs about the use of force in foreign policy (rather than constructing belief systems "on the fly") as well as paying closer attention to [a] experimental vignette (increasing the validity of their responses)" (2018, 12-13).

I formulate two additional hypotheses on the causes of effects that are associated with an increased support for a nuclear first strike. Ethnoreligious identity strongly influences Israelis' opinions (Meir and Bagno-Moldavsky 2010, 20). It is the most influential demographic characteristic in determining attitudes (Meir and Bagno-Moldavsky 2010, 108). I explore whether the religious division between Israeli Jews and Arabs¹⁹ translates into different degrees

¹⁹ About 81% of all Israelis are Jewish, 19% non-Jewish (14% of those are Arabs) (<u>"Israel's Religiously Divided Society"</u>).

of support for a nuclear strike. Questions on hawkishness in the data collection in Chapter 5 show that Arabs tend to be less supportive of the use of force. When asked whether they do or do not support an international attack on Iran without U.S. cooperation, only 24.5% of Arabs said they would do so in contrast to 65% Jews. Further, that discrepancy increased when questions included the Palestinian subject, Operation Protective Edge, or Hamas. In contrast, Jews and Arabs are less divided on Iran. When asked their opinion in 2011 on whether Israel should coordinate with the US and attack on Iran, 65% of Jews and 47% of Arabs supported an attack. Both groups were not very supportive of a unilateral attack against Iran (31% of Jews and 20% of Arabs). While a large portion of both groups is supportive of the use of force, I hypothesize that Jewish support for nuclear weapons is higher because Jews are more concerned with an existential threat toward the homeland and have a higher threat perception from external powers.²⁰ The causal TMT framework carries over to explain the willingness to defend one's worldview through the support of a nuclear weapon. Jews will not only support the use of force but sacrifice a set of moral values for their own righteous defense (Hirschberger and Pyszczynski 2012). Hence, I hypothesize heterogenous treatment effect in that MS will work more intensely among Jews than Arabs.

H2: In a comparison of Israeli respondents, Jews that are reminded of their death are more likely to support nuclear weapons and find them morally more acceptable than Arabs.

²⁰ When asked "How concerned are you about the possibility that Israel will be attacked by an enemy next year?", the survey suggests a positive relationship between being a Jew and a higher threat perception (p=.004).

Despite the Jewish-Arab divide, Israelis are further subdivided in their religious ideology. The second religion-based hypothesis is inferred from differences on religious-nationalism. Religious nationalists are associated with expansionism. Judaism and the character of the state, the future of Zionism (Waxman 2006) and cultural identity have been at the center of internal cleavages (Aronoff 1989; Hazony 2009). Recent literature has found significant cleavages among Israelis (Bar-On 2018). Rightist revisionist and leftist progressives are increasingly ideologically polarized among Jews. More religious people, whether ultraorthodox or religious nationalist, are consistently more supportive of violent measurements against Palestinians. Comparing religious nationalists with liberals is relevant given the increasingly religious nationalism (Scham 2018). Religious-nationalists have existential anxiety over their worldview and increase their defense of it (Pyszczynski et al. 2006). Hence, they fear the existence of their in-group and worldview which —I hypothesize— creates a heterogenous effect.

H3: In a comparison of Israeli respondents, those identifying as religious nationalist that are reminded of their death are more likely to support the use of nuclear weapons than those that do not identify as religious nationalist.

Experimental Design

Survey experiments are increasingly used in political science to study the consequences of foreign policy decisions (Chaudoin 2014; Johns and Davies 2014; Kertzer and Brutger 2016; Levendusky and Horowitz 2012; Trager and Vavreck 2011). Tomz, Weeks, and Yarhi-Milo do not only provide clarification to the enduring debate on the effect of public opinion on foreign policy but also highlight the benefits of experimental approaches to the study of public opinion (2018, 7-9). Research in the social sciences has increasingly applied and benefitted from experimental methods to obtain truthful responses to socially undesirable preferences or

behaviors. Experiments have been effectively employed to understand sensitive issues and their causal explanations, such as support for militant groups and combatants (<u>Bullock, Imai, and Shapiro 2011</u>; <u>Lyall, Graeme, and Imai 2013</u>) and attitudes towards war, torture, and detention (<u>Scott Gartner 2008</u>; <u>Wallace 2013</u>; <u>Piazza 2015</u>). Attitudes toward nuclear weapons fall under this category of sensitive topics.

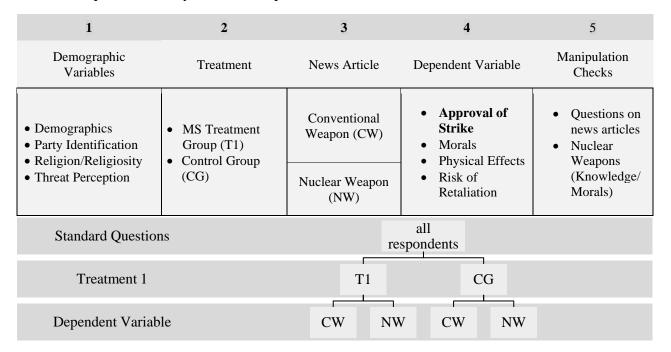
This work joins the experimental approaches of the second and third waves of the nuclear taboo literature to explore the causal factors influencing why some individuals are more willing to subscribe to taboos than others. It proposes a combination of traditional survey questions with an experiment. The random assignment of respondents into different groups provides causal inference of attitude towards nuclear weapons. Such a design allows a quantification of the uncertainty associated with the confirmation of the effects of the different treatments (Imbens 2010, 407). The strength of experimental methods is the determination of the effect on a given outcome of a particular causal treatment (Kapiszewski, MacLean, and Read 2015, 302), giving insights into internal rather than external validity. This chapter provides insights into the internal validity by showing that its manipulations —a reminder of death— work.

The survey design employs a structured data collection.²¹ Respondents are first being asked demographic and baseline questions about nuclear weapons. Then they are faced with the treatments and follow-up questions. Finally, two questions serve as manipulation checks to test respondents' attentiveness to the article and treatments. The test conditions of the experiment include two different primers based on TMT and one primer based on a realistic threat scenario.

²¹ The full survey is in Appendix B and the codebook in Appendix C.

Table 2 summarizes the sequences and 2x2 layout design of the experiment. Overall, there are four groups: T1 MS-CW, T1 MS-NW, CG-CW, and CG NW. ²²

Table 2: Sequence and Layout of the Experiment



To test TMT, the subjects of the experimental group are reminded of their mortality and then asked questions about their approval of a nuclear strike. The applied treatment is used according to other prominent works that employ TMT. The vignette here does not include a *natural* MS manipulation (car accidents, as terrorist attacks, or funeral home), but simulated induction that is artificially introduced through two common open-ended questions, referred to as the Mortality Attitudes Personalities Survey (Rosenblatt et al. 1989) or Projective Life Attitudes

²² A fifth and sixth group was treated with a reminder of the novel Coronavirus Covid-19 to induce MS. This treatment will be explored in a comparative perspective between the U.S. and Israeli population to test an MS proxy.

Assessment (Solomon, Greenberg, and Pyszczynski 1991). ²³ A vast amount of literature has used over 21 different MS manipulations, including explicit, implicit, and naturally occurring death reminders in forms of questionnaires, scales, pictures, film footage, search puzzles, and location-dependency to enforce the treatment (for a detailed list, see Cox, Darrell, and Arrowood 2019, 89-90). However, the open-ended questions have not only been used by Greenberg et al. (1990, 310) and Rosenblatt et al. (1989, 682), but roughly 80% of 277 TMT studies (Cox, Darrell, and Arrowood 2019, 87).

The condition asks respondents to briefly describe the emotions that the thought of their own death arouses in them as well as what they think happens to them as they physically die. While this inducement triggers MS, it is not expected to cause any undue harm. The study has received approval from the UCF Institutional Review Board (see Appendix A).²⁴ Respondents are given space to write about their feelings and thoughts about mortality and thus remind themselves that their lives are limited—as they would be if respondents face an immediate threat. Writing tasks are usually employed in lab settings instead of computerized self-administered questionnaires (CSAQs). Respondents' answers in the online format ranged from a few words (i.e., "fear, anxiety, stress") to in-depth, emotional explanations that included 136 words. Regardless of the length of the answer, respondents were still incentivized to think about their

²³ The pilot study with 114 undergraduate students from the University of Central Florida used the Collett-Lester Fear of Death Scale Version 3 as MS induction (<u>Lester and Abdel-Khalek 2003</u>; <u>Lester 1990</u>; <u>Boyar 1964</u>), which is also widely acknowledged and used by scholars in the field (<u>for example Rosenblatt et al. 1989, 682-683</u>). The newest version of the scale consists of 14 statements about one's own death (for example *how it will feel to be dead* and *never thinking or experiencing anything again*). However, the results of my student survey created some concerns about the attention span of the respondents. Several individuals responded with the same answer for each item. See Appendix I for more information on the Pilot Study and Death Scale.

²⁴ For a note on the ethics of this study, see Appendix F.

death. The control group is primed with the same two open-ended questions but pertained to *food* and *eating*—a common treatment for controls (see for example Rosenblatt et al. 1989).

Immediately following the treatment, all respondents face a distraction in the form of a commonly used word puzzle.²⁵ TMT studies include this delay and distraction between the prime and measure to allow for the mortality reminder to fade from consciousness. This is in line with the theory's argument that distant death defenses appear only when the thought of death remains in the unconsciousness (<u>Pyszczynski</u>, <u>Greenberg</u>, and <u>Solomon 1999</u>).²⁶ Treatments will only work if they trigger such defenses. Removing this distraction results in the disappearance of the effects of MS on the dependent measures (<u>i.e. Greenberg et al. 2000</u>).

The next component—a newspaper article (see Appendix B)—poses a hypothetical but realistic conflict scenario between Iran and Israel. The two countries have been longtime rivals and have an antagonistic relationship (for historical summaries, see for example Kaye, Nader, and Roshan 2011; Katz and Hendel 2012). Iran's nuclear program has sparked Israeli concerns. Polls have found that nuclear weapons in the hands of Iran were perceived as the most serious threat to Israel between 2004 and 2009 (Meir and Bagno-Moldavsky 2010, 25, 57). Years later, the Israeli public believes the Iranian nuclear threat to Israel remained unchanged since the JCPOA: 53% of Jews and 46% of Arabs believe the threat is unchanged, and 30% of Jews and 14% of Arabs believe it has increased ("The 2017 Israeli Foreign Policy Index" 2017). In the Pew Research Center's Spring 2015 Survey, 79% of Israeli respondents had a very unfavorable

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²⁵ For reference, please see the TMT website (<u>www.tmt.missouri.edu</u>) that lists all known TMT studies and provides two templates of delay questions commonly used. I thank Dr. Jamie Arndt (University of Missouri) and Dr. Mark Landau (University of Kansas) for their advice with this. ²⁶ For a more in-depth discussion of the distal defenses and the anxiety-buffering system specific to TMT, see (Pyszczynski, Solomon, and Greenberg 2015).

opinion of Iran and, with that, had the most unfavorable attitude out of 40 surveyed countries ("Spring 2015 Survey Data" 2015).²⁷ Hence, any further Iranian nuclear program developments (in particular uranium enrichment) will put the public and Israeli military on alert. In April 2021, Iran announced that it will enrich uranium to 60% purity (90% is needed for weapons-grade uranium).²⁸ If Iran further violates IAEA provisions,²⁹ the newspaper headline "Iran Now Capable of Targeting Israel with Nuclear Weapon" is moving closer to reality. So would Israel's response as the government has not pledged to a *no first use* policy but follows the ambiguous doctrines (1) that Israel will not be the first to introduce nuclear weapons in the Middle East and (2) that the country will use counterproliferation to prevent enemies' development of WMDs (*Begin Doctrine*).

Recent scholarship has criticized such fictional scenarios for causing a wrong understanding among respondents on international legal norms, omitting reminders of the law, and priming individuals with war crimes (<u>Carpenter, Montgomery, and Nylen 2020</u>).³⁰ However, it is unfeasible to include all information without making surveys too long and complex or the

²⁷ Interestingly, Alex Wellerstein reported that Israeli users of his online tool *Nukemap* detonate most nuclear bombs on Iran, confirming Israeli threat perception coming from Iran (<u>Eaves 2017</u>). ²⁸ See https://www.wsj.com/articles/iran-nuclear-negotiator-says-tehran-will-increase-purity-of-uranium-to-60-11618326331.

²⁹ Iran was not violating provisions when the JCPOA was in full effect. However, once President Donald Trump announced U.S. withdrawal from the agreement in 2018, Iran started to increase its uranium enrichment and built new, advanced centrifuges. The Trump administration had reinstalled economic sanctions and imposed additional sanctions in a maximum pressure approach that reduced Iranian reasons to abide by the agreement. For recent violations, see https://www.iaea.org/newscenter/focus/iran/iaea-and-iran-iaea-reports.

³⁰ The authors further criticized such studies for priming respondents to disregard a moral and legal taboo. However, – and this work joins the counterargument of Dill, Sagan, and Valentino here – respondents should not need to be reminded of a norm if it supposedly internalized: "People do not need to be reminded that cannibalism is against the law when presented with an opportunity to violate that deeply held taboo. Compliance at the internalization stage is subconscious."

risk of losing respondents or their attentiveness.³¹ Experiments and EoC approaches generally remain vulnerable to claims of having omitted certain considerations, such as a reminder of legal implications of a particular scenario. Yet, many decisions are made only after a number of independent variables come into play and interplay with each other. Experimental scenarios are useful to explore when individuals uphold their principles or when they conflict.

As Sagan and Valentino point out, it is easy for people to voice support for abstract normative principles (2020, 175), such as asking respondents whether the use of nuclear weapons is morally wrong. In this survey, the mean of all responses to such the question of the morality of a nuclear strike is 2.6 (measured on a Likert scale with 0 being highly unethical, 7 being highly ethical), pointing to a moral principle against the use of nuclear weapons. Noticeably, this mirrors the findings of regular polls. However, the potential use of nuclear weapons in the real world puts the public before a much more complex scenario, mirrored as in this work, too. Unlike Sagan and Valentino's survey experiment, ³² Israeli respondents here are not asked to choose between military actions in order to avoid a framing effect criticized by Carpenter, Montgomery, and Nylen (2020). Instead, respondents are giving the option to disapprove of the strike. The question reads:

Given the facts described in the article, if Israel decides to strike, how much would you approve or disapprove of this decision?

- ☐ Strongly Approve (5)
- ☐ Somewhat Approve (4)
- □ Neither Approve nor Disapprove (3)

³¹ This work, however, agrees that a debriefing can inform the participants that these kinds of acts may be a violation of international law and potentially a war crime, granted that individuals will take the time to read it. It should be included in future studies.

³² Sagan and Valentino's question read: "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?" 1–6 (Strongly Prefer to Continue Ground War to Strongly Prefer to Launch Strike)

□ Somewhat Disapprove (2)□ Strongly Disapprove (1)

All facts in the articles were held constant for all groups to isolate the effect of the causal variable in the primer. To avoid a biased framing effect, there are no elite cues, such as the head of government recommending a strike in the article.

The target population for this work is the Israeli adult population (> 18 years), comprised of approximately 6,394,030 million.³³ Under my supervision, an Israeli polling firm, Midgam, managed the data collection and recruited a nationally representative sample of Jews and Arabs,³⁴ sampling all groups to paint a convincing portrait and correct for the limitations of previous surveys. Midgam reported that 7,307 questionnaires were ordered for Israeli Jews and that the response rate was at 21.20%.³⁵ Overall, 903 Jews finished the survey properly.³⁶ The response rate for Arabs was lower at 12.62%, with 1,553 ordered questionnaires and 121 respondents properly finishing the survey.³⁷ The final survey includes 1,022 Israelis (omitting 2 more respondents that did not respond to the treatment questions properly): 336 in T1, 344 in T2,³⁸ and 342 in CG. The firm was tasked to recruit a random sample of Israelis ages 18 and older, considering sex, age, and residential area. Randomization checks concluded that the independent variable, MS, did not predict the allocation of specific treatments. None of the

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³³ The complete Jewish population is 6,697,000 million (74.6% of the total population), 1,890,000 millions are Arabs (20.9%), and 434,000 are others (4.5%).

³⁴ Israeli Arabs are intentionally included as they are a widely neglected group in polls and experimental surveys. Another work explores these demographics with more depth.

³⁵ These are the links for the management system for each of the Jewish survey: https://www.midgampanel.com/surveyData/index.asp?id=7OKihliq2020213737

³⁶ For comparison, the sample size mean in 277 experiments (pre-2010) that used TMT is 87.3, ranging from 17 to 343 participants (<u>Burke, Martens, and Faucher 2010, 177</u>).

³⁷ See here for the results for Arabs as reported through Midgam's management system: https://www.midgampanel.com/surveyData/index.asp?id=70Kihliq20202137372.

³⁸ The Covid-19 Treatment of T2 is addressed in more depth in the discussion of Chapter 4.

demographic groups were neither significantly more or less likely to receive the treatment nor differed in systematic ways. The Jewish sample is representative in terms of gender and age with corresponding quotas from Israel's CBS. The Arab sample, however, diverges from the general Arab population in order to recruit enough respondents. Respondents were recruited by organic and sponsored referrals in search engines (mostly Google).³⁹ A number of sites (i.e., Facebook and Telegram) referred internet surfers to the panel, and finally, the participants themselves refer other people and receive compensation for this as part of the site's affiliate program. The representativeness of the required sample was maintained by the fact that participants did not enter the studies freely but were invited to partake further if they meet the demographic characteristics of the quotas in accordance with the study's requirements. This non-probability sampling technique is termed *quota sampling*, whereas the accumulated sample has the same proportions of individuals as the targeted population with respect to known characteristics that should meet this research's quota criteria.

Midgam's sampling error is 4.4. The sampling frame consists of individuals with internet access enrolled in an administered online panel. The method to conduct the survey was the CSAQ.⁴⁰ Investigations have shown that online platforms to recruit subjects are valid tools for experimental research in political science and that respondents are at times even more representative of an adult population than in-person surveying (Berinsky, Huber, and Lenz

veteran immigrants, individuals aged 30–44, and other subpopulations in Israel (<u>Gordoni, Oren, and Shavit 2011</u>). In addition, social desirability bias is more likely in people's responses. Other methods, such as the Socially Mediated Internet Survey method (<u>Cassese et al. 2013</u>), are not used because they are not representative of the general adult population of a country.

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 $^{^{39}}$ Midgam's records indicate that respondents were paid 4 Israeli New Shekel (\pm 1.17 USD). 40 Telephone surveys were not conducted because research has shown that in Israel, specifically, they lead to systematic underrepresentation of people with a lower socioeconomic status, non-

2012). The CSAQ has several advantages for this research. A computerized algorithm assures that all respondents have an equal chance of being assigned the different treatments. Such randomization gives credibility to the survey and is the strength of the study design (Imbens 2010, 407). CSAQs also prevent the interference of spillover (Kapiszewski, MacLean, and Read 2015, 326-27). The respondents of both T1 and CG were fully separated and did not share any interaction with each other. Thus, it is unlikely that respondents in the CG were treated by accident. The independence of treatment and control was ensured to the best. Further, conducting the survey online reduced the social disability bias⁴¹ (Kreuter, Presser, and Tourangeau 2008; Tourangeau, Rips, and Rasinski 2000), annulled potential for any interviewer biases, and was most fitting for the nature of the treatments (i.e., open-ended questions, word puzzle).

A concern of online surveys can be the coverage of population parameters. The elderly might not have or use the internet as frequently. However, this is not an issue in Israel. In 2017, 87% of Israelis used the internet at least occasionally ("Spring 2017 Survey Data" 2017). Among all respondents, 47% used the internet several times a day, 30% once a day, and 12% several times a week to get news. Furthermore, about nine out of ten (88%) Israelis owned smartphones in 2018 (Taylor and Silver 2019). Older people are also catching up on their smartphone use. Among individuals that are 55 and older, 80% use them in comparison to 91% of individuals between the ages of 18 and 34. Table 3 summarizes the basic demographic characteristics of the survey sample compared with that of the general population.

⁴¹ "The concept of social desirability rests on the notions that there are social norms governing some behaviors and attitudes and that people may misrepresent themselves to appear to comply with these norms (<u>Kreuter, Presser, and Tourangeau 2008</u>)." For example, not voting can be perceived as violation to a civic duty. Respondents tend to overreport voting (<u>Belli, Traugott, and Beckmann 2001</u>) or underreport other undesirable behaviors such as drug use or drinking (Tourangeau and Yan 2007).

Table 3: Summary Statistics of Demographics of Sample and General Population

Demographic	General Population	Survey Sample
Gender	49.8% male/50.2% female	49.7% male/50.3% female
Age (Jews only)	18–24 years: 14.9% 25–54 years: 57.8% 55–64 years: 15.4% 65–74 years: 11.7%	18–24 years: 14.6% 25–54 years: 60.4% 55–64 years: 14.6% 65–74 years: 10.5%
Ethnic Groups	74.1% Jews/21% Arabs	90.4% Jews/9.6% Arabs

Source: Israeli Central Bureau of Statistics, Midgam

Findings

Overall, the results of the study suggest that 54.24% of all respondents, regardless of their treatment, support a nuclear strike in a plausible threat scenario. Thus, while there is a passionate debate about what numbers can be counted as practical thresholds (Sagan et al. 2020), this work suggests that over half the sample support a nuclear attack—in a first strike—neither confirms a strong taboo nor challenges substantial nuclear aversion. Another 10.58% said they neither agree nor disagree with the strike, and 35.15% opposed it before being conditioned with a security threat. The still fairly high support does not imply a weak nuclear norm across the globe. Israel's population tends to be hawkish. In fact, a second survey conduct in December 2020 with the U.S. population confirms that there is a norm among the public: a mere 10.2% supported a nuclear first strike.

Figure 2 plots the means and confidence interval bars for both groups. Both groups are associated with higher support for a nuclear strike after the realistic threat scenario (comparing responses to questions 9 and 15 of the survey). The mean support for the strike in the T1 group

before the treatment is $2.54 \, (N=250)^{42}$ and after $3.5 \, (N=135)$, a difference of 1. Support for a nuclear first strike increased at a greater rate in T1, and the difference between both groups is significant. In other words, respondents exposed to TMT are more likely to express support for nuclear strikes than respondents without such exposure. A Wilcoxon signed-rank test rejects the null hypothesis Ho, which states that there is no difference between respondents in T1 before and after the MS treatment and instead reveals a significant difference in support for a nuclear first strike, n=135, Z=-6.4, p=.00. Figure 3 shows that respondents in both groups find the nuclear strike increasingly moral after a realistic threat scenario (comparing responses to questions 10 and 16 of the survey). On average, T1 increased its support by 1.2 and the CG by .8.

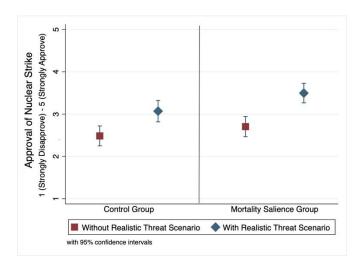


Figure 2: Approval of Nuclear Strike With and Without Realistic Threat Scenario

⁴² This reports only respondents that answered both manipulation checks correctly. Hence N decreases from 336 to 250. Unless indicated differently, all analyses in this Chapter that refers to MS uses respondents that answered manipulations checks correctly to make sure it only uses Israelis that paid full attention to the treatments. Without accounting for these checks, averages are at 2.6 (N=336) and 3.4 (N=172), respectively.

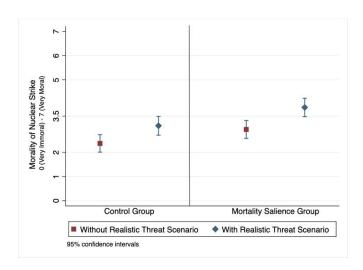


Figure 3: Morality of Nuclear Strike With and Without Realistic Threat Scenario

Table 4 displays the result of five ordinal logistic regression models that assess the effects of a reminder of death on the support for a nuclear strike. It models how the independent variable MS predicts the categorial five escalating levels of the strike support. The four models show that respondents that are being reminded of their death are more likely to support the use of nuclear weapons than those that are not. Without accounting for control variables, Model 1 shows a positive effect of mortality salience on support for nuclear weapons (p=.014). The MS treatment on average led to Israelis being 1.7 times⁴³ more likely to support a nuclear strike. In Models 2-5 this ranges from 1.7 – 1.9 times. A linear regression showed largely similar results (Appendix E). This main finding confirms H1 previous TMT research of military strikes against Iran (see Study 1 in Hirschberger, Pyszczynski, and Ein-Dor 2009).

The positive and significant coefficient substantiates the expected relationship between traditional mortality salience and the use of nuclear weapons. Some models control for several

⁴³ This number is based on the ratio of the odds of the support for a nuclear strike in the presence of MS. It is simply a measure of association between an exposure (independent variable) and an outcome (dependent variable). For more information, see (Bland and Altman 2000).

standard individual-level variables, including gender, year of birth, 44 geographic location, level of education, political ideology, socio-economic status (SES), threat perception, and nuclear knowledge. In Model 4, where the dependent variable changed, still asking about the approval of a nuclear strike but *with* the likelihood of military retaliation, MS remains a significant predictor of support. At the same time, education, gender, and age continue to be at the level of p < 0.05. Merely in Model 3, when respondents are reminded of the devastating effects of nuclear weapons, females are less likely to support the strike. According to the literature (Conover and Sapiro 1993), the reminder of thousands of people dying and long-term health effects do not justify the use of a nuclear weapon in the eyes of females.

⁴⁴ For more comments on age and gender, see Appendix E.

Table 4: Logistic Regression of the Effects of Mortality Salience on Israelis' Attitudes Towards the Use of a Nuclear Weapon

VARIABLES ⁴⁵	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
				(added	(added	(Added	(Added	(Added
				Retaliation)	Effects)	Interaction)	Interaction)	Interaction)
Mortality Salience	.536**	.526**	.477**	.527**	.658***	.88	.036	.738
	(.221)	(.232)	(.239)	(.24)	(.244)	(1.358)	(.739)	(.483)
Gender		231	393	369	945***	38	381	39
		(.234)	(.244)	(.245)	(.254)	(.286)	(.285)	(.245)
Geography		.006	.004	.076	031	02	02	.006
		(.097)	(.101)	(.1)	(.102)	(.118)	(.12)	(.102)
Education		059	057	121	136*	029	026	057
		(.076)	(.079)	(.08)	(.082)	(.092)	(.093)	(.08)
Socio-Economic Status		.511***	.292	.333	084	.483**	.524**	.303
		(.192)	(.207)	(.204)	(.213)	(.239)	(.243)	(.209)
Age		.013*	.007	009	001	.008	.007	.008
		(.008)	(.008)	(.008)	(.008)	(.009)	(.01)	(800.)
Ethnoreligious Identity		1.851***	2.327***	1.825***	2.082***	2.354***	2.552***	2.262***
		(.437)	(.507)	(.531)	(.599)	(.858)	(.692)	(.512)
Political Ideology			.243***	.294***	.28***	.162**	.165**	.181**
			(.058)	(.06)	(.059)	(.065)	(.066)	(.082)
Nuclear Knowledge			381**	166	237	465**	468**	372**
			(.18)	(.188)	(.188)	(.216)	(.217)	(.181)
Threat Perception			.174***	.17***	.219***	.228***	.227***	.175***
			(.061)	(.062)	(.063)	(.072)	(.072)	(.062)
MS X Political Ideology								116
								(.482)
MS X RelNat. Identity							.72	
							(.765)	
MS X Ethnoreligious Identity						.479		
						(1.391)		
Observations	265	245	239	239	239	239	227	239
Pseudo R ²	.007	.046	.103	.107	.116	.134	.143	.106

Standard errors are in parentheses

Regressions were run with respondents that answered manipulation checks correctly.

^{***} p<.01, ** p<.05, * p<.1

⁴⁵ Descriptive statistics for these variables are in Appendix 4.

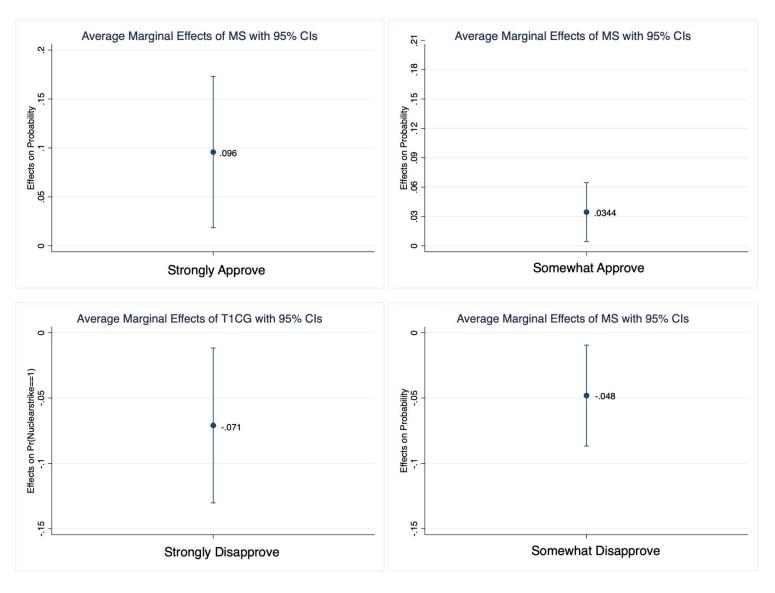


Figure 4: Isolated Effects of MS on the Probability of Specific Outcomes of (Dis-) Approval of a Nuclear Strike

Figure 4 adds to the robustness of the main finding. It shows the isolated effect of MS on the probability of four specific outcomes when asked about support for a nuclear strike: *Strongly Approve* (5), *Somewhat Approve* (4), *Somewhat Disapprove* (2), and *Strongly Disapprove* (1). It shows the average change in probability of selecting these four different outcomes as a result of the treatment. In a comparison of all, 5 has the largest increase in probability of supporting a nuclear strike. MS increases the probability that someone selects not only 5, but also 4. In comparison, MS actively decreases the probability that someone selects 2 or—with the largest decrease—1.

Models 3 to 8 show that political ideology and threat perception are significant driving factors of support. Political conservatists (ordinal variable 0–10) and people that have a higher perception of the current threat level in Israel (ordinal variable 1–7) are more supportive of the use of nuclear weapons than their respective counterparts—as shown by the positive and significant coefficients across the models. Especially in Israel, where scholars found a shift towards the right in public opinion (Meir and Bagno-Moldavsky 2010, 19), this sends alarming signals for the support of the use of extreme force. These findings also confirm the third wave of the taboo literature that suggests a connection between people on the right of the political spectrum scoring high on binding values support the use of a nuclear weapon more as they are defending their in-group (Rathbun and Stein 2020; Smetana and Vranka 2020).

The Jewish-Arab divide is a significant predictor across Models 2–8. Across the models, Jews on average are 6.2-12.8 times more likely to be support a nuclear strike than Arabs. Jewish support for a nuclear first strike is higher than Arab support. But does the MS treatment work more intensely among than Arabs then? Model 6 includes the interaction term *MS X Ethnoreligious Identity* to explore a potential heterogenous treatment effect. There is no robust,

statistical significance to report. The marginal effect model (Figure 5) shows that there is no heterogenous effect of MS on Jewish and Arab respondents that *Approve* or *Neither Approve nor Disapprove* of a nuclear strike. There is only a small difference in effect of MS on respondents that disapprove of a strike. The treatment here works better on Jews. H2 is not empirically supported.

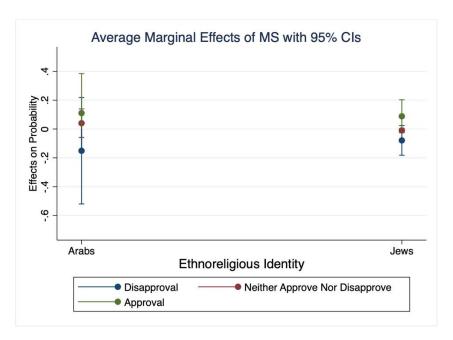


Figure 5: Marginal Effects of MS on Ethnoreligious Identity and (Dis-) Approval of Nuclear Weapons under (Model 8, Table 4)

While a large portion of both groups are supportive of the use of force, Jewish support for nuclear weapons is consistently higher in the models, but they are not necessarily more affected by MS. Israelis tend to have a higher threat perception toward the homeland than Arabs,⁴⁶ which can explain higher nuclear support. It might be that Jews justify the immoral use of force through strategies such as non-responsibility or dehumanization (Bandura et al. 2001; Castano and Giner-

⁴⁶ When asked "How concerned are you about the possibility that Israel will be attacked by an enemy next year?", the survey suggests a linear relationship between Jews and a higher threat perception (p=.004).

Sorolla 2006; Haslam 2006; Hartmann and Vorderer 2010). This literature suggests that people do not condemn themselves by aligning their conduct with internal standards. For example, moral disengagement correlates with support for retaliatory strikes against terrorists (McAlister, Bandura, and Owen 2006) and likely plays a similar role here for Jews reminded of their mortality. In the light of an existential threat and high threat perception, Jews are seeing a decreasing concern over the morality of a nuclear strike.

The finding that Jews are overall more supportive of aggressive means is not all to surprising then. However, that Arabs do show fairly high support for using nuclear weapons against Iran is not trivial. Palestinian citizens of Israel are understandably reluctant to support the use of force against their own people in the West-Bank and Gaza, but aggressions against Iranians appears to be a different issue. Iran's Shiite Muslims have been historically at odds with Sunni Muslims—the largest Islamic group in Israel. Another explanation could be that the Israeli government in the last 10+ years, has framed Iran as a danger and irrational actor who cannot be negotiated with.⁴⁷ Or the explanation could follow a logic of 'the enemy of my enemy is my friend.' The animosity toward Iran that both Israeli Arabs and Jews hold could be for completely different reasons, but it creates a common interest and in turn similar attitudes towards using extreme violence. From a rational perspective, an Iranian nuclear attack—even if it is rather unthinkable—would not discriminate among Jews and Arabs in Israel. For this reason, Arabs in Israel would be also threatened by a nuclear Iran.

⁴⁷ For example, Yitzhak Rabin had called Iran a "dark, murderous regime" in 1987 and Shimon Peres added that the Islamic regime is "more dangerous than Hitler," see https://www.haaretz.com/middle-east-news/iran/MAGAZINE-how-israel-and-iran-went-from-allies-to-enemies-1.6049884. Along the same lines, Benjamin Netanyahu called the Iranian regime "dictators," "tyrants of Tehran," and a government that spreads "death and destruction throughout the region," see https://news.un.org/en/story/2018/09/1021192.

In Model 4, respondents are asked about their support for a nuclear strike. However, this time, they are reminded of potential retaliation from Iran with a military strike. The MS treatment on average led to Israelis being—as in Model 1—1.7 times more likely to support a nuclear strike under a reminder of retaliation. This is at odds with research that has shown that when respondents consider the consequences of an Israeli pre-emptive strike, MS decreases support for a nuclear strike (Hirschberger, Pyszczynski, and Ein-Dor 2009). However, the named study is different in that Iran had not obtained a nuclear weapon yet but it could develop them in the future. In the news article vignette for the survey of this Chapter (see Appendix B), Iran is assumed to have developed a nuclear weapon. Knowing that Iran is able to strike Israel with a nuclear weapon if it wants to, might have shifted respondents' willingness to support a strike.

Model 5 also tests MS on respondents' support for a nuclear strike but with a reminder of the physical effects of a nuclear strike. ⁴⁸ Interestingly, the mentioning of devastating effects increases the likelihood of respondent to support the use of a nuclear weapon. The MS treatment on average led to Israelis being 1.9 times more likely to support a nuclear strike. Intuitively, one might assume that support goes down when the effects of a strike are more apparent. However, this support is in fact in line with arguments in the literature that found that people who feel threatened find it existentially reassuring if out-group members have died (Hayes, Schimel, and Williams 2008). Hence, the death and long-term health effects of Iranians (the out-group) ensures the existential survival of Israelis (the in-group).

⁴⁸ The questions read: "The use of the nuclear weapon in the article would cause the instant death of approximately half a million people killed by the blast wave, third-degree skin burns and eye injuries from radiation (some of which require amputation), and long-term effects including anemia, leukemia, and cancer. Do you approve or disapprove of your country's decision to strike?" This casualty number is inflated since the aim here is not the accuracy of casualties but a test of how support changes when respondents are primed with such information.

Model 7 in Table 4 includes the interaction term *MS x Rel.-Nat. Identity* to test the third hypothesis, the effect shaped by religious-nationalist identity. Respondents were asked whether they identify as secular, traditional, religious Zionists, or Haredi (ultraorthodox). While the odds ratio suggests that the MS treatment on average led to religious nationalist Israelis being 2.1 times more likely to support a nuclear strike than non-religious nationalists, the interaction in Figure 6 is not statistically significant. There may be some degree of difference in support, but MS does not have an effect. Figure 6 shows that the marginal effects of MS have quite the opposite effect. The MS treatment among religious nationalist caused a tendency of disapproval of a nuclear strike. In contrast, for non-religious nationalist, MS had an effect on those approving of a nuclear strike. There is a small heterogenous effect, but not the one that was originally expected. Hence, there is no empirical support for *H3*.

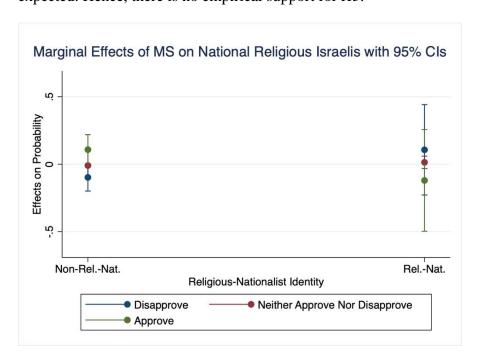


Figure 6: Marginal Effects of MS on Religious Nationalist Identity and (Dis-) Approval of Nuclear Weapons under (Model 7, Table 4)

Across the Models 3-8, Israelis on the right, on average, are 1.18-1.34 times more likely to be support a nuclear strike than Israelis on the left. Respondents who place themselves on the

right-end of the political ideology spectrum, show greater support for nuclear strikes in the regression models. In Model 8 an interaction term is utilized to test the conditional hypothesis made regarding MS and political ideology. The interaction term is a combination of the two independent variables, *Mortality Salience X Political Ideology*. Examining the substantive effects of the interaction term, Figure 7 illustrates the difference between leftist and rightist Israelis. It shows that the treatment works for leftists more than for rightists and that there is a heterogenous effect, effect, similar to the previous finding about religious nationalists.

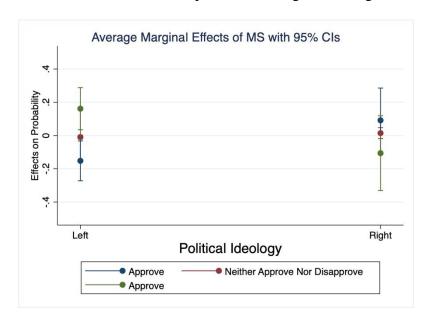


Figure 7: Marginal Effects of MS on Political Ideology and (Dis-) Approval of Nuclear Weapons under (Model 8, Table 4)

Respondents' written answers to questions about their own death are further revealing in support of the main finding. First, there is a small but significant decrease (p=.04) in support for a nuclear strike when respondents wrote more words in response to the two MS-inducing questions. This suggests that when individuals think deeply about their death, they are less willing to support nuclear weapons. That is interesting in that it is counterintuitive to TMT. This could be that an extended period of intensively dealing with the thought reduces the stimulation

of existential terror and fear of death. This is similar to the patterns of written responses when respondents are asked to describe the emotions that the thought of their own death arouses. When individuals expressed indifference, content, or even relief towards their own death, the support for a nuclear strike was high. For example, some comments read:

"Do not think about it and do not deal with it."

"Something I do not think about and have no relation to it[.] I am a believing person."

"Life in heaven. Can I still see what's going on in this world?"

"An end of suffering."

"Sad for my family. How will they manage?"

"Does not bother me at all."

"Answer before God."

"My indifference to death is just a shame [for] the family and those around."

The survey also showed comprehensive support for a conventional strike. While there have been polls that explore whether Israelis would support or oppose a conventional attack on Iran's nuclear facilities, they are ambiguous about the specifics of such an attack ("Israeli Public Opinion Polls: Attitudes Toward Iran" 2017; Meir and Bagno-Moldavsky 2010). They give few details on the type of attack, location of the attack, or estimated casualties. In 2009, 59% of Jewish Israelis supported a conventional attack on Iranian nuclear facilities if they learned that Iran has nuclear weapons (Meir and Bagno-Moldavsky 2010, 24). The results of the current survey show that support is higher in a specific scenario: 73.57% of respondents answered in the affirmative of the conventional strike. Another 10.88% said they neither supported nor

disapproved of a strike. A mere 15.54% were against it.⁴⁹ MS does not explain the high support for the conventional strike (see Appendix E, Table 15). That is likely because Israelis in general are hawkish and in support of the use of conventional force in threat scenarios. That is, they do not need to be reminded of their mortality to support a conventional strike.

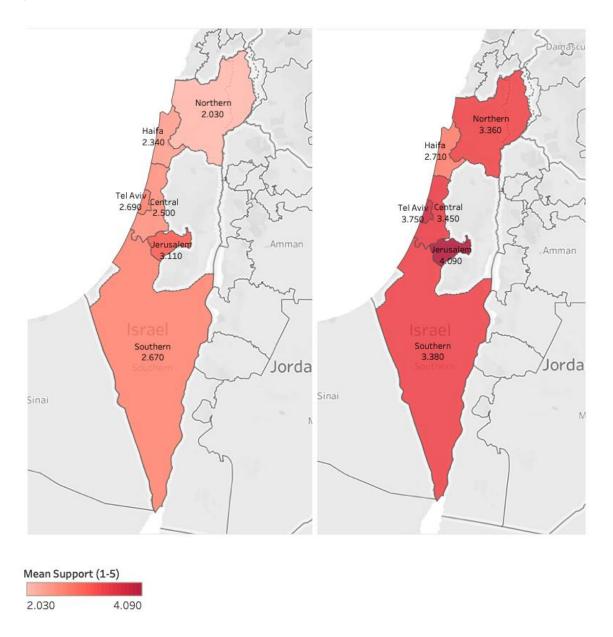
Respondents' locations did not show any significance in the Models. However, the findings in the literature warrant a closer analysis of the geographical variables. The literature on spatial differences has found that not all Israeli civilians are exposed to violence to the same degree, resulting in differences in perceived distress and threat (Hirsch-Hoefler et al. 2016, 845). Those living in high-risk areas experience more exposure to violence and psychological stress and, in turn, have a higher threat perception and reduced individuals' willingness to compromise. Additional studies have found that exposure to violence increases support for belligerent policies (Gordon and Arian 2001; Echebarria-Echabe and Fernández-Guede 2006; Skitka et al. 2006). Figure 8 confirms that there is geospatial variation in support for a hawkish policy (=the nuclear strike). It shows the distribution of respondents' approval of a nuclear strike before and after the MS treatment. The mean value increased in all districts after a reminder of mortality. Israelis in the Jerusalem district showed the highest support for a nuclear strike (4.09)⁵⁰ compared to the lowest support in the Haifa district (2.71). There is a sizable Arab population in the North and Haifa which might explain the lower support. The South shows high support likely because it is

exposed to Hamas rockets. Citizens in the two major city districts, Tel Aviv and Jerusalem, were

⁴⁹ Among respondents that answered all manipulation checks correctly.

⁵⁰ A similar high support (4) was seen among respondents from the Judea and Samaria Area but they are excluded from the map as it is not considered one of the six Israeli districts.

showed higher support than the other districts. The Northern district showed the largest increase (1.33) before and after the treatment.⁵¹



 $Figure\ 8:\ Mean\ Values\ of\ (Dis\text{--})\ Approval\ of\ a\ Nuclear\ Strike\ Before\ and\ After\ MS\ Treatment$

⁵¹ An exploration of additional sub-districts could be informative here. However, that data is not available.

Discussion

The demonstrated intersection of international relations and social psychology contributes to new thinking on public opinion on the use of nuclear weapons. Overall, this research advances a current understanding of why nuclear weapons disarmament, elimination, and non-proliferation are not progressing. It has several broader implications. First, it suggests that Israel cannot rely on public aversion to avoid nuclear warfare. The manipulations in the experiment were effective and with that showed internal validity: Reminders of death and a realistic threat scenario of a nuclear Iran affect individuals' attitudes by making them more supportive of extreme force. If mortality salience is triggered by a proxy event in international security, individuals are more likely to be supportive of military actions. That is important since public opinion matters in foreign policy. If the majority of the electorate supports nuclear weapons, a hawkish leader might be more intrigued to take aggressive military action. With Iranian nuclear proliferation efforts continued, this can become relevant faster than expected. Foreign policy plays a crucial role for Israelis as they vote on foreign policy as much as they do on economic and religious policies (Tomz, Weeks, and Yarhi-Milo 2018). Knowing that the public might support a hawkish leader is significant, especially in times when populist authoritarian leaders stoke up mass anxieties and uncertainties. The role of responsible and cautious leaders and institutions becomes crucial.

At the same time, that means for U.S. foreign policy, that the US should continue it negotiations with Iran to revive the JCPOA. The results show that the Israeli public is supportive of a nuclear first strike against a nuclear-armed Iran. The Israeli public cannot be relied upon to avoid atomic warfare as no public opposition in Israel would put a check on an Israeli nuclear first strike. Unlike during the Cold War when people took to the streets to protest the US-Soviet arms race and use of nuclear weapons, there is no visible pro-disarmament sentiment in Israel. If

Israel wants to prevent a nuclear conflict in the future, it would be in its national security interest to support the existing diplomatic framework and get Iran back into compliance with the nuclear deal.

Prime Minister Benjamin Netanyahu has made numerous belligerent statements, including: "The light of Israel will never be extinguished. (...) Those who threaten us with annihilation put themselves in mortal peril. Israel will defend itself with the full force of our arms and the full power of our convictions." He is choosing a provocative policy that includes counterproliferation measures ⁵² in order to keep Iran non-nuclear. However, Iran's has hardened its resolve to consider nuclearization. While opposing the JCPOA serves Netanyahu's short-term electoral interest that caters to the public and his political base who oppose the deal, it raises the stakes with Iran and in the long-term risks a nuclear conflict. Netanyahu seemingly is confident that Israel can keep sabotaging the Iranian program before it develops enough enrichment capacity necessary for a weapons program. However, if the continued existence of the Israeli state is Netanyahu's primary goal, then getting into a nuclear confrontation with Iran amid public calls for war creates a high risk for the state.

Third, the work carries wider implications for the importance of including Arabs in Israeli surveys. Albeit there was not significant different effect of MS on ethnoreligious identity,

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⁵² On several occasions Israel disrupted, set back, and undermined aspects of Iran's nuclear program. In 2010 an Israeli-U.S. computer worm, called Stuxnet, sabotaged Iranian gas centrifuges. Israel also was involved in assassinations of Iranian nuclear scientists and explosions at the Natanz nuclear complex. Most recently, in April 2021, Israel allegedly caused a power outage at the Iranian nuclear facility in Natanz. Early estimates suggest that this might have set back part of Iran's nuclear program by nine months but there is little tangible evidence that covert methods have had long-term effects in terms of constraining Iran's nuclear program (Horschig 2020a). On the contrary, the most recent action had Iran start uranium enrichment up to 60% purity. Similarly, Iran moved to increase uranium enrichment in response to the assassination of its top nuclear scientist, Mohsen Fakhrizadeh.

the findings showed that Jews are more hawkish than Arabs, even in the case of a nuclear first strike. With a growing Arab population, their opinion on foreign policy matters. The tendency to exclude Arabs because their opinion on national security matters is radically different from Jews and misrepresent the Jewish character of the country is—to say the least—misleading and fallacious. Only 11.11% of Arabs are supportive of a nuclear strike, compared to 56.86% of Jews. As emphasized in the literature review, public opinion in democracies matters. Hence Arab public opinion matters in Israel. Because of Arabs, the average public opinion is less supportive of a nuclear strike than it would be otherwise the case. Due to the convenience sample of Arabs, no externally valid conclusions could be made from it.

Third, Israeli support for a retaliatory nuclear strike in a real-life scenario is likely to be high. The main finding for the support of the use of nuclear weapons is (a) based on a first strike by Israel and (b) in a hypothetical scenario that Israelis are likely aware of. Albeit a grim implication, it is important to note that Iran has not developed a nuclear weapon, and there is currently no direct threat from a nuclear country to Israel. When the reality of a nuclear threat increases in reality, so would the existential concern and hence support for violence. Support for a second retaliatory strike is generally higher than a nuclear first strike.⁵³

There are a few possible limitations to the experiment. First, it does not study the length of effects (<u>Gaines, Kuklinski, and Quirk 2007</u>)—a typical issue in EoC studies. In other words, the treatment effect might not last longer than a few minutes or hours and has, therefore, little significance in the real world. However, Figures 2 and 3 have shown that a short newspaper

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⁵³ See for example, http://www.peaceindex.org/files/The%20Peace%20Index%20Data%20-%20November%202010.pdf and https://ropercenter.cornell.edu/blog/public-opinion-about-using-nuclear-weapons.

article impact people's support for a nuclear attack. If the consideration of a strike was real, it would be covering the complete news cycle and respondents would be exposed to a much longer reminder. Second, respondents rarely face a theoretical, direct reminder of their death. They are hardly ever asked to think about the end of their lives and the process of dying. Nevertheless, there are real-life implications as there might be conflict events that prompt people to think about their own death and hence act t as a proxy for the reminders of death. Third, there are likely other factors in the real world that can have an impact on one's attitude. Academic experimental studies fall short in replicating all such impacting factors to predict real-life attitudes. It nevertheless does not challenge its strength of highlighting a specific causal factor and its internal validity.

Conclusion

The purpose of this study was the investigation of determinants of Israeli support for nuclear weapons. The results suggest that the degree of public willingness to support the usage of nuclear weapons is stronger than regular polls suggest. That does not necessarily hint to a discrepancy between the anti-nuclear norms in opinion polls and the relatively high support in experimental surveys. What it suggests is that this aversion can erode when respondents face a severe threat. Hence, these findings corroborate previous experimental studies that challenge the robustness of the nuclear norm.

I have argued that these studies explore the causes of support for nuclear weapons but not the effect of a specific cause. Performing a survey experiment, I find that mortality salience has a significant effect on individuals' willingness to support nuclear attacks. There is a longstanding norm against nuclear weapons, but recent studies suggest that public adherence to this norm is weaker than typically assumed. Smetana and Vranka (2020) and Rathbun and Stein (2020) offer

retribution, deference to authority, and in-group loyalty as explanations for approval of nuclear strikes. I join this scholarship by providing TMT as the new explanation of why people may violate the nuclear norm. People who are more routinely facing existential threats will support greater use of nuclear weapons. In Israel, the norm only has a minority of support when strikes are suggested against a hostile country that developed nuclear weapons. At the same time, Israelis may not be supportive of strikes against a country lacking nuclear weapons. Thus, the fragility of the nuclear taboo appears, in part, when an existential threat exists. My findings join the scholarship that challenges the robustness of normative taboos and contest notions that human psychological nature has moved away from violence.

The study also makes an important contribution to the Israeli public opinion literature on the use of force by including Arabs, a widely neglected group in polls and experimental surveys. Since Jews and Arabs are divided over national security issues, both should be included to obtain a truly national representative sample. The findings emphasize how divided both groups are on the use of force, and specifically nuclear weapons. Arabs should be included in all polls and surveys that aim to capture Israeli opinion. Excluding Arabs not only inflates public opinion supportive of the use of force but contributes to the alienation of an ethnic group from the state.

Further research should investigate when theoretical MS translates into real-life events. Can terror attacks, civil wars, or global health threats remind people of their finite existence and, in turn, increase their support for the use of force, and specifically nuclear weapons? In other words, what are proxy events that have the same effect as traditional TMT? This is important in political decision-making. Individuals could be more inclined to support the use of nuclear weapons in times of crises that pose a reminder of mortality. In addition, the link between knowledge on nuclear weapons and support for their use should be further explored.

Respondents with more knowledge on nuclear weapons find the nuclear strike less ethical (p=.03) and are less supportive of a first strike (Table 4, Model 3). An implementation of more nuclear education might decrease public support of a first strike. The finding of a recent study with the Japanese public proposed that the government cannot easily shift existing public opinion on nuclear prohibition (Baron, Gibbons, and Herzog 2020). Thus, the efforts of nonprofit organizations, think tanks, and research institutions are important in educating people and reducing support for nuclear weapons.

CHAPTER 4: U.S. PUBLIC ATTITUDE TOWARD NUCLEAR WEAPONS

Introduction

Under which circumstances do Americans support the first strike of a nuclear weapon? Building on the theoretical framework developed in Chapter 3, this section investigates whether the increase in support for nuclear weapons after a reminder of death is unique to Israelis or whether the mechanism works with a different sample. Using an experimental survey conducted via Amazon MTurk (N=591), I explore the implications of terror management theory (TMT) for supporting nuclear strikes among Americans. I find that that mortality salience is a significant causal mechanism that can explain support for a nuclear first strike among Americans. This support is consistent with the findings in the previous chapter focusing on the Israeli public. At the same time, I also show that Israelis, on average, are more supportive than Americans of such a strike while Americans are overall more affected by mortality salience (MS).

Unlike in Israel, there is an abundance of polling data that directly asks the U.S. public about their opinion on nuclear weapons. Most recent polls suggest that a majority of the American public supports the use of nuclear weapons neither in a first strike (63.5%) nor in retaliation to cyberattacks (57.9%). Moreover, a mere 27.9% support the deployment of tactical nuclear weapons in Europe and 31.3% a 30-year modernization plan of the U.S. nuclear stockpile and complex (Baron and Herzog April 27, 2020). Americans also support alternatives to the Pentagon's modernization of its intercontinental ballistic missiles (ICBMs), such as life-extending the current one (Minuteman III) or eliminating the ICBM force altogether ("Public Perspectives on the US Intercontinental Ballistic Missile Force" 2021). When voters were asked what would make them feel safer, a mere 5% choose a modernization of the nuclear arsenal and 8% a larger defense budget. Further, although weakened since 2012, most Americans still

support nuclear arms control, such as the Comprehensive Test Ban Treaty (<u>Herzog and Baron 2017</u>). Finally, a mere 19.9% of the respondents in a nationally representative sample would support the first use of a nuclear weapon, with 16.6% being unsure (<u>Baron and Herzog April 27</u>, 2020). In sum, regular polls suggest a general public aversion to nuclear weapons. However, recent experimental surveys show a more complex picture of the U.S. public opinion on nuclear strikes, suggesting that this aversion can erode.

To recap, the scholarly literature on public opinion on the nuclear taboo can be separated into three different waves. The first wave is characterized by the argument for a robust nuclear norm against the use of nuclear weapons. Nina Tannenwald explains this through a *norm-based prohibition* (Tannenwald 2007, 1999), while T.V. Paul suggests a *tradition* of non-use (T.V. Paul 2009). The second wave brings forward elite cues (Post and Sechser 2017), perceived utility (Press, Sagan, and Valentino 2013), troop protection and war aims (Sagan and Valentino 2017), and military effectiveness and compatriot partiality (Sagan, Dill, and Valentino 2018). to explain causal mechanisms that characterize support for the use of nuclear weapons. The third wave adds moral foundations theory as causal, psychological factor (Smetana and Vranka 2020; Rathbun and Stein 2020).

Specifically, the second wave adopts a utilitarian, other-regarding behavioral approach through which individuals weigh the costs and benefits of a nuclear strike. However, this approach disregards the individual-level variation in how people decide for or against the use of nuclear weapons. Support for a nuclear strike is characterized by equifinality, suggesting that there are a variety of factors affecting individuals' perception of the utility and necessity of nuclear weapons, not merely utilitarianism. I expand on the third wave of nuclear taboo research, which explicitly focuses on psychological dynamics and proposes a novel theoretical framework

to explain why some individuals may support the use of nuclear weapons. As discussed in the previous chapter, I find some robust empirical support for the MS argument among the Israeli public. In this chapter, I develop a more comparative perspective. There is only one scholarly study underway that compares public opinion in two nuclear countries. Sagan, Dill, and Valentino found the Israeli public to be more hawkish than the American one (2018). This chapter investigates whether (a) MS is also relevant for understanding variation among Americans regarding the support for nuclear weapons and (b) Israelis are more supportive of the use of extreme force than Americans.

In this section of the dissertation, I answer the question: Under which circumstances do Americans support the first strike of a nuclear weapon? I expand on the gathered Israeli data by conducting a second online survey with individuals living in the U.S. with similar questions and an emotional treatment to measure the role of TMT, as elucidated in Chapter 3, in supporting nuclear weapons. I find that the experimental treatment works with a different sample.

Individuals in the U.S. who are reminded of their own death are more supportive of a nuclear strike. This test of TMT on two different samples confirms that the effect of MS as a causal mechanism for the support of a nuclear first strike is not unique to the Israeli population. The findings suggest that the mortality salience mechanism applies to both Israeli and American samples. The findings further suggest that Israelis, on average, are more supportive of a nuclear strike than Americans because of their greater political threat perception, confirming Sagan, Dill, and Valentino's findings (2018). In addition, U.S. respondents who identify as Christian are more likely to support the use of a nuclear weapon in a first strike and are less concerned about the morality of the use of a nuclear weapon than non-religious individuals.

Hypotheses

Does a reminder of death always increase the support for the use of extreme force across different national contexts? The core of the theoretical framework from which the hypotheses tested in this chapter is presented in the Chapter 3 (Figure 1). In brief summary, a reminder of death removes people's cultural anxiety buffer (CAB) that normally establishes a system of stability to ensure their worldview (Greenberg et al. 1997). When respondents are stimulated by existential terror through the removal of CAB (Pyszczynski et al. 2006), the inevitable death is pushed to the consciousness and triggers a defense for one's survival that can require the use of force. This existential fear stimulates a longing for the restoration of one's security. The TMT literature suggests that individuals have little concern over the effect of a defense as long as security and survival are ensured. When respondents feel threatened and concerned over their lives, they are looking for an effective way to defend their worldview and ensure survival. A preventative nuclear strike at that moment seemingly offers an effective solution to prevent an adversary's offensive attack by destroying their nuclear capability (see article vignette in Appendix G). The consequences and moral concerns of strikes are dismissed as long as they are perceived to provide protection of one's worldview.

H1: In a comparison of U.S. respondents, those being reminded of their death are more likely to support the use of nuclear weapons than those that are not.

However, higher support for a nuclear strike under MS is not expected when respondents are specifically reminded of possible retaliation. The second hypothesis examines whether the effect of MS holds up under a reminder of a possible strike from the opponent in response to a nuclear weapon. Respondents are asked, "Given the facts described in the article earlier, there will likely be retaliation with military operations against Israel. Do you approve or disapprove of your

country's decision to strike?" with the same five categorical answer options (1: Strongly Disapprove to 5: Strongly Approve). According to deterrence arguments (<u>Brodie 1959</u>; <u>Schelling 1970</u>), consistent with realist arguments, the threat of assured retaliation and deterrence prevents the willingness to engage in a conflict. U.S. respondents are expected to feel threatened by a reminder of retaliation and likely to be less supportive of a nuclear strike, even under MS. The threat of retaliation poses a threat to respondents' worldviews (see TMT literature review).

H2: In a comparison of U.S. respondents, those being reminded of retaliation are less likely to support the use of nuclear weapons.

A third hypothesis explores the difference between Christians and Non-Christians and MS. According to TMT, people feel threatened by worldviews that differ from their own. When triggered by MS, they develop an existential anxiety of one's own value system and increases the defense of such (Pyszczynski et al. 2006). Individuals that experience this existential threat are then more inclined to use force to protects one's own *superior* worldview (Bar-Tal 2007; Hirschberger and Pyszczynski 2011), specifically among religious people. The MS effect is expected to be stronger among Christians.

H3: In a comparison of U.S. respondents, Christians that are being reminded of their death are more likely to support the use of nuclear weapons than Non-Christians.

Survey Design

The experimental survey design (see Appendix G) is nearly identical to that of the previous chapter. Respondents are asked baseline questions to avoid them being repelled by questions about threats to national security and nuclear weapons. Most variables in this section will mirror those from Chapter 3. This includes age, gender, education, geographic location, socio-economic status, political ideology, religious affiliation (with different answer options), and nuclear

knowledge. Unique to the Israeli survey is the religious-nationalist question because of the context-specific division between religious-nationalists and liberals in Israel. In addition, it is not necessary to ask Americans whether they believe that the U.S. possesses nuclear weapons.

Unlike Israel, the U.S. does not follow a policy of nuclear ambiguity. The U.S. nuclear weapons stockpile is widely publicized and available (<u>Defense 2018</u>).

After the demographic section, respondents are randomly assigned to one of three groups: Treatment Group 1 (T1)—MS through death reminder,⁵⁴ Treatment Group 2 (T2)—MS through a topic-specific manipulation, or the Control Group (CG). Instead of being primed with death, individuals in T2 are being reminded of the novel Coronavirus, COVID-19. This tests a specific contemporary security threat and can act as a proxy of mortality salience. The conventional reminder of death (TG 1) has repeatedly shown effectiveness, but in real life, such a reminder would take the shape of a realistic proxy threat.

Chapter 5 suggests that Israelis are responsive to conflict events stemming from the Israeli-Palestinian conflict that includes terrorist events. This work uses COVID-19 to test and additional conflict event and respondents support for nuclear weapons. COVID-19 is a current, realistic threat at the time of both surveys. COVID has been extensively covered in the media and government and presents an immediate threat to all respondents. The public faced a permanent circulation of graphics of sick, deceased, and hospitalized people as well as maps and statistics on the worldwide spread of the disease. The pandemic directly impacts the lives of ordinary citizens through the risk and fear of getting infected with COVID-19 and dying from it.

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⁵⁴ I changed the treatment to the most commonly used MS questionnaire after finding response issues with the *death scale* in the pilot study (conducted with 114 students at the University of Central Florida, January-February 2020). See Appendix I.

Thus, T1 and T2 are used to compare two different MS manipulations: T1 being a reminder of death in general and T2 being a specific, timely proxy reminder of death.

After the treatment, respondents in T1 and T2 are presented with a word puzzle as a distraction. Previous studies have shown that mortality salience effects occur after people have been distracted from thoughts of their own death (Hirschberger and Ein-Dor 2006; Greenberg et al. 1997). All respondents are then randomly assigned one of the two newspaper vignettes. These explore whether the treatments translate into support for a nuclear first strike. The vignettes are mostly identical to the ones received by Israelis. To test *H1*, respondents were then asked about their support for a nuclear strike after they have been presented with the article that included a hypothetical threat scenario.

I collected a random, online convenience sample of U.S. adults living in the U.S. over 18. Since I use a convenience sample, I cannot generalize the results to the entire U.S. population. I use the platform Amazon Mechanical Turk (MTurk). The cost was substantially lower than contracting a survey firm and replicated research using MTurk has shown robust results (Berinsky, Huber, and Lenz 2012; Mullinix et al. 2015). A pitfall of the convenience sample is that MTurk samples tend to oversample the younger and more liberal respondents. Since the effect of MS is partially conditional on demographic and ideological characteristics, it could bias the outcome.

The use of weights can compensate for some but not all of the bias. While it ensures that the survey is more representative relative to the U.S. target population, it does not get around all biases in the data collection, including geographic location of respondents that at times reported that some U.S. states (Alaska, Hawaii, Idaho, Mississippi and Montana) were not represented at all. The convenience samples oversampled ages 35–64 and undersampled young people and the

elderly.⁵⁵ The MTurk survey also oversampled the male population to 58%. U.S. gender distribution has been fairly consistent over the past year, with 51.1% females and 48.9% males in 2020.⁵⁶ The weights in Table 5 were used in the data analysis to compensate for this bias.

Table 5: Age and Gender Weights

	Population Proportion	Sample Proportion	Population/Sample	Weight
Age				
Mean	38.4	43.76	.38/.44	.86
Gender				
Female	51	42	.51/.42	1.214
Male	49	58	.49/.58	.845

To obtain enough respondents via MTurk, I had to gradually increase the pay to respondents from \$.5 to \$1.75. To ensure a high-quality sample, the respondents needed to show an MTurk approval rate of 90% and more than 50 previous completed, but not necessarily approved, surveys. Thus, individuals are not only financially incentivized to complete the task but do so to keep the high rating of their profiles, ensuring additional survey offers. After excluding respondents that failed to finish all sections and accounting for both manipulation checks, 180 respondents remained in T1, 180 in T2, and 187 in CG (N=544). Table 6 shows the descriptive statistics of the main variables of my sample.

⁵⁵ See https://www.kff.org/other/state-indicator/distribution-by-age/?dataView=1¤tTimeframe=0&sortModel=%7B%22colId%22:%22Location%22,%22">https://www.kff.org/other/state-indicator/distribution-by-age/?dataView=1¤tTimeframe=0&sortModel=%7B%22colId%22:%22Location%22,%22">https://www.kff.org/other/state-indicator/distribution-by-age/?dataView=1¤tTimeframe=0&sortModel=%7B%22colId%22:%22Location%22,%22">https://www.kff.org/other/state-indicator/distribution-by-age/?dataView=1¤tTimeframe=0&sortModel=%7B%22colId%22:%22Location%22,%22">https://www.kff.org/other/state-indicator/distribution-by-age/?dataView=1¤tTimeframe=0&sortModel=%7B%22colId%22:%22Location%22,%22">https://www.kff.org/other/state-indicator/distribution (2019).

⁵⁶ See https://www.statista.com/statistics/737923/us-population-by-gender/.

Table 6: Descriptive Statistics of U.S. Survey

Variable	Description	N	Mean	SD	Min	Max
Nuclear Strike	Ordinal variable to determine (non-) support for nuclear weapon use (from 1 if strongly disapprove to 5 if strongly approve)	591	2.465	1.325	1	5
Mortality Salience	Dichotomous variable (1 if treated with MS, 0 if "treated" with reminder of eating)	400	.487	.5	0	1
Gender	Dichotomous variable (1 if male, 2 if female)	591	1.421	.494	1	2
Education ⁵⁷	Ordinal variable of level of education (1 Elementary school or less, 2 Partial high school, 3 Complete high school, 4 Post high school, non-academic 5 Partial academic degree, 6 Full academic degree – BA, 7 Full academic degree – MA or higher)	591	5.443	1.282	2	9
Political Ideology	Ordinal variable (from 0 if liberal to 10 if conservative)	591	4.223	3.168	0	10
Socio-Economic Status (SES)	Ordinal variable of social standing (1 if upper class, 2 if upper middle class, 3 if middle class, 4 if lower class)	591	3.144	.614	1	4
Year of Birth	Interval variable of the year people are born	591	1977.75 6	11.612	194 3	2002
Nuclear Knowledge	Ordinal variable (from 0 if no knowledge to 2 if knowledge)	578	.815	.675	0	2
Threat Perception	Ordinal variable (0 if not concerned about possible attack, 7 if very concerned)	587	2.261	1.908	0	7
Religion	Categorical variable (1= Christian, 2= Muslim, 3= Jewish, 4= Sikh, 5= Hindu, 6= Buddhist, 7=No religion, 8= Other)	591	-	-	-	-

Findings and Discussion

The findings are presented in two parts: the effect of MS on Americans and their (dis-) approval of a nuclear strike and a comparison of Israeli and U.S. attitudes towards a nuclear strike. First, the findings support HI and suggest that the experimental treatment, MS, has a direct effect on

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⁵⁷ Educational attainment levels in the U.S. in general (*Source: American Council on Education*) in comparison to sample: Less than High School: 10.4% to 1.18%; High School Graduate: 28.8% to 13.2%; Post high school, non-academic, partial academic: 26.6% to 21.66%; BA degree: 51.44% to 21.3%; MA or higher: 11% to 11.34%. Hence, the sample oversampled higher education and undersampled lower education.

Americans' attitudes towards a nuclear strike. The null hypothesis stating that there is no difference between respondents in T1 before and after the MS treatment can be rejected through the Wilcoxon signed-rank test (n=180, Z=-9.5, p=.00). There is a significant difference in support for a nuclear first strike. Figure 9 shows the difference in support for a nuclear strike before and after the MS treatment. The treatment difference of the approval of a nuclear strike is 1.09.

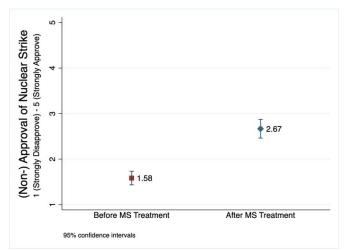


Figure 9: (Non-) Approval of Nuclear Strike Before and After MS Treatment with 95% Confidence Intervals

Table 7 reports the results of five logistic regressions examining the effects of a reminder of death on an individual's attitude towards the use of a nuclear weapon. Approval or disapproval of a nuclear strike is the dependent variable across all five models. MS is the treatment effect, whereas gender, education, political ideology, socio-economic status, age, nuclear knowledge, and threat perception present additional control variables. Respondents are reminded of the eventuality of military retaliation from Iran against the United States. Models 1 and 2 confirm the statistical significance of MS for individuals 'opinions on the use of a nuclear weapon in a first strike (*H1*). In Model 1, the estimate of the average effect of MS within

Americans is .49. The MS treatment on average led to U.S. respondents being 1.4 times⁵⁸ more likely to support a nuclear strike.

Political ideology among Americans is a consistent predictor of higher support for a nuclear strike. When people were asked to place themselves on a left-right political spectrum they are separated into the ones that support liberal thoughts, reform, equality, rights and similar ideas and ones that are more supportive of authority, hierarchy, tradition and order. Echebarria-Echabe and Fernández-Guede confirmed the correlation in the U.S. between the left and a liberal orientation and the right and a conservative orientation (2006, 262). While this distinction has been disputed at times, it is still a widely used framework and remains relevant today (Bobbio 2016). Smetana and Vranka found Republican partisanship to be the only significant demographic variable that predicted a preference for and approval of a nuclear strike (2020, 11). The results here confirm this. Conservatives, on a political-ideological scale, are known to be more prone to negative views of out-group members (Jost et al. 2003). This leads to support for extreme measures of violence as evident here. Model 2 uses a gender weight to compensate for the oversampling of males and shows that MS remains a significant predictor.

⁵⁸ This number is based on the odds ratios in Appendix E, Table 17.

Table 7: Logistic Regression of the Effects of Mortality Salience on Individuals' Attitudes Towards the Use of a Nuclear Weapon

VARIABLES	Model 1	Model 2 (Gender Weighted)	Model 3 (Threat of Retaliation)	Model 4 (Interaction MS x Christianity)	Model 5 (Effects of Strike)
N P. C. P.	.502**	.502**			
Mortality Salience			.151	.695	.075
~ .	(.198)	(.2)	(.214)	(.477)	(.224)
Gender	.021	.021	082	.028	.086
	(.216)	(.217)	(.234)	(.217)	(.244)
Education	147*	147	067	142	195*
	(.088)	(.09)	(.095)	(.089)	(.101)
Political Ideology	.129***	.129***	.194***	.128***	.207***
	(.037)	(.039)	(.04)	(.037)	(.041)
Socio-Economic Status	.018	.018	.076	.015	353*
	(.17)	(.17)	(.188)	(.172)	(.199)
Age	.015*	.015*	.013	.015*	.022**
	(.008)	(.008)	(.009)	(.009)	(.01)
Nuclear Knowledge	2	2	061	199	.017
8	(.157)	(.177)	(.165)	(.157)	(.176)
Threat Perception	.127**	.127**	.188***	.127**	.145**
	(.058)	(.06)	(.059)	(.058)	(.062)
Religious/Non-Religious	.983***	.983***	.966***	.808*	1.163***
	(.236)	(.251)	(.249)	(.453)	(.263)
MS X Christianity	(-20)	(-201)	(-21)	.225	(-200)
1715 A Christianity				(.474)	
Observations	351	351	351	351	351
Pseudo R ²	.08	.08	.12	.08	.129

Standard errors are in parentheses

*** p<.01, ** p<.05, * p<.1

Regressions were run with respondents that answered manipulation checks correctly

Model 3 tests the deterrence argument by asking respondents about the support of the use of nuclear weapons with an added reminder of likely Iranian retaliation. It shows that there is no significant effect of MS on the support for a nuclear strike when respondents are reminded of retaliation, providing empirical backing to *H2*. That supports deterrence arguments (Brodie 1959; Schelling 1970) and is consistent with realist arguments. Realist theory notes that assured retaliation and deterrence through the threat of a retaliatory strike prevents conflict. Here, respondents are taken back by the threat of retaliation and are reducing their support for a nuclear strike. This suggests support for arguments on the effectiveness of deterrence among Americans.

Model 5 explores MS on respondents' support for a nuclear strike but with a reminder of the physical effects of a nuclear strike. In contrast to the Israeli survey (Table 4, Model 5), the mentioning of devastating effects does not have an effect of increased support the use of a nuclear weapon. That is more intuitive than the results in Chapter 3: when the devastating effects of a strike are more apparent, Americans under MS do not show significant increased support for a nuclear strike.

The Models also provide insights into the correlates of effects⁵⁹ that are associated with the likelihood of supporting nuclear strikes. The Models suggest a robust, positive relationship between individuals' political ideology and the support for a nuclear strike. This control variable shows a robust tendency among U.S. respondents with conservative views being more supportive of the use of a nuclear weapon. Further, threat perception—across the models—is a consistently significant predictor for the approval of a nuclear strike. Individuals that tend to be more conservative and have higher levels of threat perception are more likely to support a nuclear first

⁵⁹ Respondents were not surveyed for race and ethnicity, but this is something to explore going forward. Which ethnic groups are more or less likely to support nuclear weapon use?

strike when reminded of their death. This sends alarming signals for the support of the use of extreme force.

Meanwhile, gender, education, SES, age, and nuclear knowledge have little effect on individuals' attitude towards a strike under MS. The absence of a significant tendency due to respondents' age confirms other studies that did not find a difference for the age of participants (Smetana and Vranka 2020). In fact, after testing the year of birth and two additional different breakups of the age groups, there was no statistical significance for four of five Models. This is also confirmed by the marginal effect models in Figure 8.

Gender is no significant indicator, suggesting that females are no less likely than men to support the use of a nuclear weapon if they are reminded of their own death. A large body of literature has shown that women are less supportive of the use of violence and war than men (Baxter and Lansing 1983; Shapiro and Mahajan 1986; Wilcox, Ferrara, and Allsop 1993; R.C. Eichenberg 2003; R. Eichenberg and Stoll 2017). Most of this literature suggests that this is due to maternalism (or mothering), which suggests that females do more parenting than men, which results in more empathy and caring. Yet Conover and Sapiro find that maternalism does not explain why women appear less militaristic than men (1993). They find strong support for the gender⁶⁰ itself and some evidence for peace politics of feminism⁶¹ to explain the relationship. They also suggest that although women seem more worried about war and foreign involvements, they are just as willing as men to contemplate the use of force when there is a justification for it

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⁶⁰ The gender hypothesis has two explanations in the literature. First, females are inherently more inclined toward pacifism than males. Second, they are socialized early in life to be less militaristic.

⁶¹ The underlying connection is that feminists are committed to values of freedom, equality, and self-government and hence are opposed to militaristic action, domination, and the use of force.

(Conover and Sapiro 1993, 1091). Sagan and Valentino more recently find that female respondents are no less likely to support nuclear weapons use than their male counterparts (2017). The findings here confirm that.

A Chi-Square Test for multicollinearity showed that religion⁶² has a statistically significant association with political ideology (p=.00). Religious individuals are more likely to support a strike (Table 7). They are on average are 2.2-3.7 times more likely to support a nuclear strike than non-religious people.

Model 4 in Table 7 includes the interaction term *MS x Christianity* to explore whether there is a potential heterogenous treatment effect among subdivisions, Christians and Non-Christians. Christianity is measures as binary variable (1= Christian, 0= Non-Christian). There is no robust, statistical significance of MS among Christians to report. While the marginal effects of Figure 10 suggests that MS affect Christians to a greater extent than non-Christian Americans, the regression results do not statistically confirm this tendency. Nuclear strike approval is reduced to three categories (Disapproval, Approval, Neither). The effect of MS appears more limited among Non-Christian respondents on low support for nuclear weapons. The MS treatment works for Christians on Approval and Disapproval more than it does on non-Christians. So, there is a small heterogenous effect and *H3* receives some empirical support.

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⁶² Religion also shows significant differences in terms of shaping political attitudes in the United States. The two largest dimensions on the religious scale among Americans are Christians (roughly 60-65%) and unaffiliated individuals (roughly 28-32%). Christianity in the survey included sub dominions such as Catholics, Orthodox Christians, Protestants, Anglicans, Baptists, Lutherans, Evangelicals, and similar. Non-religious options included respondents that identify as atheists, agnostics or are not affiliated with anything in particular. See https://www.pewforum.org/2021/01/14/measuring-religion-in-pew-research-centers-american-trends-panel/.

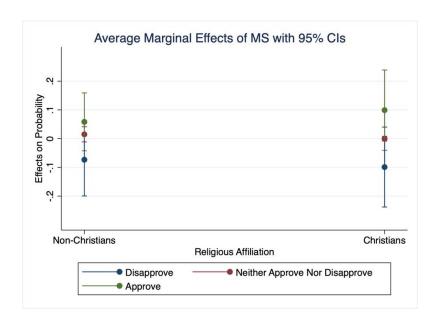


Figure 10: Marginal Effects of MS on Christians and (Dis-) Approval of Nuclear Weapons under (Model 4, Table 7)

Without accounting for MS, Figure 11 depicts that there are still differences between Christians (48.6% of all respondents) and non-Christian respondents (51.4%), suggesting that Americans who are Christians are more likely to support the use of a nuclear weapon in a first strike and are less concerned with the morality of such. The average support for a nuclear strike among Christians without a threat scenario is 1.96, and with a threat scenario is 2.98, a difference of 1.02 (N=233). Non-Christian individuals showed an increased support of .66 after the realistic threat scenario. Regardless of a threat scenario, Christians show an overall higher support for a strike and less concern over the morality of a strike. While Christians are on the lower end of both scales, they do show a tendency for overall higher support for the use of a nuclear weapon than non-religious people. This division could be because of political ideology and partisanship.

Also, Christians' in-group identity is strong, especially when the threat is coming from a Muslim country in the scenario. ⁶³

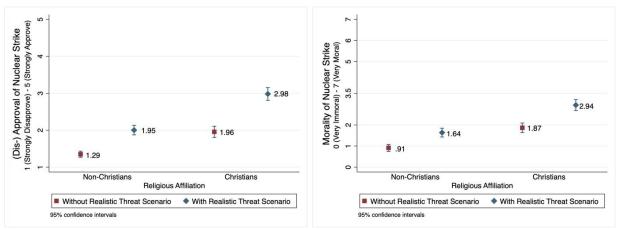


Figure 11: Effect of Christianity on Nuclear Use and Morality in the United States

Along similar lines, U.S. respondents that identify themselves non-religious (including atheists and agnostic) show lower support for a nuclear strike—but without accounting for MS. The average support before a realistic threat scenario is 1.29 and increases to 1.95. Those that identify as Christian, Muslim, Jewish, Sikh, Hindu, or Buddhist show an overall higher support for the use of nuclear weapons before (1.95) and after (2.91) a realistic threat. There is a large amount of literature that explores the connection between religion and the willingness on militaristic foreign policies and the use of force, ⁶⁴ but none discuss this in connection with the use of a nuclear weapon. Finding that non-religious respondents are less willing to resort to a nuclear strike should be further explored.

Something that is not included in the regression model are the geographical patterns among U.S. respondents. While there are limitations to generalizing on these spatial patterns (as

⁶³ In retrospect, it would have been insightful to analyze nuclear support among Christian denominations in the U.S., including Protestants, Catholics, and especially Evangelists, who are the strong supporters of hawkish U.S. foreign policy (<u>Baumgartner</u>, Francia, and Morris 2008), but it was not surveyed here.

⁶⁴ See for example, (<u>Grasmick et al. 1993; Cullen, Fisher, and Applegate 2000</u>).

respondents were not matched according to population data of these regions), they do provide insides for the sample into which regions have more hawkish respondents than others. All patterns here are unique to the convenience sample of this survey, however. Figure 12 divides the U.S. mainland into seven separate sub-regions.⁶⁵ The states are colored by the average public support for a nuclear strike before and after MS treatment and are labeled by political ideology (0-7). As seen by the red color coding that intensifies in the second map, all states show an overall increase support for a nuclear strike after the reminder of death. The Mountain region shows only a small increase (.2 – see Table 8), while the three other regions -South-West, Mid-Atlantic, and New England- all nearly increase by 1 point average, closely followed by the remaining three (increase between .7 and .8). Hence, the smaller effect on the Mountain region is an outlier compared to the others. Respondents in this region were the least effected by MS.

The South-West shows the highest average support for a nuclear strike after the MS treatment (2.9) while being the furthest on the right of the political spectrum. This region is followed by the Mountain region with the second highest support (2.6) and furthest on the right of the political spectrum (6.3). This seeming tendency of a connection between support for a nuclear strike and conservative political views is confirmed by the Mid-Atlantic for example

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⁶⁵ Note: Since they number of respondents of the survey was fairly limited (N=591), states were grouped together into their according regions. Regions include the South-West (Arizona, New Mexico, Oklahoma, Texas), Midwest (Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, Wisconsin), the Mountain region (Colorado, Nevada, Utah, Wyoming), New England (Connecticut, Maine, Massachusetts, Rhode Island, Vermont), Pacific (California, Oregon, Washington), Southeast (Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, North Carolina, South Carolina, Tennessee, Virginia, West Virginia), and Mid-Atlantic (Delaware, Maryland, New Jersey, New York, Pennsylvania). The MTurk sample did not include respondents from Alaska, Idaho, Montana, or Mississisppi.

with lower support for a nuclear strike (2.4) and more leftist placement on the political ideology scale (3.7).

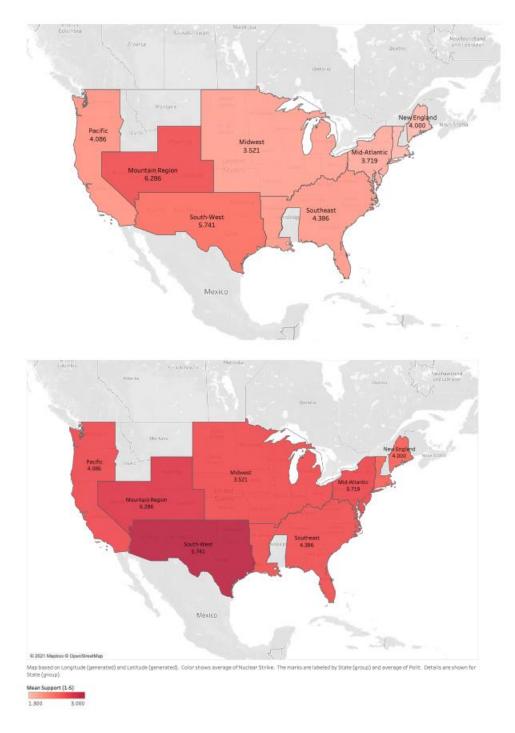


Figure 12: Means of (Dis-) Approval of a Nuclear Strike Before and After MS Treatment

Table 8: Average Public Support for a Nuclear Strike Before and After MS Treatment

	Average Support	Average Support for a Nuclear First Strike			
Region	Before MS	After MS	Change		
Pacific	1.7	2.4	+0.7		
Mountain	2.4	2.6	+0.2		
South-West	2.1	3	+0.9		
Midwest	1.6	2.4	+0.8		
Southeast	1.7	2.4	+0.7		
Mid-Atlantic	1.5	2.4	+0.9		
New England	1.3	2.2	+0.9		

Comparative Perspective of TMT to Explain Nuclear Support

Chapter 3 and 4 have shown that MS has an effect on both, Israeli and U.S. respondents. Hence, deep-seated psychological factors—that are usually absent in the discussion of the use of nuclear weapons—pose causal mechanism that can explain higher support for a nuclear strike, in addition to rational cost-benefit considerations. Both, the prospect of one's personal death and perceived utility of a strike, as shown in previous literature, cause defensive reactions. The presence of a real threat as seen with newspaper vignettes in these, and previous studies and psychological defenses as seen with MS treatment TMT are at play. These factors operate seemingly independent from each other for Israeli and U.S. respondents.

Although I find that public opinion in both samples is affected by MS, I also find a substantive difference in the overall support towards the use of nuclear weapons. Israelis tend to have an overall higher support for nuclear warfare and are overall more supportive of a nuclear strike before and after the MS treatment than U.S. individuals. Americans have a predicted .96 points lesser support for a nuclear first strike. Israeli higher support is in line with the high threat perception among Israelis that increased from 2004–2009 (Meir and Bagno-Moldavsky 2010).

The survey added to this that Israelis had a generally higher threat perception⁶⁶ at a mean of 3.69 (scale 0–7) compared to Americans at 2.16. Israelis already experiences a fairly unique threat to their worldview. In the scenario, Israelis were faced with a threat from their most prevalent enemy, Iran, in the threat scenario. Iran is not an equivalent threatening opponent to the U.S. Israelis tend to choose belligerent policy choices Israelis support (Gordon and Arian 2001).

In addition, as Dill, Sagan, and Valentino (2018) explain, increased support among Israelis for nuclear weapons (compared to the U.S., British, and French public) is based on higher *compatriot partiality*. That means Israelis prioritize the safety of their compatriots (soldiers or citizens) over foreign civilians. They put greater weight on the safety of the in-group. Further, Israelis live in a more contested geopolitical environment than Americans and have a higher threat perception. In the baseline question of the survey, the mean for Israeli threat perception was 3.7 compared to that of the American sample at 2.3.⁶⁷ This greater geopolitical threat perception, in combination with compatriot partiality, makes Israelis, on average, more supportive of the use of a nuclear strike than Americans.

All respondents were also asked about their opinion on the morality of the use of a nuclear weapon before and after the treatment. In comparison to Americans, Israelis found the nuclear first strike to be more moral than Americans. Before the reminder of a threat, Israelis

⁶⁶ The question to test threat perception had asked respondents about how concerned they are about the possibility of an enemy attack the following year.

⁶⁷ A recent Gallup found that American's threat perception of Iran went down considerably in 2021 from 2020, from 19 to 4%. See <a href="https://news.gallup.com/poll/337457/new-high-perceptions-china-greatest-enemy.aspx?utm_source=AM+Nukes+Roundup&utm_campaign=427f2036b6-EMAIL_CAMPAIGN_2019_09_03_03_17_COPY_01&utm_medium=email&utm_term=0_547_ee518ec-427f2036b6-391876849.

averaged 2.7/7. After the treatment, the morality of the strike increased to 3.9. Americans increased the perception of morality from 1.3 to 2.2.

Respondents in the U.S. and Israeli survey also differed in their approval of a nuclear strike after being reminded of Iranian retaliation. As the results of Model 3 suggested, Americans' support for the use of a nuclear weapon was lower when they were reminded of retaliation. In contrast, Israelis (Chapter 3, Table 4, Model 4) did not show lower support when reminded of likely retaliation. Deterrence theory holds up for American respondents but not Americans. Approval of the strike among the Israeli MS treatment group remains higher despite the risk of military strikes by Iran. This can be because Israel's deterrence strategy includes massive retaliation with nuclear weapons should an opponent like Iran invade Israel (Hersh 2013).

Reminding individuals of COVID-19 as a proxy variable for MS did not have a significant effect—neither for Israeli nor for American respondents (Appendix E, Tables 18 and 19). It is probable that COVID-19 does not have the effect of reminding people of their own death. When respondents were asked to *Please briefly describe the emotions that the thought of COVID-19 arouses in you*, answers varied from true concerns over the virus—oftentimes in regard to family members—over indifference to frustration with government responses (i.e., "A fear but mainly for my elderly relations and the country as a whole," "I don't know. I feel indifferent toward this," or "Mostly just frustration. I am frustrated that the governments of the world are so willing to destroy people's lives for no good reason. Governments allow smoking and obesity, then pretend to care about public health (...)." When asked to *Jot down, as specifically as you can, what you think will happen to you if you get COVID-19 and once you have gotten COVID-19*, answers only a few times included thoughts of death (i.e., "I'll probably

die," or "If I get COVID-19 I am afraid I will die. I am 67 years old, have high BP, and am overweight").

COVID-19 is the deadliest pandemic in a century. There are several factors as to why respondents were not reminded of their death when they got treated with COVID salience. ⁶⁸

First, while the numbers were rapidly spreading, according to the news coverage, the comparative spread originally was slow. It took several months until the majority of people knew of some in their circle infected with COVID. Further, there was an immediate, vehement global search for a vaccine. Through this collaborative effort, hopes were high that an immunization was feasible shortly. Lastly, knowing that certain recommendations such as face-covering, social distancing, and travel restrictions work might have made respondents less worried about getting infected. The perpetuity of these measures against the pandemic, including lockdowns, might have triggered respondents' frustration more than anything else. Since COVID-19 is not a specific proxy for MS, determining what other events then can be a reminder of death and trigger MS needs to be explored in further research. ⁶⁹

At the same time, the insignificant Covid-19 treatment showed that the effects of MS are not just a coincidence. While COVID-19 appears similar to the treatment since it reminds people about negative effects to their physical health, not just any such treatment equates to a death reminder. It emphasizes and increases confidence that it is MS what causes the effect in both samples and that not just any treatment that will have the effect. It is the specific aspect of death that explain higher approval for nuclear weapons.

⁶⁸ There might be some demographic patterns that explain psychological reactions after a COVID-19 reminder. However, that would require an in-depth content analysis of the openended questions, which was not the main purpose of the experiment.

⁶⁹ For additional comments, see the conclusion of Chapter 5.

Conclusion

This chapter contributes to the ongoing debate over public opinion on the use of nuclear weapons. It joins the third wave of nuclear taboo research (Rathbun and Stein 2020; Smetana and Vranka 2020; Smetana et al. 2021) by exploring a psychological mechanism that explains public approval for a nuclear first strike. Specifically, it suggests that terror management theory helps us understand why people may support nuclear weapons in Israel and the U.S. In both samples in Chapters 3 and 4, respondents showed higher support for the use of a nuclear weapon when reminded of their mortality. Hence, TMT as a causal factor of support for nuclear weapons has some cross-national relevance, and its application is not limited to the sample of one nation.

In this chapter, I presented some robust empirical support for the effect of mortality salience on the support for nuclear weapons. There are several implications of this study with U.S. respondents. First, it informs policymakers about the tendencies of public approval for a nuclear strike. Since public opinion can be influential in most existential crises facing democratic regimes (McKeown 2000), this should alert proponents of disarmament and non-use. While the public is generally aversive to nuclear weapons use—as regular polls suggest—the robustness of this aversion erodes as respondents face severe threats. Second, as we cannot rely on public opinion to avoid a nuclear war, the role of institutions and activists becomes crucial. Efforts of nuclear arms control are crucial in making it more difficult to have and use nuclear weapons. However, it seems that this is unlikely to change public support. At the same time, it is promising that the support did not increase at the same rate as the other Models that did not mention such effects.

Further, the effect of increased support disappears when retaliation is mentioned, supporting realist arguments, or the physical effects of a strike. MS did not have an impact when

retaliation was mentioned, suggesting that deterrence theory holds up. In a real-life scenario, opposition groups to the use of nuclear weapons will likely detail the risk of military action from the opponent and effects of the use—to the public will be exposed to this information.

A limitation of this chapter is the convenience sample of individuals living in the U.S. With a limited budget, I was restrained to MTurk. Hiring a polling firm was outside the available resources for this study. Further research would benefit from (1) a more representative U.S. sample to generalize on the U.S. population and (2) a larger sample to make more robust conclusions. Both of these improvements would enable conclusions about the external validity of support for a first strike.

CHAPTER 5: NATIONAL SECURITY HAWKS: THE EVOLUTION OF ISRAELI PUBLIC OPINION ON THE USE OF FORCE

Introduction

This chapter centers on the evolution of Israeli public opinion on the use of force. How has Israeli public opinion on national security issues changed over time? This study presents the first systematic analysis of longitudinal public opinion data on the use of force in Israel and directly informs Chapter 3. It provides an empirical collection of public opinion data from 1984 to 2018 that tests hawkish tendencies. The work has two main findings. First, over half of the Israeli public tends to favor military options in the last 30+ years that include the use of force. Second, public opinion shows a temporal response to conflict events, suggesting support for the theory that in times of crises, individuals turn to support for violence against out-group members, militarism, and aggressive military policy. This analysis of the evolution of Israeli public opinion on the use of force provides a foundation for studies that explore additional micro-foundational factors and causes that influence Israeli public opinion.

The attitudinal trend of the Israeli public warrants more analysis. While some foreign relations have improved since Israel's early days, tensions continue with other countries such as Iran and Syria and non-state actors such as Hamas and Hezbollah. Because of the perennial exposure to tensions while living under security concerns since the establishment of the state, foreign policy has a direct impact on the daily lives of Israelis. But has Israeli public opinion on national security issues changed over time in response to conflict events? Are conflict and increased support for the use of force responsive to each other? This article explores whether the public is reactive to conflict events or remains unaffected by them.

I explore these questions through an accumulation of the public's opinion over the years. I bring together historical survey data on the Israeli society to explore that opinion toward national security, tracing the findings by polling firms and scholarly work. I find that Israeli public opinion, if treated as a monolithic entity, has a tendency to support belligerent policies, averaging at 55.7% from 1984 until 2018, with a slight upward trend. *Hawkish* here meaning an increased support for policies that include the use of military force. ⁷⁰ To determine developments and changes in public opinion over the years, I trace the developments of the public's attitude over three decades. The first section provides a brief overview of polling on Israeli public opinion on national security. The second section introduces the research design to systematically track the public's attitude. This includes the conceptualization of hawkishness and how it is measured across different times and surveys. The analysis provides insights into patterns of Israeli attitude over the years and how conflict events—mostly resulting from the Israeli-Palestinian conflict—affect public opinion, suggesting that the public shows a responsiveness to events that include Israeli casualties. The chapter concludes with a summary of how these findings are relevant to future scholarship.

Chapter 3 and 4 presented tests of theoretical TMT, but they did not explore what reallife events could pose a reminder of death. Israelis will not be directly asked about their own death in a nuclear crisis. The question becomes, what can be a proxy for MS? What event can remind people of dying? This chapter provides insights into the potential proxy events for the theoretical mortality salience in the previous chapter. The public here shows a temporal

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⁷⁰ It should be acknowledge that the terms *hawks* and *hawkishness* are very contested and can mean different things. The chapter relies on the named definition and does not aim to engage with a theoretical discussion of the definitions of these terms.

responsiveness to events that include casualties from the Israeli-Palestinian conflict. At the same time, it confirms Chapter 3 in that Israelis are not only supportive of the use of nuclear weapons but the use of force more general.

Israeli Public, National Security, and the Use of Force

Historically, the Israeli public has been concerned with security threats.⁷¹ Not only does the public tend to cast its votes in elections on security issues (<u>Arian 1995, 235</u>), but surveys show a concern for national and private security. In the 1984 election study, 28.3% of the public suggested that national security threats were the main problem facing the government, only second to the economy that had more votes.⁷² In 2002, during the height of the Second Intifada, the public was concerned about personal and national security because of frequent killings and indiscriminate terror (<u>Asher 2002, 12</u>). Then 77% of Israeli Jews perceived a new war between Israelis and Arabs as likely (<u>Asher 2002, 17</u>). In 2011, the public seemed even more concerned with security issues. Only 23.6% answered perceived social issues as the greatest to Israel—all other answers were related to internal and external security issues (21% Iranian bomb, 19% Palestinian terror, 16.3% international community refusal to recognize the existence of Israel as a Jewish state).⁷³ Similarly, in 2017, 39% of Israeli Jews worried most about external and security issues in contrast to internal and social issues (24%).⁷⁴ Polling suggests a pattern over time that demonstrates that the public worries about security issues.

⁷¹ "Threat" in this review section largely refers to a real security threat to the state by an opponent, not perceived threat by individuals.

⁷² See https://www.tau.ac.il/~ines/files/1984 Questionnaire Eng.pdf.

⁷³ For the survey, see http://www.imra.org.il/story.php3?id=53896. The sample included Hebrew-speaking Israeli Jews only.

⁷⁴ See https://www.jewishvirtuallibrary.org/israeli-attitudes-about-other-nations.

Emigration and voting choices are two issues that further demonstrate the public's occupation with security issues. Israeli emigration was most intense during the violent years of 2001–2003 (Lustick 2004). Some emigrated because of the Iranian threat, as stated by former Defense Minister Ehud Barak and former Deputy Defense Minister Efraim Sneh (Goldberg 2010, 7). Scholars argue that security factors even outweighed economic factors as the driver for emigration. These security concerns are motivated by an international movement to delegitimize Israel, the wars in Lebanon and Gaza, and Iran's nuclear program (Lustick 2004). The delegitimization of Israel is not a security threat by itself but elicits fears to the country's independent status. Other scholars argue that emigration is related to socioeconomic changes, not security (DellaPergola, Rebhun, and Tolts 2005; DellaPergola 2011). The opponents of the security argument ascribe the fluctuations in immigration to various causes that have a different degree of importance to rational actors: social class, religious and cultural-ideological tensions, or economic gaps. But Israelis' voting choices in elections emphasize that security issues and foreign policy are of high importance.

Israelis vote on foreign policy as much as they do on economic and religious policies (Tomz, Weeks, and Yarhi-Milo 2018, 4), and the exposure to violence and conflict affects Israeli voting and political preferences (Berrebi and Klor 2008; Getmansky and Zeitzoff 2014; Gould and Klor 2010). Not only are policies on national security a key voting issue, but they even outweigh many other issues (M. Shamir and Arian 1999). Over time, many polls have shown variation among Israelis' approach to the use of force. Asked in 1988 where people would place themselves on a dovish-hawkish continuum concerning foreign affairs and security, 39% identified themselves as fairly hawkish in contrast to 21% as dovish (Arian and Shamir 1988). Some early studies concerned with hawks and doves in Israel have emphasized that the divide is

mostly on territorial controversy (Arian 1995; Gad Barzilai and Peleg 1994; J. Shamir and Shamir 1993). Barzilai and Inbar mapped public opinion on the use of military force for the years 1988–1994 and found that the public was generally (80%) inclined to support the use of force against terrorists, with most answers in favor of large-scale military option instead of limited ones (1996, 52-53). The public was fairly hawkish during these years. One-third of respondents said they would apply only very limited use of force during the First Intifada (1996, 54-55). The authors explain the difference in support for the use of force with decreased legitimacy to repress a primarily non-violent civilian uprising, the Intifada, as opposed to terrorism.

These differences continued in the 1990s. When questioned on their attitude toward conventional war (1996), most supported preemptive strikes (38% to 46.6% from 1988–1994). Interestingly, the authors found little impact of the 1991 Iraqi missile attacks. In fact, Israeli restraint and inaction found widespread support (Gad Barzilai and Inbar 1992), which hints at a more dovish approach to conflict, contrasting 1988 self-placement. In contrast, Israelis showed heightened support for nuclear weapons after 1991. In 1986 only 36% of Israelis "recognized circumstances under which they would justify such use" of a nuclear weapon, while in 1991—after the Gulf War—that number was up to 88% (Arian 1995, 71). The threshold for opposition against nuclear weapons was significantly lowered. In 1993, the support decreased back to 67%.

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⁷⁵ The respondents of the survey were not provided with a definition for terrorists or terrorist groups but assumed the PLO to be in people's minds (<u>G. Barzilai and Inbar 1996, 51-52</u>).
⁷⁶ These findings need to be viewed with caution as all one answer option was "Clausewitzian war" (usually seen as the traditional war where the stronger military on the battlefield wins) for which not all respondents might know the definition for. Their question assumes basic knowledge of conventional warfare and the differences between the different wars are not unambiguously explained—an interpretation issue of inference in survey questions known as excessive complexity.

However, the support was still high, pointing to a general hawkish tendency. The numbers only decreased when the respondents were asked about vague conditions to use nuclear weapons such as "to save many lives," "to save few lives," or "to avoid defeat in conventional war" (<u>Arian 1995, 72</u>). The support for the use of nuclear weapons instead of the regular army was very low, hinting at the public's conception of a reactive and strategic role for nuclear weapons, but not a tactical one and therefore limits to hawkishness.

More recent surveys support the notion of a hawkish Israeli public. In 2007, Israelis remained hawkish on security issues (Ben-Meir and Shaked 2007, 10), and most of the public supported the use of nuclear weapons under certain circumstances ("Global Poll Finds Varied Views on Nuclear Weapons" 2007, 16). In a 2016 survey, 9% of Israeli Jews identified as "definitely dovish," 27% as "more dovish than hawkish," 39% as "more hawkish than dovish," and 25% as "definitely hawkish" (Tomz, Weeks, and Yarhi-Milo 2018, 20-21). The majority (64%) expressed a preference for a hawkish approach to foreign affairs.

This brief overview of Israeli public opinion on the use of force suggests an overall support for belligerent policies since the 1980s. However, a systematic study of this implied pattern is missing. Specifically, it leaves questions open on when and why support fluctuates and how conflict affects public opinion over time. Further, the available studies comprise short time frames for their data collection. The discussion below offers insights into longitudinal developments over time through an accumulation of many of them that can provide more robust findings. Because of Israel's record of conflict exposure and threats to security, I hypothesize that:

H1: The prolonged exposure to political violence in Israel is expected to show a high average of support for belligerent policies.

The data collection to test the first hypothesis is then taken to explore whether the fluctuations in Israeli support for belligerent policies shows temporal responsiveness to conflict events. Extant scholarly work suggests that prolonged exposure to violence in armed conflict increases collective threat perceptions (Canetti et al. 2017; Ferguson and Cairns 1996; Schmid and Muldoon 2015). 77 Political violence can lead to psychological distress, emotional and physiological arousal, reduced sense of safety, post-traumatic stress symptoms, and a sense of insecurity. Studies have shown that distressed individuals adopt hostile attitudes toward outgroups and support violence against members of these groups (Canetti-Nisim et al. 2009; Hobfoll, Canetti-Nisim, and Johnson 2006), which in turn predicts militarism (Bonanno and Jost 2006) and support for aggressive national security policy (Huddy et al. 2005). Hence, the exposure to intense conflict can increase a support for policies that adopt hawkish approaches.

H2: The support for belligerent policies temporarily increases in response to conflict events.

Research Design

This paper identifies patterns in Israeli public opinion on the use of force over time through the accumulation of existing information. The work develops a new variable derived from polls of national surveys and scholarly articles that study attitude on national security issues. The ideal method to study longitudinal patterns would be a panel survey design: asking respondents the same questions over a period of time. However, there are feasibility issues such as access to the same people over several years and the duration of the study. Thus, I use existing survey data.

⁷⁷ The relationship between threat and hawkishness is a complex one but beyond the scope of this paper to theoretically address (see for example Gould and Klor 2010).

This new dataset summarizes the findings in the literature and polls on whether the Israeli public is hawkish or not. I recognize the division between hawks and doves is somewhat simplistic. However, it is commonly used and understood to conceptualize people's stance on foreign policy issues. Hawks are defined as people who "tend to favor coercive action, are more willing to use military force, and are more likely to doubt the value of offering concession (Kahneman and Renshon 2009)." They are commonly perceived as highlighting competitiveness, dividing between "our" and "their" national security interests, and emphasizing considerable military strength and readiness to use such (Russett 1991, 516). In contrast, doves highlight cooperation, manifest a greater readiness for political compromise, and favor diplomatic solutions over military ones (Meir and Bagno-Moldavsky 2010, 20). Military force for doves is not the answer to protecting national security (Weeks and Mattes 2019, 58). Hence, hawkishness in this chapter is measured by the support for belligerent policies, including the use of force, and non-support for peaceful solutions.⁷⁸

Using these measures, the dataset includes public opinion on a variety of questions on foreign policy issues (Palestine, Iran, terrorism, etc.). Such an analysis of available questions can be useful in political science to explore aggregate attitudes toward foreign policy (Page and Shapiro 1982; 1988). Survey questions that identify a measure of hawkishness are taken for what they are without alternating them. An inherent limitation is that questions are usually worded differently because they become outdated or simply address different timely topics.

Nevertheless, the various questions have a commonality of addressing national security issues

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⁷⁸ For an accumulation of all questions, see file *Chapter 5_Israel Public Opinion* in Supplemental Material.

and specifically the use of force. This enables a longitudinal analysis to chart and trace developments and changes in Israeli public opinion.

In the dataset, the percentage of the population that is hawkish equals the population that chooses the hawkish answer to a question. For example, if a question in a given year asked the public whether they are in favor of a military operation in the Gaza Strip and 56.9% (Lerner 2011) answered with yes, then this is the number coded as "hawkish" since that percentage of the population favored a military solution for the conflict with Hamas. For a survey question to qualify as a measure for "hawkishness," it must ask respondents:

- 1. to decide between military or diplomatic solutions to a conflict,⁷⁹ such as for the support or opposition to a ground operation or a truce, or
- their opinion on the use of conventional or unconventional force, such as using or not
 using force, favoring or opposing continued fighting, or supporting or opposing the use of
 force if a trade-off is presented to the public.

A question must unambiguously divide the hawkish/militaristic and dovish/peaceful population to be included. For example, a 2007 Angus Reid Strategies survey asked respondents: "Under the *strategic ambiguity* policy, Israel has refused to publicly discuss its purported nuclear capabilities. Would you feel safer knowing that Israel possesses nuclear weapons, or would you feel less safe knowing that Israel possesses nuclear weapons ("Global Poll Finds Varied Views on Nuclear Weapons" 2007, 2)?" This question does not qualify as a hawkishness measure as it is not directly about the use of force. However, in the same survey, the question of whether

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⁷⁹ Conflict is broadly defined as a clash of interest between Israel and an adversary that involved aggression for either or both sides. That includes specific conflicts or tensions between Israel and Hamas, Hezbollah, Palestine Liberation Organization (PLO), Syria, and Iran as well as broad categories such as between Israel and terrorists.

Israelis think the use of nuclear weapons would be justified (<u>"Global Poll Finds Varied Views on Nuclear Weapons" 2007, 8</u>) identifies hawks and doves (over 70% agreed with the use of nuclear weapons, either in the context of war or as a deterrent against an attack).

Survey questions that have ambiguous answers are not taken into consideration. For example, a question by *Maariv*, a Hebrew newspaper in Israel, asked the public in July 2006 on the conflict in Lebanon: "What do you think is a solution to the crisis in the North?" One provided answer option was "Continue fighting until Hezbollah is distanced from the border and only then negotiate a ceasefire and the return of the hostages." This answer is equivocal, identifying first a hawkish tendency and in its second part a dovish one.

Some questions ask about specific operations, such as assassinations or military strikes. For example, in 2009, Israelis were asked, "In your opinion, was the IDF's operation 'Cast Lead'⁸⁰ in Gaza successful or not?" The answers "very successful" and "rather successful" are coded as hawkish. This perception of victory despite many casualties is a proxy for hawkishness. People supported an operation in which many out-group members died—which emphasizes the indifference for the Palestinians' lives and also supports a militaristic approach. This confirms lesser sensitivity to out-group casualties in intergroup conflicts as found in different contexts the literature (Schori-Eyal et al. 2015; Larson and Savych 2007). The public is

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⁸⁰ This operation describes that Gaza War that took place December 2008-January 2009 between the IDF and Palestinian paramilitary groups. The result of the armed conflict was Israeli victory, approximately 1,425 casualties, and a unilateral ceasefire. The nature of the conflict was very unbalanced. Of the casualties, 1,398 were Palestinians killed by Israeli security forces. Palestinians killed 3 Israeli civilians and 6 Israeli security forces. See https://www.btselem.org/statistics/fatalities/during-cast-lead/by-date-of-event.

⁸¹ Gelpi, Feaver, and Reifler provide a more detailed conceptual discussion on casualty-phobia, casualty-sensitivity, and casualty-aversion. See, (<u>Gelpi, Feaver, and Reifler 2009</u>). For the purpose of this chapter, casualty tolerance and hawkishness are treated as endogenous variables.

less willing to support the use of force if it results in high numbers of in-group fatalities (<u>Baum and Groeling 2010</u>; <u>R.C. Eichenberg 2005</u>; <u>Scott Gartner 2008</u>). The perception of Cast Lead's victory could also have been determined by other indicators such as territory gained, opponents killed, high-value targets eliminated, the cessation of rocket attacks, etc. All of these victory indicators are proxy measures for hawkishness. Some polls included several questions that met these criteria. I then included the average of all responses for each year.

The data is derived from questions in national polls and academic articles that conducted surveys in Israel. One such used source is the Peace Index:⁸² a longitudinal project that surveys the Israeli public on a monthly basis since 1994 on topics such as the Israeli-Palestinian conflict, Jewish-Arab relationships, and current political events. One question that is asked almost monthly in the Peace Index is Israeli public opinion on negotiations between Palestine and Israel. However, the so-called recurring negotiations index (NI) is not coded in the dataset because it does not directly ask about a military option or the use of force. Including the NI would shift the focus of Israeli opinion from the use of force to the Israeli-Palestinian conflict only. Another source is the collection of Israel National Election Studies (INES), conducted prior to the Knesset elections, and includes questions about national security issues. The INES is widely used by scholars and policymakers. In addition, the Jewish Virtual Library (JVL) by the American Israeli Cooperation Enterprise provides a useful systematic accumulation of Israeli public opinion polls. The Peace Index, INES, and JVL, as well as scholarly articles, have provided many survey questions relevant to this study to identify hawkish responses within the public.

⁸² For the archival collection see http://www.peaceindex.org/indexMainEng.aspx.

Results

The accumulation of data on Israelis' attitudes on the use of force shows a consistent tendency towards hawkishness from 1984 to 2018. Figure 12 shows that, on average, 55.72% of the Israeli general public has a hawkish attitude when asked about issues of national security (blue line), supporting HI since the prolonged exposure to political violence in Israel correlates with a high average of support for belligerent policies. The average varied between a high of 77.8% in 2002 and a low of 24.6% in 1984. Support for hawkish policies falls below 40% only in three out of 34 years. The support for hawkish action was particularly high in 2002 and particularly low in 1984 and 2000.

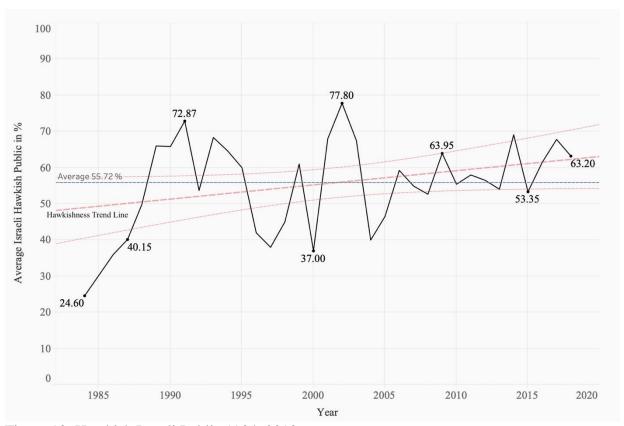


Figure 13: Hawkish Israeli Public 1984–2018

The spike in 2001–2003 to 77.8 % is confirmed by the decrease in support for Prime Minister Ehud Barak during the Second Intifada. He was voted out of office in February 2001,

and Israelis voted for an even more hawkish Ariel Sharon, right-wing Likud party leader. His policy of "targeted assassinations" of Palestinians received support from 92% of Israeli Jews in 2003 (Asher 2003, 28). Interestingly, the extreme fluctuations in average hawkishness seem to taper off as years pass. A narrowing occurred after 2005, which is roughly the end of the Second Intifada, in the early years of the Likud (Sharon/Netanyahu) dynasty, and during a period when Israel was victorious in the Israeli-Palestinian conflict. It suggests a decreasing shift between hawks and doves among the Israeli public. This could mean that the "swing" vote is smaller than in the past and that public opinion is more static than it used to be. The red-dashed trend line shows that hawkish opinion has been slightly increasing over the past three decades. The confidence bands show, however, that the trend might not be significant (p-value= 0.066). It is one that should be monitored closely over the next few years. For now, the data shows a fairly stagnant longitudinal support for hawkish policies.

The overall hawkish tendencies are consistent with disproportionate Israeli support for extreme counterterrorism measures compared to relatively limited damage to Israeli Jews (Friedland and Merari 1985, 602). If people perceive an increased exposure to conflict, popular support for security policies often comes at the cost of out-groups. The combination of moral disengagement theory, moral dilemmas, and intergroup dynamics suggests that due to the threat to moral self, people make hawkish choices (Ben-Nun Bloom et al. 2019, 5). The literature suggests that justifying hawkishness can entail blame on the opponent's previous action (Bandura et al. 1996), rationalizing immoral acts and policies (Iyer, Jetten, and Haslam 2012; Roccas, Klar, and Liviatan 2006), disparaging the opponent (Rudman and Fairchild 2004), and downplaying transgressions of their own group (Tarrant, Calitri, and Weston 2012).

While Israeli public opinion averages out to 55% hawkish, there is also a 45% dovish minority population—a sizable one. This could be because the time period corresponds with the decline in state-based existential threats to Israel itself. Peace was made with Egypt in 1979, the threat from Iraq was nearly eliminated, and the Syrian threat dropped off after 2011. Non-state combatants supplanted states as the primary source of insecurity, and none of them pose nearly the existential threats to the Israeli state itself as did state actors. The major opponent remaining is Iran.

<u>Discussion: Are Israelis Responsive to Conflict Events?</u>

After 2003, there was a particularly sharp decline in hawkishness, which poses a challenge to the literature that suggests that conflict events influence public opinion. The literature suggests an effect of events on Israeli threat perception⁸³ and inherent change in public opinion on security matters (Arian 1995; Handel 1973; D. Horowitz 1982; Yariv 1980; Yaniv 1987). The more intense a conflict is, the more threatened Israelis feel. Arian suggests that the public is reactive to different stimuli (1995, 4). Opponents argue that foreign policy events do not directly shape public opinion (Berinsky 2009; Gad Barzilai and Inbar 1992), finding that the effect of the Gulf War on Israeli attitude caused little change in public opinion (1992).

This section takes conflict exposure over time to explore whether the Israeli public is temporarily responsive to conflict, whereas casualties are the proxy measure for the intensity of conflict.

Whereas casualties are not an ideal proxy for threat perception, they can provide an assessment of the lethality of a conflict event. Usual conflicts that have more casualties are move intensely covered in the news and Israelis are reminded of the exposure to violence. To track this, the

 $^{^{\}rm 83}$ In this section, "threat" largely refers to perceived threat by Israelis.

analysis includes only Israeli casualties⁸⁴ (civilians and security forces personnel in Occupied territories and Israel), under the assumption that Israeli public opinion tends to be concerned predominantly with its in-group members. The data comes from B'Tselem, the Israeli Information Center for Human Rights in the Occupied Territories (B'Tselem 2020) that recorded (estimated) the independent variable, Israeli casualties, for each year from 1986-2018. A limitation to any this data is its focus on conflict escalation. It gives little credit to more peaceful events, such as the disengagement from Gaza in 2005. The analysis suggests that the support for belligerent policies among Israelis is responsive to conflict events, supporting *H2* to a small degree. While statistically significant, the linear regression (Table 9) suggests that the estimate of the average effect of hawkishness on response to Israeli fatalities is a mere 0.06. The support for belligerent policies is corresponds with an increase in Israeli casualties during conflict events.

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⁸⁴ A second test with Palestinian casualties did not show a hawkish responsiveness. I used data from the Uppsala Conflict Data Program (UCDP)'s Battle-Related Deaths Dataset 1989–2018 (Pettersson, Högbladh, and Öberg 2019) that counts all military and civilian deaths that are caused by warring parties directly relevant to combat. As UCDP deliberately distinguishes between battle-related versus war-related deaths, it might exclude some suicide attacks during the Second Intifada. I ran additional models with Armed Conflict and Intervention (ACI) dataset provided by the Center for Systemic Peace that lists major armed conflict episodes as annual, cross-national, time-series data on interstate, societal, and communal warfare ("INSCR Data Page" 2018) which includes interstate, civil, and ethnic violence and the Global Terrorism Database (GTD) that is compiled through a variety of open media sources to collect the information on worldwide terrorist events 1970–2017. Neither the ACI nor GTD models showed a pattern of the public responding to events of violence. This suggests that Israeli aggregate support for more hawkish measurements is—not unexpected—only congruent with Israeli casualties.

Table 9: Linear Regression for Average Israeli Hawkish Public

Hawkishness	Coef.	St.Err.	t-value	[95% Conf	Interval]
Israeli Fatalities	0.063**	0.025	2.47	0.011	0.115
Constant	52.653	2.329	22.61	47.910	57.396
R-squared		0.160			
F-test		6.085			
Number of Obs		34			

^{***} *p*<0.01, ** *p*<0.05, * *p*<0.1

Graph 2 visualizes this responsiveness current conflict events. The ongoing clashes with Palestinians during the First Intifada, Second Intifada, and Gaza War (and smaller operations such as Defensive Pillar in November 2012 and Protective Edge in 2014) are correlated with temporarily increased support for belligerent policies. The responsiveness to Israeli casualties confirms the theory that individuals adopt hostile attitudes towards out-group members and in turn support (1) violence against them (Canetti-Nisim et al. 2009; Hobfoll, Canetti-Nisim, and <u>Johnson 2006</u>), (2) militarism (<u>Bonanno and Jost 2006</u>), and (3) aggressive military policy (Huddy et al. 2005). In contrast, the findings challenge the accommodation effect and desensitization (Bleich, Gelkopf, and Solomon 2003; Waxman 2011; Jaeger et al. 2012). This literature puts forward that stress created through traumatic events decreases if the events occur regularly through processes such as desensitization. With continuous exposure in Israel to conflict events, one would assume that it desensitizes citizens. It has also been suggested that casualty counts that cross a certain threshold cause a diminishing return as the population develops a sort of resilience to the news of violence (Jaeger et al. 2012). But Figure 14 suggests that temporal support for belligerent policies is conditioned by specific conflict events and that

the public has not accommodated to fatalities. These results challenge the desensitization literature.

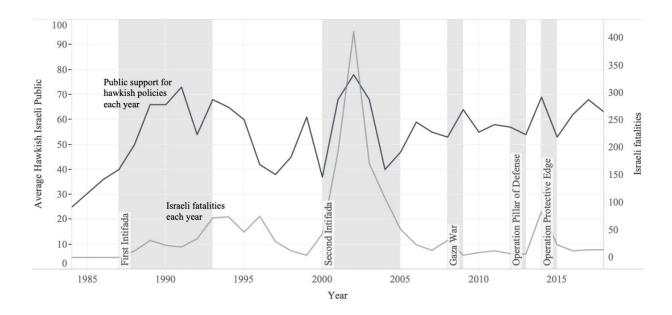


Figure 14: Responsiveness to Conflict Events

Conclusion

This study presents the first systematic analysis of longitudinal public opinion data on the use of force in Israel. The main finding proposes that Israelis tend to support hawkish national security options at the aggregate level. Second, a discussion of the effect of conflict events confirms that support for hawkish policies temporarily increases to current events under the condition that the casualties of a conflict are Israelis. This supports the notion that in times of crises, individuals turn to support violence against out-group members, militarism, and aggressive military policy but questions the processes of desensitization to conflict. The slight increase of average hawkish support further discredits the assumption that the Israeli public has become accommodated to conflict and episodes of political violence.

The second finding can help explain why the COVID-19 treatment in Chapter 3 did not have an effect on Israelis' attitude toward nuclear weapons. The results here suggested that

Israeli hawkishness in public opinion is conditioned by specific conflict events that include
Israeli casualties that died at the hands of an opponent. While casualty rates can be similar or
even higher during a pandemic, people did not die because of the actions of an enemy. Thus,
Israelis might not show patterns in response to national security threats when casualties that died
by natural causes. Support for belligerent policies likely develops from a conflict with an
opponent. This is something to explore in further research.

In further research, it would be interesting to explore the demographic divisions among Israelis on the use of force, some of which was done in Chapter 3 but remains fairly limited. This chapter's work was limited in that raw data was unobtainable for most surveys. Further, they rarely provided information about respondents' gender, education, income, socio-economic status, religious beliefs, religiosity, or political self-placement. I suggest scholars build on this aggregate data to develop additional survey experiments about micro-foundations and the of public support for the use of force. Another limitation is the use of surveys to the exclusion of the Arab population and subdivisions among Jews. Some scholars reason that public opinion in the Arab sector radically differs from the Jewish sector and that such data would confuse the "true picture and in some instances may be no more than a statistical artifact" (Ben-Meir and Shaked 2007, 14). INES started to include Arabs only in 2001. However, Arabs make 20.9% of the population and 16% of the voting population. Since Israelis' votes are largely dependent on foreign policy issues, Arabs' opinions on the use of force should be considered. The Arab vote might not be strong enough to shape Israeli foreign policy, but it can secure additional seats in

the Knesset. The divisions in Israel between Arabs and Jews⁸⁵ should be further explored to understand voting behavior and the nation's general public opinion on foreign policy.

CHAPTER 6: CONCLUSION

This dissertation examined the role of existential threat—through the lens of terror management theory—on the motivation to support and morally justify the use of nuclear weapons. The first study was conducted on a sample of Israeli participants, the second one on American participants. The third relied on archival survey data in Israel to further support a proposed relationship between existential threat and support for violent measures.

At its core in Chapters 3 and 4, this dissertation studied public attitudes toward nuclear weapons. It provided an answer as to when people become more hawkish and are willing to endorse a nuclear first strike against a foreign country. It explored the effects of a specific cause to explain support for a nuclear first strike: terror management theory (TMT) while also providing an understanding of Israeli hawkish tendencies more general. I estimated that a reminder of mortality is likely to cause individuals to increase their support for the use of nuclear weapons. Further, I suggested that Israelis support hawkish national security options at the aggregate level and that the effect of conflict events confirms that support for hawkish policies increases in responsive to such.

The contribution of this dissertation to the literature is threefold. First, it joins the third wave of nuclear taboo research, Smetana and Vranka (2020) and Rathbun and Stein (2020), in

see (Gelvin 2014; Shapira 2012).

⁸⁵ These historical inequalities between Arabs and Jews manifest themselves, for example, through conscription to the Israel Defense Forces (IDF), veterans' benefits, housing segregation, schools and education, infrastructure, social services, income, and employment in the high-tech sector. For a more nuanced narrative of the development of divisions between Jews and Arabs,

offering an explanation of human psychological nature that impacts people's opinions. I explore in more depth why or why not individuals might support the use of nuclear weapons, providing better information on causal mechanisms. I found that an increase in support for nuclear weapons when respondents are reminded of their death. I borrow a new theoretical framework from social and evolutionary psychology that affect behavioral responses to test causal mechanism. I am adding a psychological causal factor to the rational ones brought forward by the second wave to the taboo literature. Neither perceived utility and rational, expected outcomes (such as winning the war, protecting soldiers and compatriots, and saving lives in the long-term) nor psychological instincts are isolated causal factors that motivate individuals to support the use of an atomic bomb. Instead, it is likely a combination of numerous consequentialist and psychological logics.

Testing TMT included a reminder of people's finite existence, which stimulates potential existential terror. The work tested whether this stimulation increases people's support for the use of force. The faith in one's worldview based on stability usually mitigates the fear of death through a *cultural anxiety-buffer* (Greenberg et al. 1992, 212). Here, that buffer was removed to test people's willingness to use nuclear weapons. This interdisciplinary approach introduces theories that otherwise have not been discussed in connection with the use of force. Bridging the disciplines of international relations and social psychology provided a better understanding of the psychological aspects of human beings that cause them to increase support for extreme methods of war and goes beyond the second wave that proposes a utilitarian logic that suggests that perceived utility, strategic merit, and logic of consequences, are isolated predictors of attitude towards nuclear weapons. This wave disregards psychological causal mechanism. However, the dissertation is congruent with both waves in arguing that the nuclear taboo is fragile, in part,

when an existential threat exists. My findings join both camps in challenging the robustness of normative taboos.

Second, I show that TMT is a relevant framework to explain a factor causing increased support for a nuclear strike across two different samples. Drawing on comparative politics, I conducted two original experimental surveys in Israel and the U.S. and a systematic analysis of longitudinal public opinion data. Israelis and U.S. respondents are affected by the reminder of MS and show higher support for a nuclear first strike against a hostile country obtaining nuclear weapons. The experimental survey literature so far mostly surveyed the United States in isolation. This work joins Dill, Sagan, and Valentino (2018) by adding an analysis of the Israeli public opinion to the non-use literature. For further research I would suggest more studies and experiments on proxy events that can trigger a reminder of death — COVID-19 was not such reminder. It would also be interesting to explore how support changes if the characteristics of the opponent are different; instead of a hostile country that obtained nuclear weapons to one that is still in the proliferation phase, for example.

Third, the findings in Chapter 4 provide support for the realist deterrence arguments. In the American sample, the threat of retaliation from the opponent lowered support for a nuclear first strike, supporting the argument that deterrence works. While the Israeli public did not reduce its support for a nuclear strike under retaliation, it is a unique case with a deterrence policy, the Samson option, that is rooted in the willingness to use nuclear weapons in response to implicit threats.

Questions on the morality of a nuclear weapon have revealed that respondents oftentimes do not have a significant moral concern over a nuclear first strike or decrease such in times of crisis. These findings do not question the existence of a nuclear taboo but disclose a challenge to

the robustness of it. The norm declines under certain circumstances. Meir and Bagno-Moldavsky found that only 13% of Israelis support a Middle East nuclear-free zone (2010, 24). Another poll found that in 2016, 41.3% of Israelis (3% Arabs and 49% Jews) agreed that in order to fight terror effectively, one could ignore human and civil rights (Alkalay 2016). This work confirms that Israelis are willed to justify the immoral use of force and put their original moral concerns aside. Americans concerns for the morality of a nuclear strike slightly diminished. They favor their countries' nuclear capabilities in times of crisis and are unlikely to give it up for the purpose of a world without nuclear weapons.

The findings of this work have some inherent policy relevance. As the literature review at the beginning of the dissertation clarified, public opinion does affect foreign policy in democracies. First, the findings reveal that there are robust tendencies among the public in times of security threats to support the use of force. The public increases its overall approval for the use of force and even nuclear strikes if they feel threatened. This should alert policymakers, proponents of disarmament, and activists of non-use. Since states are unlikely to go to war if the public does not consent to it (Reiter and Stam 2002), it is crucial to address the spike in hawkish public opinion to avoid nuclear war. While being hawkish and defensive of oneself and one's country is not uncommon, it can lead to troubling outcome for the durability of the nuclear norm in real life threat scenarios. The public cannot be relied upon to avoid such since support because it is not only driven by rational, perceived utility of the use force but also emotions and individual-based, human psychological instincts. The public's hawkishness—in a democracy—can lead to foreign policy decisions that challenge the non-use norm of nuclear weapons.

In line with this, policymakers need to ensure more awareness among the public about the nuclear weapons. The information suggests that the degree of public willingness to support

the use of nuclear weapons and dismiss moral concerns is stronger than regular polls suggest. The results challenge a notion of a norm against the use of nuclear weapons—a norm that is assumed to be robust among the public. My policy recommendation includes more nuclear education of the general public in an effort to prevent support in times of crises. The work and effort by non-profit organizations, think tanks, and research institutions is incredibly important to reduce such public support. I also urge these establishments to rethink the underlying assumption that the public is largely supportive of bold causes such as to eliminate nuclear weapons. The findings suggest that individuals ultimately support the possession and use of a nuclear weapon under realistic threats.

Third, the findings confirm that the public cannot be counted on to be a constraint on the political leadership. Currently, Iran does not have a nuclear bomb and there is no immediate threat of a nuclear conflict in the region. Israel has consistently raised its opposition to the JCPOA because it believes that Tehran never abandoned its ambition to become a nuclear-armed state and that the deal left pathways open for realizing this ambition. However, if Israeli counterproliferation efforts fail and the international community is unable to negotiate an agreement, a nuclear-armed Iran and resulting conflict is not far from reality. If Israel will be in a situation where it considers a nuclear attack, the public will not serve as constraint to such as decision. Hence, Israeli leadership should support recent efforts to revive the JCPOA. It is in Israel's domestic interest to support the existing diplomatic framework if it wants to prevent a nuclear conflict with Iran in the future. The US should continue it negotiations with Iran and get back into compliance with the Iranian deal if it wants to prevent a nuclear crisis in the Middle East.

Fourth, the Arab population should not only be included by scholars in experimental research and surveys on the use of force but in foreign policy decision-making in Israel. Arabs have hitherto been excluded from it and have very limited leverage over the direction of Israeli politics. The findings in Chapter 3 on significant differences between Arabs and Jews joins polls that surveyed both Jewish and Arab opinions on hawkish policies. They find major discrepancies between the two groups' attitudes toward the use of force against Palestinian territories. For example, in 2011, respondents were asked whether they support a wide-scale military operation in Gaza. Sixty-five percent of Jews and merely 25% of Arabs supported such a decision, the obvious reason being that almost all people living in the Gaza strips are Sunni Arabs. More recently, in 2015, about 80% of Jews and only 11% of Arabs supported Israel's decision to launch Operation Protective Edge. In 2018, 61% of Jews and only 16% of Arabs thought it to be a good move to launch a wide-scale military operation against Hamas in Gaza if the group violates the ceasefire. As expected, Arabs are much less likely to support violence against their own ethnic group. Another comprehensive study of 5,602 face-to-face interviews with Israeli adults between 2014 and 2015 showed that while the majority of Jews (56%) say that Israel is making a sincere effort toward peace, only 20% of Arabs do so (Waxman 2008). The longitudinal peace index⁸⁶ that has been conducted since 1994 confirmed this historical divide over the peace process. The differences in opinion are significant and should be taken into account when deciding on foreign policies for the country. While the exclusion of Arabs might reflect the nature of the Jewish state, it also leads to a misrepresentation of Israeli public opinion in policymaking by ignoring its ethnoreligious diversity.

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⁸⁶ See https://en.idi.org.il/centers/1159/1520.

A limitation of the dissertation is that the treatments in the survey of Chapter 3 and 4 remain mere thought experiments. No hypothetical scenario can accurately recreate the depth of urgency and emotion that people would feel in real life if their government would consider a nuclear strike. As such, it is a conservative test of public opinion on the use of a nuclear weapon. This dissertation is also limited in its conclusions on the U.S. public. The survey in Chapter 4 uses a mere convenience sample instead of a national representative population sample through a more reputable survey firm (i.e., YouGov, Gallup). As the resources for this project were limited, a more robust data collection was achieved for the Israeli sample.

A third limitation is that public opinion on nuclear weapons might matter very little in times of crises. Just how President Truman did not consult the public in 1945, a president today might do the same. The high support for the nuclear bomb on Japan was based on public opinion polls taken after the dropping on Hiroshima and Nagaskai. Although some have argued that states are unlikely to go to war if the public does not consent to it (Reiter and Stam 2002) and that public opinion in general sets broad limits to elites' foreign policy choices (Risse-Kappen 1991), studying public opinion and its effect on policy can be distorted. Public opinion is often malleable, responsive to events, and the public tends to have a favorable view of things that are successful. Hence, it is difficult to assess to what extent public opinion on the use of a nuclear weapon has an effect on a leader thinking about using them.

Lastly, the work excludes exploration of elites' basic affective instincts that affect their attitude toward the use of force. The surveys merely explored the general public, but it would be interesting to test MS on elite decision-makers and whether it affects them in a similar way since the mechanism is an individual-level one. That would be worrisome in the light of studies that found that policy decision-making becomes emotion rather than logic-driven when threat

perception increases (Epstein 1994). This dissertation originally started out with the project goal to explore domestic patterns of hawkish attitudes, including both public and elite opinion (Horschig 2018). However, it became apparent to me how complex public opinion on nuclear weapons is and that an analysis of such would require all resources of this work. Hence, it now becomes a recommendation of this dissertation that more research on leaders' attitudes towards nuclear weapons is needed. What are the causal mechanisms of support for nuclear weapons among leaders? What domestic and international factors affect a leader's attitude towards nuclear weapons and make some leaders more supportive than others of nuclear weapons?

Understanding not only the public but what makes leaders more supportive of the use of nuclear weapons provides decision-makers valuable information. Only when the attitudes of both domestic actors, the public and elites, are understood can frameworks be put in place to underenforce a robust norm against nuclear weapons.

To conclude; a prominent supposition is that studying nuclear security and specifically domestic opinion on it is redundant because the use of the weapons is highly unlikely. For that reason, there has been no other use than 1945. I argue the contrary: studying nuclear security and public opinion is crucial. Since nuclear strikes are infrequent (and more so inexistent), scholars and policymakers still have the opportunity to understand public and elite opinion before nuclear weapons are used. If policymakers can grasp that their public's opinion can be inflated by temporary human instincts and emotions of survival, their decisions might be alternated. If the majority of publics support the use, then activist groups can work with this astounding but crucial information.

APPENDIX A: IRB HUMAN SUBJECTS APPROVAL



UNIVERSITY OF CENTRAL FLORIDA

Institutional Review Board

FWA00000351 IRB00001138 Office of Research 12201 Research Parkway Orlando, FL 32826-3246

EXEMPTION DETERMINATION

January 31, 2020

Dear Doreen Horschig:

On 1/31/2020, the IRB determined the following submission to be human subjects research that is exempt from regulation:

Type of Review:	Initial Study, Category
Title:	An Illusional Nuclear Taboo: Mechanisms of Domestic
	Attitudinal Patterns for Extreme Methods of War
	Doreen Horschig
IRB ID:	STUDY00001135
Funding:	None
Grant ID:	None

This determination applies only to the activities described in the IRB submission and does not apply should any changes be made. If changes are made, and there are questions about whether these changes affect the exempt status of the human research, please contact the IRB. When you have completed your research, please submit a Study Closure request so that IRB records will be accurate.

If you have any questions, please contact the UCF IRB at 407-823-2901 or irb@ucf.edu. Please include your project title and IRB number in all correspondence with this office.

Sincerely,

Gillian Bernal

Designated Reviewer

APPENDIX B: FULL ISRAELI SURVEY



EXPLANATION OF RESEARCH

Title of Project: "An Illusional Nuclear Taboo: Mechanisms of Domestic Attitudinal Patterns for Extreme Methods of War"

Principal Investigator: Doreen Horschig

Faculty Supervisor: Güneş Murat Tezcür Ph.D.

You are being invited to take part in a research study. Whether you take part is up to you.

The purpose of this research is the investigation of patterns concerning public attitude towards foreign policy. Specifically, the study aims to gain insights into public opinion about several foreign policy decisions that your government either has faced, is facing, or will likely be confronted with in the future.

Who can participate: We invite you to take part in a research study because you are an Israeli citizen or a permanent resident currently residing in Israel, over the age of 18, and have volunteered to participate. We expect that about 1,700 people will be in this research.

Your active participation will take place online by clicking the *Start button* below. It will first ask you a series of questions about your demographics and then a few general questions about the use of force. Then you are provided with a newspaper article that has follow-up questions. The last question gives you the opportunity for self-expression.

Your active participation is expected to last no more than 10 to 15 minutes.

Participation in research is completely voluntary. You can decide to participate or not participate at any time with no consequences. No privately identifiable information will be collected from participants in the study. The study is completely anonymous.

The data will be stored on a cloud storage site that is encrypted and password protected for future research. The storage site is accessible only to the PI.

Parts of this study are being concealed from you in this Explanation of Research, or you are not being told about the true nature of this study at the start. You will be given full details at the end of your participation in the study. Please be aware that some visuals in this survey are of sensitive nature.

Study contact for questions about the study or to report a problem: If you have questions, concerns, or complaints, contact Doreen Horschig (PI), School of Politics, Security, and International Affairs at University of Central Florida, +1 (347) 798 6220, or by email at doreenhorschig@knights.ucf.edu.

IRB contact about your rights in this study or to report a complaint: If you have questions about your rights as a research participant or have concerns about the conduct of this study, please contact Institutional Review Board (IRB), University of Central Florida, Office of Research, 12201 Research Parkway, Suite 501, Orlando, FL 32826-3246 or by telephone at (407) 823-2901, or email irb@ucf.edu.

e the following survey.
uestions
t is your year of birth?
t is your sex? Male Female Neither. Please Specify:
Elementary school or less Partial high school Complete high school Post high school, non-academic (teacher's seminar, nursing school, engineering school) Partial academic degree Full academic degree - BA Full academic degree - MA or higher Do not know/Prefer not to respond
ation
re are you from? Please specify the (nearest) town. Jerusalem District, Northern District, Haifa District, Central District, Tel Aviv District, Southern District,

		udea ar Veither.									
Socio-Ec	Socio-Economic Status ⁸⁷										
5	□ U □ N	your so Jpper c Jpper n Middle Lower c	lass niddle o class								
Political	Ideology										
6	. Please p			on a let	ft (mor	e libe	ral) to	right (more o	conserv	rative) political
	0 Liberal	1	2	3	4	5	6	7	8	9	10 Conservative
Please Answe r											
Religious	s Affiliatio	n									
7	. What is	your cu	ırrent r	eligion	1?						
	I M H O I I	Haredi Dati Masorti Hiloni Muslim Christia Druze No relig None of	n	ove. P	lease S	Specify	<i>7</i> :				

⁸⁷ The question is adapted from the 2015 INES (<u>M. Shamir 2015</u>).
⁸⁸ The question in the survey uses a 11-point scale that generates a high validity of left-right data (<u>Kroh 2007</u>). The left-right dimension is also applied in Israeli settings such as in INES. The common alignment "liberal" and "conservative" are added to left and right, respectively, for clarification.

	Religiou	s Nation	alist ⁸⁹
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8.	 □ N □ A □ T □ D 	ot at all little o a great de o a very gre on't know	egree eat degree or prefer no	ot to answer				
ability.	now be ask	ed about is	sues of nau	ionai securi	ty. Piease a	nswer to the	e best of yo	ur
Baseline	Questions							
Moral At	titude Towa	ard Nuclear	Weapons					
	disapprov	ve of this detrongly Appomewhat A either Appomewhat D trongly Dis	ecision? prove pprove cove nor Di isapprove approve	sapprove	now much wo	·	nuclear wea	apon?
	0 Highly Unethic al	1	2	3	4	5	6	7 Highly Ethical
Please Answer								
Threat Pe	1		you about t	he possibili	ty that Israe	el will be at	tacked by a	n enemy
"feminist	" with "reli	gious-natio	nalist."				uestion repl on previous	

threats in times of war and conflict (<u>Canetti et al. 2017</u>; <u>Canetti-Nisim</u>, <u>Ariely</u>, <u>and Halperin 2008</u>; <u>Huddy et al. 2002</u>; <u>Kam and Kinder 2007</u>). Part of the wording was adapted to the most

pertinent current and future threats to Israelis from Canetti et al. (2013).

	0 Not Concern ed at all	1	2	3	4	5	6	7 Very Concern ed
Please Answer								

Experiment

On the following page are two open-ended questions. Please respond to them with your first, natural response.

I am looking for people's gut-level reactions to these questions.

This assessment is a recently developed, innovative personality assessment. Recent research suggests that feelings and attitudes about significant aspects of life tell us a considerable amount about the individual's personality. Your responses to this survey will be content-analyzed in order to assess certain dimensions of your personality. Your honest responses to the following questions will be appreciated.

Treatment Group 1 Only

	you.
	13a. Jot down, as specifically as you can, what you think will happen to <u>you</u> as you physically die and once you are physically dead.
Contro	l Group Only 12b. Please briefly describe the emotions that eating arouses in you.

13b. Jot down, as specifically as you can, what you think happens to you as you eat and once you physically ate.

TMT Delay Question – All groups

14. Circle as many words as you can in the puzzle below.

Book	Computer
Desk	Phone
Movie	Train

S	R	E	T	U	P	M	O	C	O
W	P	Н	O	N	E	R	E	E	В
A	M	U	S	I	C	P	Z	S	N
В	T	N	R	O	T	C	A	S	K
В	M	R	K	S	E	D	E	A	O
R	F	O	A	G	O	L	В	R	O
E	L	G	V	I	Z	В	O	G	В
P	A	N	U	I	N	E	L	W	Q
A	G	T	A	В	E	T	G	D	O
P	S	C	H	O	O	L	N	I	T

Please read the following article and answer the questions that follow. (All randomly assigned nuclear or conventional condition)

Iran Now Capable of Targeting Israel with Nuclear Weapon

July 7, 2020 Press. TEL AVIV, Israel

Various intelligence services have confirmed that the Iranian government is now capable of reaching all Israeli territories with nuclear weapons. This comes after tensions between the two countries have escalated in the past weeks. Both countries expect continued heavy fighting with many casualties if the conflict continues. Iranian elites have announced that they will not hesitate to use a nuclear weapon on Israeli territory if the Israeli government shows any aggression. Such a strike could kill thousands of Israeli citizens.

Israel has discussed several military options to end the conflict as quick as possible. Some experts suggest an Israeli **high-yield conventional weapon** directed at the Iranian nuclear facility in Natanz where most nuclear weapons are produced and stored. The **conventional weapon** would assure that the facility and its underground infrastructure is completely destroyed and further production at the site impossible. Iran would likely surrender and end fighting. This could save thousands of Israeli lives in the long-term and nullify the Iranian nuclear program. ⁹¹

Various intelligence services have confirmed that the Iranian government is now capable of reaching all Israeli territories with nuclear weapons. This comes after tensions between the two countries have escalated in the past weeks. Both countries expect continued heavy fighting with many casualties if the conflict continues. Iranian elites have announced that they will not hesitate to use a nuclear weapon on territory if the Israeli government shows any aggression. Such a strike could kill thousands of Israeli citizens.

Israel has discussed several military options to end the conflict as quick as possible. Some experts suggest an Israeli **nuclear strike** directed at the Iranian nuclear facility in Natanz where most nuclear weapons are produced and stored. The **nuclear strike** would assure that the facility and its underground infrastructure is completely destroyed and further production at the site impossible. Iran would likely surrender and end airstrikes on Israel. This could save thousands of Israeli lives in the long-term and nullify the Iranian nuclear program.

Figure 15: Newspaper Article for Israeli Respondents

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⁹¹ While this is a positive prime, it does not alternate the main findings of the study that TMT is an important effect of increased support. The prime is realistic in terms of how the government would frame such an attack.

Dependent Variables

Approval of Strike

1 ippiova.	of Strike							
	ou approve S S S S S	or disap trongly A omewha leither A omewha	prove of th Approve t Approve	is decision r Disapprov ve	?	cides to str	ike, how mu	ch would
Moral At	titude							
				•		•	ntry uses the	
	0 Highly Unethic al	1	2	3	4	5	6	7 Highly Ethical
Please Answer								
1' ap ey ir	oproximate ye injuries to acluding an ecision to s	of the nuly half a from radicemia, leutrike? (Note trongly A omewhaleither A omewhaleither half and the number of	clear weap million pe lation (son lkemia, and fuclear Con Approve t Approve	oon in the accepted which the of which distancer. Disapprove	by the blast require am to you appro	t wave, thir putation), a	and long-teri	n burns and
All Grou	ps							
Approval	l of Strike v	with Risk	of Retalia	ation				
m	nilitary oper ecision to s	rations ag	gainst Israe				y be retaliati of your cour	

 □ Somewhat Approve □ Neither Approve nor Disapprove □ Somewhat Disapprove □ Strongly Disapprove
Manipulation Checks
19. Based on the article, what country was the target of the military strike in the article you just read?
20. Based on the article, what weapon do some experts suggest using to destroy the Iranian nuclear facility?
Knowledge of Nuclear Weapons
21. How many nuclear weapons have been used in conflict so far? 38 12 11 21 0
22. The United States, the United Kingdom, Canada, Germany, and Pakistan all possess nuclear weapons. □ True □ False
Israeli Nuclear Weapons
23. Do you believe Israel possesses nuclear weapons? (Israeli Survey Only) ☐ Yes ☐ No ☐ Do not know/Prefer not to respond
Explorative Question
24. Are there any other thoughts, comments, or concerns about nuclear weapons that yo would like to share?

Thank you for your participation.

DEBRIEFING STATEMENT

For the study entitled:

"An Illusional Nuclear Taboo: Mechanisms of Domestic Attitudinal Patterns for Extreme Methods of War"

Dear Participant,

During this study, you were asked to answer questions on the use of force. You were told that the purpose of the study was the investigation of patterns concerning public attitude towards foreign policy. The actual purpose of the study was the investigation of determinants of domestic support for nuclear weapons: What factors influence public willingness to support the usage of nuclear weapons? It aimed to capture individuals' willingness to support or oppose conventional and nuclear attacks under different treatments to understand people's motivations. One group was treated with a reminder of their death, another with a reminder of the COVID-19 pandemic, and another received no treatment. All groups were presented with a realistic threat scenario (= the newspaper article) to understand whether an anti-nuclear norm becomes less robust if the salience of a security threat increases.

We did not tell you everything about the purpose of the study because doing so would have limited our ability to elicit truthful responses from our participants.

You are reminded that your original consent document included the following information: Participation in research is completely voluntary. You can decide to participate or not participate at any time with no consequences. If you have any concerns about your participation or the data you provided in light of this disclosure, please discuss this with us. We will be happy to provide any information we can to help answer questions you have about this study.

The responses in this study are de-identified and cannot be linked to you.

Study contact for questions about the study or to report a problem: If you have questions, concerns, or complaints, think the research has hurt, would like to know the results of the survey, or have any other questions, please contact Doreen Horschig (PI), School of Politics, Security, and International Affairs at University of Central Florida, +1 (347) 798 6220, or by email at doreenhorschig@knights.ucf.edu.

IRB contact about your rights in the study or to report a complaint: Research at the University of Central Florida involving human participants is carried out under the oversight of the Institutional Review Board (UCF IRB). For information about the rights of people who take part in research, please contact: Institutional Review Board, University of Central Florida, Office of Research & Commercialization, 12201 Research Parkway, Suite 501, Orlando, FL 32826-3246 or by telephone at (407) 823-2901.

Please again accept our appreciation for your participation in this study.

APPENDIX C: CODEBOOK

VARIABLE/ VARIABLE LABELS

Year	of birth/Yob (Q: What is your year of birth?)
Gend	er/Gen (Q: What is your sex?)
1	Male (49.56%)
2	Female (50.24%)
	. Neither. Please Specify:(0.2%)
Educa	ation/ Edu (Q: What is your highest level of education?) ⁹²
1	Elementary school or less (1.17%)
2	Partial high school (1.07%)
3	Complete high school (23.8%)
4	
	5.66%)
	Partial academic degree (6.34%)
	Full academic degree - BA (25.07%)
	Full academic degree - MA or higher (14.63%)
	Oo not know/Prefer not to respond (0.59%)
. (Other (1.66%)
Educa	ation by Groups/EduGroups
	1 Elementary school or less
	2 Partial or complete high school, post high school, non-academic
	3 Academic (Partial, Full, BA, MA, Higher)
	. Do not know, Prefer not to respond, Other
Geog	raphic Location/Geo (Where are you from? Please specify the [nearest] town.)
1	
2	
3	
4	Tel Aviv Central Area,(44.39%)
5	Southern District,(11.51%)
6	Judea and Samaria Area,(1.56%)
. 1	Neither. Please Specify:(3.61%)
	7 variables with specified town (Geo_Jerusalem, Geo_Northern, Geo_Haifa, Geo_Central
	eo_Haifa, Geo_Central, Geo_Southern, Geo_Judea, Geo_Other)
Socio	-Economic Status/SES (What is your social status?)
1	Upper class
2	Upper middle class
<i>_</i>	Opper initiate class

 $^{^{92}}$ The formulation is taken from the 2015 INES (M. Shamir 2015).

- 3 Middle class
- 4 Lower class

Political Ideology/Polit (Q: Please place yourself on a left [more liberal] to right [more conservative] political scale from 0–10.)

0 (liberal) –10 (conservative)

Religious Affiliation/Rel (Q: What is your current religion?)

- 1 Orthodox
- 2 Religious
- 3 Traditional
- 4 Secular
- 5 Muslim
- 6 Christian
- 7 Druze
- 8 No religion
- 9 None of the above. Please Specify: _____

Religious Affiliation Jew or Arab/RelJA

- 0 Arab
- 1 Jew

Religious Nationalistic/Relnat (Q: To what extent do you define yourself as a religious-nationalistic?)

- 1 Not at all
- 2 A little
- 3 To a great degree
- 4 To a very great degree
- . Don't know or Prefer not to answer

Israel Using a Nuclear Weapon/Moral1 (Q: If Israel decides to use a nuclear weapon, how much would you approve or disapprove of this decision?)

- 5 Strongly Approve
- 4 Somewhat Approve
- 3 Neither Approve nor Disapprove
- 2 Somewhat Disapprove
- 1 Strongly Disapprove

Ethics of Nuclear Strike/Moral2 (Q: How moral or immoral do you think it would be if Israel uses a nuclear weapon?)

Likert Scale 0 (Very Immoral) – 7 (Very Moral)

Threat Perception/Threat (Q: How concerned are you about the possibility that Israel will be attacked by an enemy next year?)

Likert Scale 0 (Not concerned at all) – 7 (Very concerned)

Treatment Group 1

Treatment Group 1 Mortality Salience Death/T1MSQ1 (Q: Please briefly describe the emotions that the thought of your own death arouses in you.)

Treatment Group 1 Mortality Salience Death/T1MSQ2 (Q: Jot down, as specifically as you can, what you think will happen to you as you physically die and once you are physically dead.)

Treatment Group 2

Treatment Group 2 Mortality Salience Covid / T2MSQ1 (Q: Please briefly describe the emotions that the thought of Covid-19 arouses in you.)

Treatment Group 2 Mortality Salience Covid / T2MSQ2 (Q: Jot down, as specifically as you can, what you think will happen to you if you get Covid-19 and once you have gotten Covid-19.)

Control Group/ CGQ1 (Q: Please briefly describe the emotions that eating arouses in you.)

Control Group/CGQ2 (Q: Jot down, as specifically as you can, what you think happens to you as you eat, and once you physically ate.)

Approval of Nuclear Strike/NuclearStrike (Q: Given the facts described in the article, if Israel decides to strike, how much would you approve or disapprove of this decision?)

- 5 Strongly Approve
- 4 Somewhat Approve
- 3 Neither Approve nor Disapprove
- 2 Somewhat Disapprove
- 1 Strongly Disapprove

Moral Attitude Nuclear Strike/NSMoral (Q: How moral or immoral do you think it would be if your country uses the nuclear weapon?

Likert Scale 0 (Very Immoral) – 7 (Very Moral)

Physical Effects of the Use of a Nuclear Weapon/EffectsNS (The use of the nuclear weapon in the article would cause the instant death of approximately half a million people killed by the blast wave, third-degree skin burns and eye injuries from radiation (some of which require amputation), and long-term effects including anemia, leukemia, and cancer. Do you approve or disapprove of your country's decision to strike?)

- 5 Strongly Approve
- 4 Somewhat Approve
- 3 Neither Approve nor Disapprove
- 2 Somewhat Disapprove
- 1 Strongly Disapprove

Approval of Conventional Strike/ConvenStrike (Q: Given the facts described in the article, if Israel decides to strike, how much would you approve or disapprove of this decision?)

- 5 Strongly Approve
- 4 Somewhat Approve
- 3 Neither Approve nor Disapprove
- 2 Somewhat Disapprove
- 1 Strongly Disapprove

Moral Attitude Conventional Strike/CSMoral (Q: How moral or immoral do you think it would be if your country uses the conventional weapon?

Likert Scale 0 (Very Immoral) – 7 (Very Moral)

Retaliation to Nuclear & Conventional Strike/RetalNSCS (Q: Given the facts described in the article earlier, there will likely be retaliation with military operations against Israel. Do you approve or disapprove of your country's decision to strike?)

- 5 Strongly Approve
- 4 Somewhat Approve
- 3 Neither Approve nor Disapprove
- 2 Somewhat Disapprove
- 1 Strongly Disapprove

Manipulation Check 1/Manip1 (Q: Based on the article, what country was the target of the military strike in the article you just read?)

Manipulation Check 2/Manip2 (Q: Based on the article, what weapon do some experts suggest using to destroy the Iranian nuclear facility?)

Knowledge on Nuclear Weapons/Know1 (Q: How many nuclear weapons have been used in conflict so far?)

- 1 38
- 2 2
- 3 11
- 4 21
- 5 0

Knowledge on Nuclear Weapons/Know2 (Q: The United States, the United Kingdom, Canada, Germany, and Pakistan all possess nuclear weapons.)

- 1 True
- 2 False

Knowledge on Nuclear Weapons Merged/KnowNuk

- 0 Little No Knowledge (No correct answer to Know1 and Know2)
- 1 Some Knowledge (1 correct answer to either Know1 or Know2)

2 Knowledgeable (Correct answers to either Know1 and Know2)

Israeli Possessing Nuclear Weapons/IsraelNuk (Q: Do you believe Israel possesses nuclear weapons?)

- 0 No
- 1 Yes
- . Do not know/Prefer not to respond

Explorative Question/Explor (Q: Are there any other thoughts, comments, or concerns about nuclear weapons that you would like to share?)

Political Ideology/ PolitBinary (Q: Please place yourself on a left [more liberal] to right [more conservative] political scale from 0–10.)

- 1 Left/Liberal (0-5)
- 2 Right/Conservative (6-10)

Support for Nuclear Strike 3 Categories/ Nuclear Strike 3

- 1 Disapprove
- 2 Neither Approve nor Disapprove
- 3 Approve

Group Asked About Nuclear Strike / NSBinary

- 0 Not Asked
- 1 Asked

Threat Perception 2 Categories/ ThreatDummy

- 1 Low
- 2 High

Religious Nationalistic/RelNatDummy (Q: To what extent do you define yourself as a religious-nationalistic?)

- 0 Not at all/ A Little
- 1 To A Great Degree/ To A very Great Degree

Religious Nationalistic based on Midgam/ relidBinary

- 0 Secular, Traditional, Religious
- 1 religious-Nationalist (Haredi/Ultraorthodox)

Additional Demographical Variables provided by Survey Firm⁹³

All lowercase in dataset

⁹³ See also, https://www.midgampanel.com/surveyData/dA.asp?id=70Kihliq2020213737.

*Dropped from dataset

*Termination Status/stat

- 1 Finished properly
- 2 Filtered
- 4 Started but did not finish

Device Type/device

- 1 Desktop/Computer
- 2 Smartphone/Tablet

*Invitation/ Id

Demographic quota code/sekerID

User ID/uid

Country of birth/cbor

Country of birth – father/cborfa

Country of birth - mother/ cborma

Survey start time/startTime

Survey end time/endTime

Total survey time (Duration)/totime

Age/age

Year of birth/byear

Year of immigration/alyayear

Newly generated: Age of immigration/ageimmi

Number of children/kids Year youngest kid born/ykid Year oldest kid born/okid Gender/sex

- 1 male
- 2 female

Marital status/fstat

- 1 "Single"
- 2 "Married"
- 3 "Separated/Divorced"
- 4 "Widow"

District/nafa

- 1 "Jerusalem"
- 2 "North"
- 3 "Haifa"
- 4 "Central"
- 5 "Tel Aviv"
- 6 "South"
- 7 "Judea and Samaria"

8 "Other/Abroad"

Education/edu

- 1 "up to 8 years"
- 2 "up to 9-10 years of schooling"
- 3 "up to 9-10 years of schooling"
- 4 "High school student"
- 5 "High school graduate"
- 6 "During Non-Academic High School Studies"
- 7 "Graduate of non-academic high school"
- 8 "During undergraduate studies"
- 9 "Bachelor's degree"
- 10 "During Master's Degree Studies"
- 11 "Master's degree"
- 12 "During a doctoral dissertation"
- 13 "Holds a PhD"

Religion/rel

- 1 "Jew"
- 2 "Christian"
- 3 "Muslim"
- 4 "Druze"
- 5 "Other"
- 6 "Lack of religion"

Religious Identification/relid

- 1 "Secular"
- 2 "Traditional"
- 3 "Religious"
- 4 "Haredi"

Primary Occupation/osek

- 1 "High School Student"
- 2 "Soldier"
- 3 "Student"
- 4 "Yeshiva Student"
- 5 "Employee"
- 6 "Unemployed"
- 7 "Not looking for a job Other"
- 8 "Freelancer"
- 11 "Junior Manager"
- 12 "Intermediate-Level Manager"
- 13 "Senior Manager"
- 14 "Moderate"
- 15 "Retired"
- 16 "Cooperative Member"

17 "Kibbutz Member"

Income/ses

- 0 "No income at all"
- 9 "No income at all"
- 1 "Well below average"
- 2 "Below average"
- 3 "Average"
- 4 "Above average"
- 5 "Far above average"
- 6 "Not interested in answering"

*Continent of birth/rcbor

- 1 "Israel"
- 2 "Asia/Central America"
- 4 "Eastern Europe"
- 5 "Maghreb"
- 6 "Middle East"
- 7 "North America"
- 8 "Oceania"
- 9 "South America"
- 10 "Former Soviet Union"
- 11 "Western Europe"
- 12 "Africa"

*Election 2015/vote2015 (data not provided)

- 1 "Likud"
- 2 "The Zionist Camp"
- 3 The "Common List"
- 4 "There is a future"
- 5 "All of us"
- 6 "The Jewish Home"
- 7 "Shas"
- 8 "Torah Judaism"
- 9 "Israel Beiteinu"
- 10 "March"
- 11 "Together the people with us"
- 12 "Green leaf"
- 13 "Other"
- 14 "Did not vote"
- 15 "Too young/Does not know/Refuses to answer"

1st Election 2019/vote2019

- 1 "Likud"
- 2 "Blue and white"
- 3 "Shas"

- 4 "Torah Judaism"
- 5 "New/Canal"
- 6 "Labor Party"
- 7 "Yisrael Beiteinu"
- 8 "Union of the Right"
- 9 "March"
- 10 "All of us"
- 11 "Rem/Bled"
- 12 "The New Right"
- 13 "Other"
- 14 "Did not vote"
- 15 "Too young/Does not know/Refuses to answer"

2nd Election 2019/vote2019b

- 1 "Blue and white"
- 2 "Likud"
- 3 "The Common Arab List"
- 4 "Shas"
- 5 "Yisrael Beiteinu"
- 6 "Torah Judaism"
- 7 "Right"
- 8 "Labor Party"
- 9 "The Democratic Camp"
- 10 "Jewish Power"
- 11 "Other"
- 12 "Not voted"
- 13 "Too young/Does not know/Refuses to answer"

Election 2020/vote2020

- 1 "Likud"
- 2 "Blue and white"
- 3 The "Common List"
- 4 "Shas"
- 5 "Torah Judaism"
- 6 "Labor-Bridge-March"
- 7 "Yisrael Beiteinu"
- 8 "Right"
- 9 "Other"
- 10 "Not voted"
- 11 "Too young/Does not know/Refuses to answer"

Age by Group/agegrp

- 1 0 18–24
- 2 1 25–39
- 3 40-59
- 4 60+

APPENDIX D: SUMMARY STATISTICS

Table 10: Descriptive Statistics of Israeli Survey

Variable	Description	N	Mean	SD	Min	Max
Nuclear Strike	Ordinal variable to determine (non-) support for nuclear weapon use (from 1 if strongly disapprove to 5 if strongly approve)	508	3.283	1.388	1	5
Mortality Salience	Dichotomous variable (1 if treated with MS, 0 if "treated" with reminder of eating)	678	.496	.5	0	1
Gender	Dichotomous variable (1 if male, 2 if female)	102 0	1.503	.5	1	2
Geography	Categorical variable of districts (1 if Jerusalem District, 2 if Northern District, 3 if Haifa District, 4 if Tel Aviv Central Area, 5 if Southern District, 6 if Judea and Samaria Area)	986	-	-	-	-
Education	Ordinal variable of level of education (1 if Elementary school or less, 2 if Partial high school, 3 if Complete high school, 4 if Post high school, non-academic 5 if Partial academic degree, 6 if Full academic degree – BA, 7 if Full academic degree – MA or higher)	999	4.727	1.522	1	7
Political Ideology	Ordinal variable (from 0 if liberal to 10 if conservative)	102 2	4.422	2.389	0	10
Socio-Economic Status	Ordinal variable of social standing (1 if upper class, 2 if upper middle class, 3 if middle class, 4 if lower class)	102	2.75	.647	1	4
Year of Birth	Interval variable of the year people are born	102 2	1978.182	15.419	1946	2002
Nuclear Knowledge	Ordinal variable (from 0 if no knowledge to 2 if knowledge)	102 2	.745	.671	0	2
Threat Perception	Ordinal variable (0 if not concerned about possible attack, 7 if very concerned)	977	3.735	2.032	0	7
Ethnicity	Dichotomous variable (1 if Jew, 0 if Arab)	997	.904	.295	0	1

Table 11: Mean Attitude Towards Nuclear and Conventional Strike with Correct Manipulation Checks

Group	Mean	Std. Dev.	N				
Nuclear Weapon							
T1	3.5	1.35	135				
CG	3.07	1.45	130				
	Conventional Weapon						
T1	3.9	1.18	115				
CG	3.77	1.16	1127				

Table 12: Distribution of Sample by Age and Sex

		Numbers	1	Pper	rcentages	in %
Ages	Total	Male	Female	Total	Male	Female
18–24	149	76	73	99.34	50.67	48.67
25–39	363	182	181	100	50.14	49.86
40–59	328	157	171	100	47.87	52.13
60+	183	93	90	99.45	50.54	48.91
Total	1023	508	515	99.8*	49.56	50.24

^{* 2} additional respondents identified as "neither"

Israeli Nuclear Weapons

In the Israel survey, a question asked whether Israelis believe in their country's possession of nuclear weapons. While Israel does not officially admit to its nuclear arsenal, it is a well-known secret. In 2009, approximately 90% of the population believed that Israel possessed nuclear weapons (Meir and Bagno-Moldavsky 2010, 24). In my survey, 96% responded in the affirmative. The few individuals who believe Israel does not possess nuclear weapons were mostly Arabs. It might have been that they understood the article as unrealistic and fictional. *Additional Notes on the Article Vignette*

As nuclear weapons have not been used since 1945, a contemporary reaction to a nuclear strike cannot be measured. That is why the conditions for all groups contain a hypothetical but realistic scenario. The conditions of the recent, prominent experimental surveys pose some challenges to respondents' cognitive processes (as identified in Groves et al. 2011) in answering questions.

Post and Sechser provided their respondents with "a fictional news story of approximately 400-500 words" and included differences in attack method (varying between a successful U.S. cruise missile strike against the bunker, 100 conventionally-armed cruise missiles, and two nuclear-armed cruise missiles), and dissenting cue (varying between positive and negative cues from the Chairman of the Joint Chiefs, a retired military officer, a Republican Senator, and Democratic Senator) (2017, 14). Similarly, Press, Sagan, and Valentino's treatment news stories had more than 500 words (2017; 2013). The length of the articles, filled with technical complexity and political subject matter, suggests that some respondents could lose interest or might not read the complete article. Groves et al. suggest that respondents have difficulties comprehending material if survey questions include problems of excessive complexity and unfamiliar terms (2011, 228). Post and Sechser report that roughly 77% of all respondents got all four manipulation checks to ensure subjects absorbed the key facts correctly (2017). Scholars should be careful to formulate the treatment from an academic, elitist privilege view transcribing their educational standards. Respondents might not understand the terms used or are interested in carefully reading the article for the minor monetary compensation they get from taking a survey on MTurk. Hence, my threat scenarios are briefer at less than 200 words.

Asking Israelis about using force against Iran comes with this moral baggage. Israeli politics have framed Iran as a major threat. Choosing a fictional country or another hostile target country (i.e., Turkey or Saudi Arabia) would avoid this. However, it would also decrease the

salience and effectiveness of the reality of the threat. While Israel might have strained relations with Turkey and Saudi Arabia, they are not as salient as with Iran. The most realistic future nuclear threat to Israel is coming from Iran. If respondents perceive a scenario as unrealistic, they are more likely to inflate their support as there are no real-life consequences.

The so-called "expert" in the article—who recommends either conventional or nuclear action—is purposefully kept unbiased and bipartisan to avoid distraction from the recommended military action. The article is not supposed to test for an elite cue or partisan endorsement of the strike. In one condition, the suggested military action includes a conventional strike. Currently, the largest known one Israel possesses is the Delilah that ranges approximately 250–300km, missing the range between Israel and Iran. Yet, the exact Israeli military inventory is ambiguous and unknown to the public as the government rarely offers statements on the matter. Israel might have its own arsenal of missiles that can target Iran. Further, with the support from the US military, Israel could strike Iran. The bottom line is that an attack from Israel is probabilistic, although not all strategic planning is known. The wording "high-yield conventional weapon" serves the purpose of asking participants about their opinion on conventional weapons.

All other acts were held constant for all groups to isolate the effect of the causal variable in the primer. To avoid a biased framing effect, there are no elite cues in the newspaper article. Furthermore, the article does not give an estimate of casualty count numbers because the study does not aim to understand the effects of such thresholds. Adding a casualty account usually intends to test the threshold of people's willingness to use or not use force. All groups were debriefed on the aim of the study after the completion of the questionnaire. The control group was provided with the same realistic threat scenario as the others.

Iran Now Capable of Targeting Israel with Nuclear Weapon

[May 7, 2020] Press. TEL AVIV, Israel.

Various intelligence services have confirmed that the Iranian government is now capable of reaching all Israeli territories with nuclear weapons. This comes after tensions between the two countries have escalated in the past weeks. Both countries expect continued heavy fighting with many casualties if the conflict continues. Iranian elites have announced that they will not hesitate to use a nuclear weapon on Israeli territory if the Israeli government shows any aggression. Such a strike could kill thousands of Israeli citizens.

Israel has discussed several military options to end the conflict as quick as possible. Some experts suggest an Israeli high-yield conventional weapon directed at the Iranian nuclear facility in Natanz where most nuclear weapons are produced and stored. A conventional weapon would assure that the facility and its underground infrastructure is completely destroyed and further production at the site impossible. Iran would likely surrender and end fighting. This could save thousands of Israeli lives in the long-term and nullify the Iranian nuclear program.

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Figure 16: Article with Conventional and Nuclear Condition

Manipulation Checks

I use two manipulation checks to test how closely respondents read the news article. All questions require respondents to recall information from the article, depending on the treatment they obtained. In the pilot survey, a mere 6% of respondents were not able to answer the manipulation question. Hence, the checks provide sufficient clarity to remove subjects because of the lack of comprehension. A total of 74.76% of respondents answered correctly to both

questions, ⁹⁴ 21.23% of respondents answered correctly to only one question, and 4.01% of respondents did not answer correctly to either question. However, recent scholarly work shows that dropping subjects based on the manipulation checks can lead to bias as it induces an asymmetry across treatment arms (<u>Aronow, Baron, and Pinson 2019</u>). However, respondents who did not answer the question correctly likely did not pay the necessary attention to the survey. The main analysis drops those.

Explorative Question⁹⁵

This last part includes an open-ended question that is optional for respondents to fill out. Since the survey is a CSAQ, there is no opportunity for respondents to express any opinions, thoughts, or concerns to the administrator that the survey topic might elicit. This section gives them an opportunity to express themselves. The question makes sure to provide a place for self-expression in regard to the topic. Political scientists that use human subjects are required to follow the "do no harm" principle and adhere to the institutional review board's (IRB) guidelines which are defined as the minimalist ethical practices a researcher can adhere to. But a researcher can go beyond the minimum requirements and employ a maximalist ethical practice with which one can provide benefits and draws upon principles of respect, justice, and beneficence that have a positive impact (Kapiszewski, MacLean, and Read 2015, 146). This cannot only include appropriate monetary compensation but an opportunity for self-expression. In face-to-face interviews, respondents are able to do so by simply adding to their answers (for example, by

⁹⁴ Which is interestingly lower than Post and Sechser's 77% of all respondents that got four manipulation checks correct (2017). In my survey, respondents were presented with a half as short newspaper vignette and only two manipulation questions.

⁹⁵ The answers to this question suggested in the pilot study that Generation Z (those born between 1997 and 2012) in the U.S. holds strong, but polarized opinions on nuclear weapons (Horschig 2020b).

talking about their experiences, thoughts, and opinions). In an online survey with multiple-choice questions, this becomes more difficult. Hence, this additional question is an effort to go beyond the minimum ethical requirements. Furthermore, it creates an opportunity to explore what is—if anything—on the minds of Israelis when it comes to nuclear weapons.

APPENDIX E: ADDITIONAL ANALYSIS

Age, measured by year of birth, shows no significant tendencies on the attitude towards the use of nuclear weapons in Models 1–4 in Chapter 3, Table 4 of the main manuscript. To test whether older people are thinking more about death and are more affected by the treatment, an interaction term of age and MS was used but did not show any significance either (p=.9). In addition, models that measure age by various groups did not show significance either. Hence, no conclusions can be made on whether the younger or older generations are more hawkish.

The findings on tendencies among females and males are inconclusive. A large, mostly early body of literature has shown that women are less supportive of the use of violence and war than men (Baxter and Lansing 1983; Shapiro and Mahajan 1986; Wilcox, Ferrara, and Allsop 1993; R.C. Eichenberg 2003; R. Eichenberg and Stoll 2017). The gender hypothesis further suggests that females are inherently more inclined toward pacifism than males and that they are socialized early in life to be less militaristic. My findings in Models 1–3 suggest that this association is questionable and confirms several studies that challenge the gender hypothesis. A study of Israeli university students found that the hawks among the respondents were neither associated with females nor males (Jacobson and Bar-Tal 1995, 583). Sagan and Valentino more recently find that female respondents are no less likely to support nuclear weapons use than their male counterparts (2017). However, there are some significant differences when retaliation is mentioned and in Table 2 of this Appendix when asked about conventional weapons. Females tend to be less supportive of a conventional weapon than males.

Table 13: Linear Regression of the Effects of Mortality Salience on Individuals' Attitudes Towards the Use of a Nuclear Weapon

VARIABLES	(Model 1)	(Model 2)	(Model 3)	(Model 4)	(Model 5)
Mortality Salience	.427**	.416**	.335**	.333**	.229**
•	(.172)	(.175)	(.166)	(.165)	(.113)
Gender		195	261	284*	374***
		(.177)	(.168)	(.168)	(.114)
Geography		.053	.047	.05	015
		(.074)	(.07)	(.07)	(.048)
Education		095	081	081	093**
		(.058)	(.054)	(.054)	(.038)
Socio-Economic Status		.352**	.249*	.224	.21**
		(.14)	(.138)	(.138)	(.097)
Year of Birth		.006	.001	.001	008**
		(.006)	(.006)	(.006)	(.004)
Political Ideology			.143***	.141***	.124***
			(.037)	(.037)	(.026)
Threat			.148***	.147***	.116***
			(.041)	(.041)	(.029)
Nuclear Knowledge				194	046
-				(.126)	(.085)
_cons	3.069***	-8.874	961	.205	17.646**
	(.123)	(11.766)	(11.185)	(11.178)	(7.43)
Observations	265	250	244	244	461
R-squared	.023	.074	.198	.207	.174

*** p < .01, ** p < .05, * p < .1Regressions were run with respondents that answered manipulation checks correctly

Table 14: Logistic Regression of the Effects of Mortality Salience on Israelis' Attitudes Towards the Use of a Nuclear Weapon with Odds Ratios

VARIABLES	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
				(added	(added	(Added	(Added	(Added
				Retaliation)	Effects)	Interaction)	Interaction)	Interaction)
Mortality Salience	1.709**	1.692**	1.611**	1.694**	1.93***	2.411	1.037	2.091
	(.378)	(.392)	(.385)	(.407)	(.472)	(3.274)	(.766)	(1.009)
Gender		.794	.675	.691	.389***	.684	.683	.677
		(.186)	(.165)	(.169)	(.099)	(.196)	(.195)	(.166)
Geography		1.006	1.004	1.079	.969	.98	.981	1.006
		(.097)	(.101)	(.108)	(.099)	(.116)	(.118)	(.102)
Education		.943	.945	.886	.873*	.972	.974	.944
		(.072)	(.075)	(.071)	(.072)	(.09)	(.091)	(.075)
Socio-Economic Status		1.666***	1.339	1.395	.92	1.62**	1.689**	1.354
		(.32)	(.277)	(.285)	(.196)	(.388)	(.411)	(.283)
Age		1.013*	1.007	.991	.999	1.008	1.007	1.008
		(800.)	(800.)	(800.)	(800.)	(.009)	(.01)	(800.)
Ethnoreligious Identity		6.364***	10.249***	6.202***	8.024***	10.529***	12.832***	9.601***
		(2.782)	(5.197)	(3.294)	(4.804)	(9.029)	(8.874)	(4.917)
Political Ideology			1.275***	1.342***	1.323***	1.176**	1.179**	1.199**
			(.074)	(.08)	(.078)	(.076)	(.078)	(.099)
Nuclear Knowledge			.683**	.847	.789	.628**	.626**	.689**
			(.123)	(.159)	(.149)	(.135)	(.136)	(.125)
Threat Perception			1.19***	1.186***	1.245***	1.257***	1.255***	1.192***
			(.073)	(.074)	(.079)	(.09)	(.091)	(.074)
MS X Political Ideology								.71
								(.519)
MS X RelNat. Identity							2.054	
							(1.571)	
MS X Ethnoreligious Identity						1.615		
						(2.246)		
Observations	265	245	239	239	239	239	227	239
Pseudo R ²	.007	.046	.103	.107	.116	.134	.143	.106

Standard errors are in parentheses *** p<.01, ** p<.05, * p<.1

Regressions were run with respondents that answered manipulation checks correctly

Table 15: Israelis' Attitudes Towards the Use of a Conventional Weapon by Demographics

Variable	Conventional Strike
Gender	788***
	(.216)
Geography	065
	(.088)
Education	183**
	(.072)
Political Ideology	.157***
	(.048)
Socio-Economic Status	.165
	(.187)
Year of Birth	.013*
	(.007)
Nuclear Knowledge	.005
	(.152)
Threat Perception	.16***
_	(.058)
Ethnicity	2.673***
	(.417)
Observations	337
Pseudo R ²	.116

Standard errors are in parentheses ***p<.01, **p<.05, *p<.1

The analysis in this section is based on data from both surveys, the Israeli and U.S. ones. Since the Israeli and U.S. samples are quite different, one being a national-representative one and the other a convenience sample, this analysis does not appear in the main manuscript but is moved to this Appendix. However, some demographic factors provide interesting tendencies that can stimulate further research about individuals who are more likely to be hawkish than others.

First, Figure 16 shows that respondents with more conservative views (who place themselves on the further right on the political ideology scale) are associated with a robust increase in support for a nuclear strike. Similar to political ideology, threat perception has been a robust predictor in support for the use of force. If individuals perceive a high threat, they become more willing to support the use of extreme force. Second, it suggests that individuals that have

higher education are associated with a decreased support for a nuclear first strike (p=.00 without and with controls - other demographic variables). People with more education are less likely to support a nuclear strike when they are reminded of their death. This significance is an interesting finding given regression results in Chapters 3 and 4 that showed no significance for education among Americans or Israelis. Political ideology and threat perception remain significant variables. Respondents that were able to answer questions about nuclear weapons correctly show a decreasing tendency to support a nuclear strike (p=.003 without controls, p=.033 with controls). With a lack of fundamental knowledge about nuclear weapons among Americans (Connolly and Hewitt 2018), nuclear education and public awareness become increasingly important to reduce hawkishness among the public.

The correlation between education and support for the use of force, military action, and counterterrorism measurements in the literature shows an inverse relationship. The support decreases with people's increased educational level. In early Israeli studies, Friedland and Merari find a consistent decrease for the demolition of terrorists' houses, deportations, curfews, and bombings among elementary, secondary, and university-level Israeli Jews (1985, 598). There are two causal links that explain the relationship. First, highly educated people have a greater facility to deal with probabilistic information and can better reason about the consequences of the use of force (Edwards 1983). Second, people with lower educational levels are more likely to have a heightened, more forceful response because their greater life stressors reduce their sense of control (Vaughan 1993; Fischhoff et al. 2003; Perilla, Norris, and Lavizzo 2002). I hypothesize that this relationship holds up for nuclear weapons.

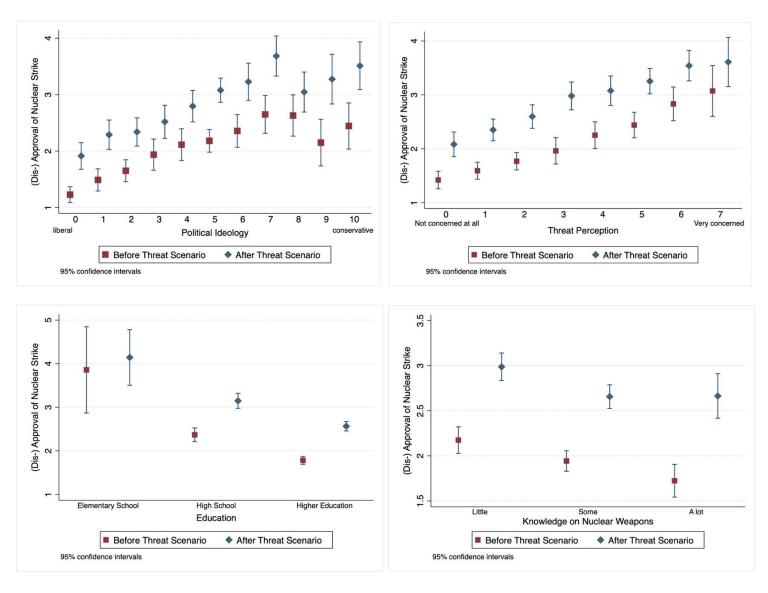


Figure 17: Additional Variables and the Use of Nuclear Weapons

The following regression analysis in Table 14 shows that Christians show higher support for a nuclear strike (with a threat scenario) and less concern over the morality of nuclear use compared to non-religious individuals.

Table 16: Regression of the Effects of Religion on U.S. Individuals' Attitudes Towards the Use of a Nuclear Weapon and Moral Perception

	Model 1	Model 2	Model 3	Model 4
	Approval of Nuclear Strike	Approval of Nuclear Strike	Moral of Nuclear Strike	Moral of Nuclear Strike
Religion	252***	174***	242***	144***
	(.028)	(.033)	(.032)	(.034)
Education		059		148*
		(.071)		(.083)
Political Ideology		.142***		.208***
		(.033)		(.035)
Socio-Economic Status		.076		08
		(.137)		(.182)
Age		.009		.012
		(.007)		(.009)
Nuclear Knowledge		088		183
		(.137)		(.146)
Threat Perception		.16***		.359***
		(.044)		(.054)
Gender		006		274
		(.178)		(.225)
Observations	548	537	548	537
Pseudo R ²	.052	.083	.054	.153

Standard errors are in parentheses

^{***} p<.01, ** p<.05, * p<.1

Table 17: Ordinal Logistic Regression: The Effects of Mortality Salience on Individuals' Attitudes Towards the Use of a Nuclear Weapon with Odd Ratios

VARIABLES	Model 1	Model 2	Model 3	Model 4 (Gender Weighted)	Model 5 (Threat of Retaliation)	Model 6 (Interaction MS x Christianity)	Model 7 (Effects of Strike)
Mortality Salience	1.647**	1.61**	1.644**	1.647**	1.165	1.687*	1.085
Wild turney Surrence	(.327)	(.318)	(.326)	(.329)	(.25)	(.453)	(.244)
Gender	1.028	1.101	.939	1.028	.919	1.028	1.086
	(.223)	(.234)	(.202)	(.225)	(.215)	(.223)	(.265)
Education	.868	.853*	.884	.868	.933	.868	.818**
	(.077)	(.075)	(.079)	(.079)	(.09)	(.077)	(.083)
Political Ideology	1.136***	1.15***	,	1.136***	1.215***	1.136***	1.232***
	(.042)	(.041)		(.045)	(.049)	(.042)	(.051)
Socio-Economic Status	1.018	1.021	1.001	1.018	1.082	1.015	.704*
Socio Economic Status	(.173)	(.173)	(.17)	(.173)	(.204)	(.174)	(.14)
Age	1.015*	1.014*	1.013	1.015*	1.013	1.015*	1.022**
C	(.009)	(.009)	(.009)	(.008)	(.01)	(.009)	(.01)
Nuclear Knowledge	.819	.788	.827	.819	.941	.819	1.015
	(.129)	(.123)	(.13)	(.145)	(.155)	(.129)	(.178)
Threat Perception	1.135**	2.521**	2.82**	2.239*	2.82**	2.243*	3.733***
1	(.065)	(1.125)	(1.272)	(1.08)	(1.302)	(1.016)	(1.891)
Religious/Non-Religious	2.239*	1.207	1.356	1.222	.923	1.188	.843
	(1.014)	(.522)	(.595)	(.575)	(.405)	(.581)	(.405)
Christianity	1.222	, ,	1.175***	1.135**	1.206***	1.135**	1.155**
•	(.535)		(.067)	(.068)	(.071)	(.065)	(.071)
MS X Christianity						1.054	
•						(.421)	
Observations	351	353	351	351	351	351	351
Pseudo R ²	.08	.077	.069	.08	.12	.08	.129

*** p < .01, ** p < .05, * p < .1Regressions were run with respondents that answered manipulation checks correctly

Table 18: Ordinal Logistic Regression: The Effects of COVID-19 Reminder on Israeli Individuals' Attitudes Towards the Use of a Nuclear Weapon

	Model 1	Model 2	Model 3	Model 4
	Nuclear Strike	Nuclear Strike	Nuclear Strike	With Retaliation
COVID-19 Salience	.285	.419*	.525**	.24
	(.229)	(.245)	(.256)	(.172)
Gender		052	123	465***
		(.248)	(.263)	(.18)
Geography		.019	.063	043
		(.094)	(.098)	(.069)
Education		136	086	155**
		(.083)	(.088)	(.06)
Socio-Economic Status		.443**	.322	.187
		(.207)	(.217)	(.15)
Age		.022**	.022**	.003
		(.009)	(.009)	(.006)
Ethnicity		2.599***	3.001***	1.51***
•		(.475)	(.574)	(.363)
Political Ideology			.281***	.22***
			(.057)	(.039)
Nuclear Knowledge			398*	153
C			(.205)	(.131)
Threat Perception			.11*	.101**
-			(.066)	(.046)
Observations	243	226	219	460
Pseudo R ²	.002	.072	.123	.068

^{***} p<.01, ** p<.05, * p<.1

Table 19: Ordinal Logistic Regression: The Effects of COVID-19 Reminder on U.S. Individuals' Attitudes Towards the Use of a Nuclear Weapon

X7 . 11	Model 1	Model 2	Model 3	Model 4	Model 5	
Variable	Nuclear Strike	Nuclear Strike	Nuclear Strike	Nuclear Strike	With Retaliation	
COVID-19 Salience	328*	33*	303	328*	.013	
	(.198)	(.197)	(.197)	(.198)	(.215)	
Gender	175	062	286	175	541**	
	(.218)	(.213)	(.215)	(.221)	(.239)	
Education	02	018	009	02	.089	
	(.087)	(.087)	(.087)	(.09)	(.096)	
Political Ideology	.174***	.187***		.174***	.227***	
	(.037)	(.036)		(.04)	(.04)	
Socio-Economic Status	.172	.184	.158	.172	.351*	
	(.172)	(.169)	(.171)	(.17)	(.189)	
Age	.011	.011	.008	.011	.006	
	(.009)	(.008)	(.008)	(.008)	(.009)	
Nuclear Knowledge	188	214	187	188	126	
	(.151)	(.15)	(.151)	(.161)	(.162)	
Threat Perception	.169***		.206***	.169***	.243***	
	(.055)		(.055)	(.052)	(.059)	
Religion	172***	191***	241***	172***	137***	
	(.039)	(.039)	(.037)	(.04)	(.042)	
Observations	361	363	361	361	361	
Pseudo R ²	.101	.093	.08	.101	.139	

^{***} p<.01, ** p<.05, * p<.1

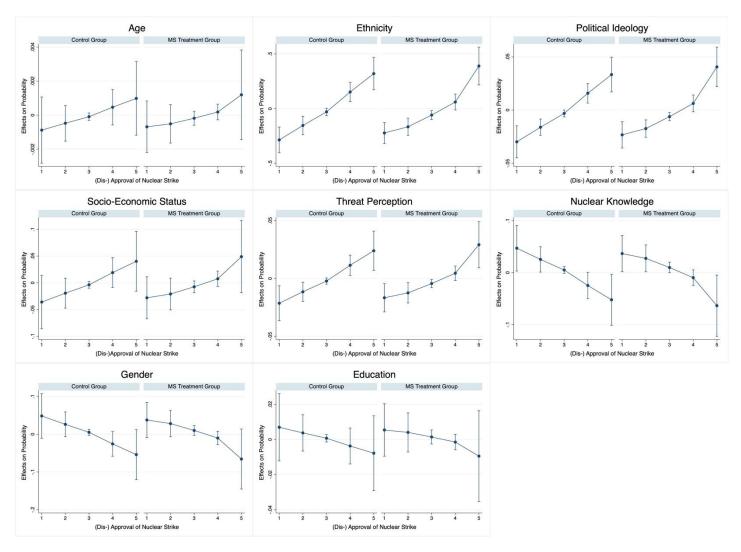


Figure 18: Additional Marginal Effects from Chapter 3, Table 4 (Model 3)

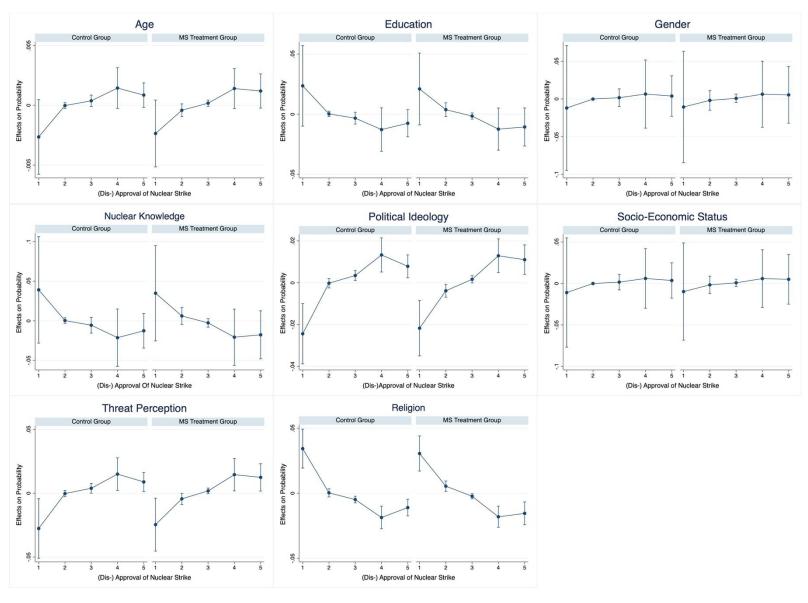


Figure 19: Additional Marginal Effects from Chapter 4, Table 7 (Model 4)

APPENDIX F: A NOTE ON RESEARCH ETHICS

The potential impact of the study of nuclear weapons as well as the TMT framework are sensitive and dreadful and should strictly comply with the "do no harm" principle (Kapiszewski, MacLean, and Read 2015, 146). The questions in the survey are phrased to prevent any possible psychological harm. Specifically, the experience of MS on participants was expected to be low threshold feelings because no new ones are induced but existing ones. The given scenario of the newspaper vignette is hypothetical, and there is no real current threat about which they have to make a decision on the use of nuclear weapons. Mentioning to the respondents that the scenario is hypothetical would reduce the treatment's effectiveness, however. Studies have shown that it is always not unethical to ask questions on such sensitive subject (Carter-Visscher et al. 2007). Respondents that feel uncomfortable in taking the survey (or feel as the number of potential casualties has a psychologically harmful effect) can exit the survey at any time. The survey was completely voluntary, and the local polling firm ensured its anonymity. Further, Israelis' opinions on nuclear weapons are not used or exploited by any third parties but are for the sole purpose of this academic research only.

Unless the respondents are over the age of 80, they will not remember Hiroshima and Nagasaki. Thus, unless Israelis make conscious efforts to use educational nuclear resources, most will not grasp the real impact of a nuclear weapon. However, with simulations such as the one from Alex Wellerstein⁹⁶ and public education of 1945, one does not need to have a personal memory of a nuclear attack to form a strong opinion about the deleterious impacts of nuclear attacks. Further, not surveying respondents who were alive at the time mitigates the risk of a harmful psychological impact. The ethical challenges do not hinder

⁹⁶ See https://nuclearsecrecy.com/nukemap/.

the successful implementation of the experiment. To go beyond the "do no harm" principle, I hope to initiate the translation of my findings into Hebrew and distribute them without a paywall. Further, I added an optional open-ended question to the survey that gives respondents an opportunity to express any thoughts or opinions about nuclear weapons instead of simply meeting the researcher's agenda. The majority of answers to this question confirmed a conscious norm against the use of nuclear weapons. Respondents wrote variants of "using nuclear weapons is a red line that should never be crossed," "the most effective use of nuclear weapons is deterrence," and "all nuclear weapons should be destroyed."

APPENDIX G: FULL U.S. SURVEY



EXPLANATION OF RESEARCH

Title of Project: "An Illusional Nuclear Taboo: Mechanisms of Domestic Attitudinal Patterns for Extreme Methods of War"

Principal Investigator: Doreen Horschig

Faculty Supervisor: Güneş Murat Tezcür Ph.D.

You are being invited to take part in a research study. Whether you take part is up to you.

The purpose of this research is the investigation of patterns concerning public attitude towards foreign policy. Specifically, the study aims to gain insights into public opinion about several foreign policy decisions that your government either has faced, is facing, or will likely be confronted with in the future.

Who can participate: We invite you to take part in a research study because you are a U.S. citizen or a permanent resident currently residing in the United States, over the age of 18, and have volunteered to participate. We expect that about 1,700 people will be in this research.

Your active participation will take place online by clicking the *Start button* below. It will first ask you a series of questions about your demographics and then a few general questions about the use of force. Then you are provided with a newspaper article that has follow-up questions. The last question gives you the opportunity for self-expression.

Your active participation is expected to last no more than 10 to 15 minutes.

Participation in research is completely voluntary. You can decide to participate or not participate at any time with no consequences. No privately identifiable information will be collected from participants in the study. The study is completely anonymous.

The data will be stored on a cloud storage site that is encrypted and password protected for future research. The storage site is accessible only to the PI.

Parts of this study are being concealed from you in this Explanation of Research, or you are not being told about the true nature of this study at the start. You will be given full details at the end of your participation in the study. Please be aware that some visuals in this survey are of sensitive nature.

Study contact for questions about the study or to report a problem: If you have questions, concerns, or complaints, contact Doreen Horschig (PI), School of Politics, Security, and International Affairs at University of Central Florida, +1 (347) 798 6220, or by email at doreenhorschig@knights.ucf.edu.

IRB contact about your rights in this study or to report a complaint: If you have questions about your rights as a research participant or have concerns about the conduct of this study, please contact Institutional Review Board (IRB), University of Central Florida, Office of Research, 12201 Research Parkway, Suite 501, Orlando, FL 32826-3246 or by telephone at (407) 823-2901, or email irb@ucf.edu.

noe der.edd.
Please complete the questionnaire.
Demographic Questions
Age
1. What is your year of birth?
Gender
 2. What is your sex? ☐ Male ☐ Female ☐ Neither. Please Specify:
Education
 3. What is your highest level of education? □ Elementary school or less □ Partial high school □ Complete high school □ Post high school, non-academic (teacher's seminar, nursing school, engineering school) □ Partial academic degree □ Full academic degree - BA □ Full academic degree - MA or higher □ Do not know/prefer not to respond
Geographic Location
4. Where are you from? State: (Nearest) City: Socio-Economic Status
5. What is your social status?

☐ Upper class

		Jpper n Middle		class							
		Lower o	class								
Political 1	Ideology										
				on a le	eft (mo	ore libe	eral) to	right ((more o	conserv	vative) political
	0 Liberal	1	2	3	4	5	6	7	8	9	10 Conservative
Please Answe r											
Religious	s Affiliatio	n									
your abili	I I J I S I I I I I I I I I I I I I I I I I I	Luthera Muslim Tewish Sikh Hindu Buddhis No relig	n, etc.	ncl. At	heist, Please	Agnos Specif	tic) `y:				orthodox, Baptist, wer to the best of
Baseline	Questions										
Moral At	titude Tow	ard Nu	ıclear '	Weapo	ons						
8.	or disap		of this of Appropriate Appropriate Appropriate District Control of the Appropriate Control of the Appr	decision dec	on? r Disaj ve			eapon,	how m	uch w	ould you approve

9.	How moral or immoral do you think it would be if the United States uses a nuclear
	weapon?

	0 Very Immoral	1	2	3	4	5	6	7 Very Moral
Please Answer								

Threat Perception

10. How concerned are you about the possibility that the United States will be attacked by an enemy next year?

	0 Not Concern ed at all	1	2	3	4	5	6	7 Very Concern ed
Please Answer								

Experiment

On the following page are two open-ended questions. Please respond to them with your first, natural response.

I am looking for people's gut-level reactions to these questions.

This assessment is a recently developed, innovative personality assessment. Recent research suggests that feelings and attitudes about significant aspects of life tell us a considerable amount about the individual's personality. Your responses to this survey will be content-analyzed in order to assess certain dimensions of your personality. Your honest responses to the following questions will be appreciated.

Treatment Group 1 Only

12a. Please briefly describe the emotions that the thought of your own death arouses in you.

13a. Jot down, as specifically as you can, what you think will happen to <u>you</u> as you physically die and once you are physically dead.
Control Group Only
12b. Please briefly describe the emotions that eating arouses in you.
13b. Jot down, as specifically as you can, what you think happens to you as you eat and once you physically ate.
Treatment Group 2 Only
12a. Please briefly describe the emotions that the thought of COVID-19 arouses in you
13b. Jot down, as specifically as you can, what you think will happen to you if you get the Coronavirus and once you have gotten COVID-19

TMT Delay Question – All groups

11. Highlight as many words as you can in the puzzle below.

			Book	Computer					
			Desk	I	Phone				
			Movie	Train					
S	R	E	T	U	P	M	O	C	О
W	P	Η	O	N	E	R	E	E	В
A	M	U	S	I	C	P	Z	S	N
В	T	N	R	O	T	C	A	S	K
В	M	R	K	S	E	D	E	A	O
R	F	O	A	G	O	L	В	R	O
E	L	G	V	I	Z	В	O	G	В
P	A	N	U	I	N	E	L	W	Q
A	G	T	Α	В	E	T	G	D	O
P	S	C	Н	O	O	L	N	I	T

Please read the following article and answer the questions that follow. (All randomly assigned nuclear or conventional condition)

Conventional Condition

Nuclear Condition

Iran Now Capable of Targeting the US with Nuclear Weapon

March 7, 2021
Press. New York, United States

Various intelligence services have confirmed that the Iranian government is now capable of reaching all U.S. territories with nuclear weapons. This comes after tensions between the two countries have escalated in the past weeks. Both countries expect continued heavy fighting with many casualties if the conflict continues. Iranian elites have announced that they will not hesitate to use a nuclear weapon on American territory if the U.S. government shows any aggression. Such a strike could kill thousands of U.S. citizens.

The United States have discussed several military options to end the conflict as quick as possible. Some experts suggest a U.S. high-yield conventional weapon directed at the Iranian nuclear facility in Natanz where most nuclear weapons are produced and stored. The conventional weapon would assure that the facility and its underground infrastructure is completely destroyed and further production at the site impossible. Iran would likely surrender and end fighting. This could save thousands of American lives in the long-term and nullify the Iranian nuclear program.

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The United States have discussed several military options to end the conflict as quick as possible. Some experts suggest a U.S. **nuclear strike** directed at the Iranian nuclear facility in Natanz where most nuclear weapons are produced and stored. The **nuclear strike** would assure that the facility and its underground infrastructure is completely destroyed and further production at the site impossible. Iran would likely surrender and end fighting. This could save thousands of American lives in the long-term and nullify the Iranian nuclear program.

Figure 20: Newspaper Article for U.S. Respondents

Dependent Variables

Approval of Strike

Tippiova	of bulke							
13	you appro	ove or disa trongly Ap omewhat A leither App	approve of topprove Approve prove nor D Disapprove	this decision	on?	ecides to str	ke, how mu	ich would
Moral At	titude							
1.						f your count lonal bomb		
	0 Very Immoral	1	2	3	4	5	6	7 Very Moral
Please Answer								
•	4. The use of approximand eye if effects in your course S	of the nucl nately half njuries fro cluding ar ntry's deci trongly Ap omewhat A leither App	a million pom radiation nemia, leuk ision to strib oprove Approve prove nor D Disapprove	in the article eople killed (some of emia, and ke? (Nucle	ed by the l which rec cancer. D ear Condi	quire amput o you appro	third-degree ation), and	e skin burns long-term
All Group	ps							
Approval	l of Strike v	vith Risk o	of Retaliation	n				
1:	military o		against the to strike?			re will likel you approve	•	

	☐ Somewhat Approve
	☐ Neither Approve nor Disapprove
	☐ Somewhat Disapprove
	☐ Strongly Disapprove
Manipul	ation Checks
1	6. Based on the article, what country was the target of the military strike in the article you just read?
1	7. Based on the article, what weapon do some experts suggest using to destroy the Iranian nuclear facility?
Knowled	dge of Nuclear Weapons
1	8. How many nuclear weapons have been used in conflict so far?
-	
	□ 11
	□ 21
	\Box 0
1	9. The United States, the United Kingdom, Canada, Germany, and Pakistan all possess nuclear weapons. □ True □ False
Explorat	tive Question
2	20. Are there any other thoughts, comments, or concerns about nuclear weapons that you would like to share?

Thank you for your participation.

DEBRIEFING STATEMENT

For the study entitled:

"An Illusional Nuclear Taboo: Mechanisms of Domestic Attitudinal Patterns for Extreme Methods of War"

Dear Participant;

During this study, you were asked to answer questions on the use of force. You were told that the purpose of the study was the investigation of patterns concerning public attitude towards foreign policy. The actual purpose of the study was the investigation of determinants of domestic support for nuclear weapons: What factors influence public willingness to support the usage of nuclear weapons? It aimed to capture individuals' willingness to support or oppose conventional and nuclear attacks under different treatments to understand people's motivations. One group was treated with a reminder of their death, another with a reminder of the COVID-19 pandemic, and another received no treatment. All groups were presented with a realistic threat scenario (= the newspaper article) to understand whether an anti-nuclear norm becomes less robust if the salience of a security threat increases.

We did not tell you everything about the purpose of the study because doing so would have limited our ability to elicit truthful responses from our participants.

You are reminded that your original consent document included the following information: Participation in research is completely voluntary. You can decide to participate or not participate at any time with no consequences. If you have any concerns about your participation or the data you provided in light of this disclosure, please discuss this with us. We will be happy to provide any information we can to help answer questions you have about this study.

The responses in this study are de-identified and cannot be linked to you.

Study contact for questions about the study or to report a problem: If you have questions, concerns, or complaints, think the research has hurt, would like to know the results of the survey, or have any other questions, please contact Doreen Horschig (PI), School of Politics, Security, and International Affairs at University of Central Florida, +1 (347) 798 6220, or by email at doreenhorschig@knights.ucf.edu.

IRB contact about your rights in the study or to report a complaint: Research at the University of Central Florida involving human participants is carried out under the oversight of the Institutional Review Board (UCF IRB). For information about the rights of people who take part in research, please contact: Institutional Review Board, University of Central Florida, Office of Research & Commercialization, 12201 Research Parkway, Suite 501, Orlando, FL 32826-3246 or by telephone at (407) 823-2901.

Please again accept our appreciation for your participation in this study.

APPENDIX H: NOTES ON U.S. AND MERGED SURVEY

Additions and/or changes to Merged codebook

Nationality/Nat

- 1 American
- 0 Israeli

Education by Groups/EduGroups

- 2 Elementary school or less
- 2 Partial or complete high school, post high school, non-academic
- 3 Academic (Partial, Full, BA, MA, Higher)
- . Do not know, Prefer not to respond, Other

Age Group Option 1/AgeGroups

- 1 18-24
- 2 25–29
- 3 30–34
- 4 35–39
- 5 40-44
- 6 45-49
- 7 50-54
- 8 55–59
- 9 60-64
- 10 65-69
- 11 70 <

Age Group Option 2/AgeGroups2

- 1 18–24
- 2 25-39
- 3 40-60
- 4 61 <

Religion/Rel

- 1 Christian (incl. Catholic, Orthodox, Protestant, Anglican, Orthodox, Baptist, Lutheran, etc.)
- 2 Muslim
- 3 Jewish
- 4 Sikh
- 5 Hindu
- 6 Buddhist
- 7 No religion (incl. Atheist, Agnostic)
- 8 None of the above. Please Specify:

Religion Binary/RelBinary

- 1 Religious (Identified a religion in the 'Religion' variable)
- 0 No religion
- . Other

- Christianity/ChrisBinary

 1 Christian (incl. Catholic, Orthodox, Protestant, Anglican, Orthodox, Baptist, Lutheran, etc.)
 - 0 Non-Christians

APPENDIX I: UCF PILOT STUDY

• Target Population: UCF Student Body

• Sample: 114 Students

• Not finished (< 95 in progress) = 105

• Response Rate: 92%

Correct response to one manipulation check: 24 %
Correct response to two manipulation checks: 76 %

• Final N= 102

Table 20: Pilot Study Distribution of Sample by Age and Gender

		Numbers		Percenta		
Ages	Total	Male	Female	Total	Male	Female
18–23 (Gen Z)	76	41	35	74.5	40.2	34.3
> 23	26	23	3	25.5	22.6	2.9
Total	102	64	38	100	62.8	37.3

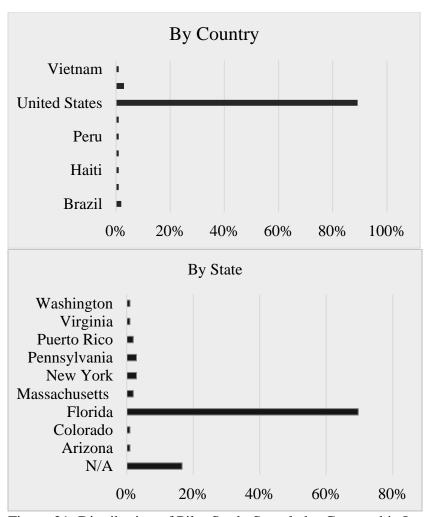


Figure 21: Distribution of Pilot Study Sample by Geographic Locations

Knowledge of Nuclear Weapons

- Correct response to two questions: 45.1%
- Correct response to one question: 49 %
- No correct responses: 5.9 %

Ethics of Nuclear and Conventional Weapons

- T2 TS treatment rated nuclear strike as more ethical after treatment
- T1 MS NW said strike was less ethical after treatment
 - o N possibly too low
 - o Buffer after death treatment needs to be implemented (!)
 - o Young People; research shows they tend to be more dovish

	All NW	T1 MS (CW)	T1 MS (NW)	T2 TS (CW)	T2 TS (NW)
Before Treatment	2.04	N/A	1.91	N/A	1.86
After Treatment	N/A	3.43	1.77	3.09	2.04
N	102	30	22	22	28

Figure 22: Morality of Nuclear Strike

Mortality Salience (How does the thought about death make you feel?)

The responses to this question suggested that the treatment had the intended reactions. Respondents contemplated how they feel about death and actively engaged with the thought of death:

- Very moved
- Alone
- It does not matter to me que sera, sera.
- Afraid
- Numb
- Anxious and peaceful.
- That nothing really makes any sense in life
- Makes me want to do everything I enjoy doing or to be around those that mean a lot to me.
- Out of my hands, unknown
- Worried
- Helpless
- Unaware and anxious
- Human
- Death makes me feel powerless and Hopeless
- Uncomfortable
- Uneasy
- Contemplative and numb
- Inevitable
- Depressed
- It makes me angry. It has taken so much from me, from my family, from everybody around the world and all throughout history. As far as I'm concerned, death is the ultimate enemy. Though I like to believe that it is a conquerable one, I doubt I'll see it done in my lifetime.
- Really sad
- Uncomfortable
- Indifferent
- Not scary yet not welcome
- Slightly concerned yet unworried
- Uneasy
- Sad and scared
- Depressed
- Indifferent, as long as it is relatively painless

- Nervous
- Its lack of bias makes me feel indifferent to it as I realize that it's a natural process of life
- I feel indifferent because it has affected everyone I know and clearly has no bias, so I accept it as a natural process of life.
- Well, death is inevitable... so why dwell? I guess it doesn't really make me feel anything. It's coming anyway; why focus on it any more than you have to?
- Death has very little control over my emotions
- Death is a natural occurrence, so it doesn't seem too scary, but the thought of leaving behind all the bonds I've made and hard work I've put in is pretty grim.
- Because of my faith, I do not fear it.
- Sad
- Indifferent but slightly anxious
- Necessary Evil of Life I don't want to die, but everyone's gotta die or the world doesn't go on. Perhaps there exists an alternative system, but we don't live in that.
- Anxious
- Curious
- Death is promised. Everyone will die at some point and time, but I hope I don't die before I feel like I should.
- Anxious at times, understanding at times (if I recognize it as a natural part of life—like dying from old age)
- There is no sense in worrying. It's inevitable.
- Apathetic
- Uneasy

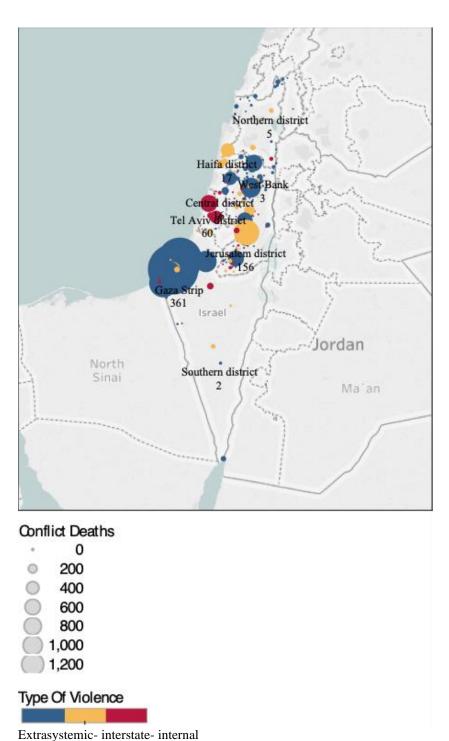
Changes made after receiving the statistics from the survey:

- Added a time buffer (word search puzzle) between death treatment and questions that test independent variables.
- Added near-identical question of support for a nuclear strike with mirrored answer options to have a better comparison before and after the treatment.
- Removed Death Scale:

Table 21: Removed Death Scale

	disturbed or made anxious are you by the aswer it quickly. Don't spend too much to					
impression of how you think right now. Choose the number that best represents your feeling.						
		Extremely	Very	Somewhat	Slightly	Not at all
I.	Your own death	5	4	3	2	1
II.	The total isolation of death	5	4	3	2	1
III.	The shortness of life	5	4	3	2	1
IV.	Missing out on so much after you die	5	4	3	2	1
V.	Dying young	5	4	3	2	1
VI.	How it will feel to be dead	5	4	3	2	1
VII.	Never thinking or experiencing anything again	5	4	3	2	1
VIII.	The disintegration of your body after you die	5	4	3	2	1
IX.	The physical degeneration involved	5	4	3	2	1
X.	The pain involved in dying	5	4	3	2	1
XI.	The intellectual degeneration of old age	5	4	3	2	1
XII.	That your abilities will be limited as you lay dying	5	4	3	2	1
XIII.	The uncertainty as to how bravely you will face the process of dying	5	4	3	2	1
XIV.	Your lack of control over the process of dying	5	4	3	2	1
XV.	The possibility of dying in a hospital away from friends and family	5	4	3	2	1

APPENDIX J: EFFECT OF CONFLICT IN ISRAEL



Zinasystemic intersume internal

Figure 23: High- and Low-Risk Areas according to Distribution of Deaths from Conflict in Israel 1989-2017

This map provides an overview of the effect of conflict from 1989–2017, using conflict data from UCDP (Pettersson, Högbladh, and Öberg 2019). It is an accumulation of violence by a

number of groups, including the government of Israel, Hamas, Fatah, Palestinian Liberation Organization, Hezbollah, and the Palestinian Islamic Jihad (PIJ), and covers conflict in the territories of the Gaza Strip, the Golan Heights, and the West Bank. Conflict is measured by reported deaths and combines several categories of violence: extrasystemic (extrasystemic armed conflict occurs between a state and a non-state group outside its own territory), interstate (interstate armed conflict occurs between two or more states), internal (internal armed conflict occurs between the government of a state and one or more internal opposition group[s] without intervention from other states), and internationalized (internationalized internal armed conflict occurs between the government of a state and one or more internal opposition group[s] with intervention from other states [secondary parties] on one or both sides). There are no reported conflicts of the latter in the dataset. UCDP reports 7,854 deaths from violence in Israel from 1989 until 2017.

The map shows that most deaths were reported from violence in the Gaza Strip and north of the Southern district, followed by the Jerusalem district, the West Bank, and Tel Aviv district. Fewer incidents were reported in the Haifa district and the Northern district. In the Gaza Strip and the West Bank, the majority of violence was a result of extrasystemic violence. That can be explained through violence in the Gaza Strip between (mostly) Hamas and the government of Israel and in the West Bank between Hamas and PIJ and also the government of Israel. Individuals in the area bordering the Gaza strip are particularly at high risk of being exposed to violence. In the Tel Aviv district, the map shows that most violence is a result of internal conflict, which is a result of violence between the al-Aqsa Martyrs' Brigades and the government of Israel. In the Haifa and Jerusalem districts are reports of interstate conflict. Since al-Aqsa

Martyrs' Brigades was in active conflict with the Israeli government in the Haifa district, questions about the measurement of the type of violence in the UCDP datasets should be raised.

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