SHIFTING HORIZONS:

TEMPORAL ORIENTATIONS AND CONFLICT DECISION-MAKING

A Dissertation

by

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ABSTRACT

This project explores how time horizons influence decision-making in international conflict. Despite their prevalence as an explanation for conflict behavior, it is less clear how temporal orientations lead to selecting certain policies, and pushing others 'off the table'. I investigate this puzzle by focusing on the effects of variations in time horizons on the decision-making process. Using insights from IR, political psychology and decision science, I develop a theoretical framework arguing that actors' time horizons serve as a screening mechanism that shapes the decision process by reducing the type and number of alternatives that are evaluated. Since individuals' time horizons vary, different choice-sets of policy options emerge. I posit that individuals with long time horizons evaluate larger and more diverse choice-sets compared to those with short time horizons. In turn, the composition of these choice-sets affects the final policy selection. Using a two-phase experiment, I estimate the effects of time horizons on the decision-making process. The results demonstrate that time horizons have a direct effect on the decision process, and an indirect effect on the selection of a conflict strategy. Then, I explore time horizons as a dependent variable. In order to explain what leads to variations in time horizons, I develop a framework that describes how the interplay between situational factors and individual dispositions shapes time horizons. I argue that situational factors moderate the effects of individual dispositions and shift decision-makers' temporal orientations and policy choices. I assess this framework with a survey experiment, and a large-N statistical analysis of leaders in international conflicts. The findings demonstrate how the conditional relations between both sets of factors shape leaders' time horizons in conflict. This project presents a comprehensive view of the role that time horizons play in conflict decision-making. First, I unpack the decision-making process and highlight how time horizons influence the selection of conflict strategies. Second, I present an integrated framework to explain how time horizons shift facing a conflict situation. As a whole, this research places the concept of time horizons as a prominent explanation for the behavior of decision-makers in international politics.

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CHAPTER I

INTRODUCTION

In August 1988, during his nomination acceptance speech at the republican national convention, future president George H.W. Bush gave one of the most famous promises to the American people: "Read my lips: No new taxes." Halfway through his presidency, Bush broke that promise as he negotiated the 1990 budget with a democratic congress and accepted an increase in taxes. The president was well aware of the consequences of his choice, mostly the political price he would pay (as the 1992 elections demonstrated). At the same time, Bush was also cognizant of the need to begin the process of balancing the federal budget to support an economic recovery, a process that spiked during the Clinton administration.

Bush's decision in June 1990, viewed by some as an act of political courage, illustrates the temporal implications of political choices - in the short term, the president paid a clear political cost (substantial partisan and public criticism). At the same time, his decision increased the odds of providing long-term benefits for the US economy, which grew substantially in the following decade under president Clinton's administration.

The temporal dimension is reflected in almost any choice we make. In many cases, there is a clear trade-off - we can choose to emphasize immediate benefits from unhealthy habits such as smoking or excessive alcohol consumption. But these choices also have clear ramifications for our health in the future. In addition, choosing to enjoy the benefits in the short-term, for example, purchasing multiple products with the yearly bonus, means we may not be able to use those extra funds for purchases in the future. On the other hand, some choices involve the opposite dynamics and ramifications. We may decide to act in a way that 'creates' a short-term loss, in exchange for future growth and increased benefits at that time. An example for such choice may be going back

to school and accepting less free time and perhaps lower income in the short-term. Yet, the added education can help with occupational growth and promotion in the long-term.[1]

Beyond the individual context, those kind of dynamics are prevalent in the corporate and business world.[2] When in 2019 Amazon introduced a change to its shipping policy, it was described by some as 'a clear example of short-term pain for long-term gain'.[3] Despite relatively large losses in quarterly earnings (a short-term measure), the company emerged with an increased revenue growth at that same year. On the opposite end of this spectrum, Michael Pearson, former CEO of *Valeant Pharmaceuticals* adopted a managerial approach that placed more emphasis on actions that increased short-term earnings, while also slashing investment in the company's R&D. That strategy contributed to the large drop in the firm's value in late 2015 after investigations of its actions. Pearson's short-term focus on shareholders' earnings cost his company in much of its long-term growth (Scott, 2016).[4]

While highly prevalent in the business world, the Bush 1990 tax increase decision demonstrates that the political environment is also rife with choices that illustrate the role of the temporal dimension. Another example in the realm of public policy is the aversion by many US administrations to invest in long-term strategies to reduce the damages from climate change. While temporal considerations are an implicit and not a central factor in this case (it is mostly a reluctance by policymakers to increase regulation by the federal government), the choices made in these policy areas have clear time-related consequences.[5]

The examples presented above illustrate how temporal implications are present in almost any decision we make. Yet, in most cases, these aspects of the choice are implicit and not clearly

[1] Any decision to invest part of our income also involves a temporal trade-off - we forgo the option to spend all of our present income in exchange for future revenue from the investment.

[2] See, for example Stewart (2011) on Amazon chief executive Jeff Bezos

[3] Amazon Shipping Policy change (2019)

[4] Pearson's actions are not unique, a recent study found that between 2003 and 2012, 54% of the revenues of the 449 companies making up the S&P 500 index were used to buy back their own stock (Nikolov, 2018).

[5] The implicit temporal aspect of this example is the focus of politicians on electoral incentives, and their need to provide short-term outcomes to their constituents. Long-term climate policy does not fit this calculus. See also the report by Carothers (2019).

debated. In this research project, I shift the view and place the temporal dimension in the spotlight by focusing on the element of time in public policymaking, and specifically foreign policy. I explore how the temporal orientations of decision-makers, both leaders and members of the public, shape their political choices in foreign policy. In addition, I study the temporal dimension itself by addressing an under-explored topic within the literature, primarily what explains the variation in individuals' temporal orientations. In other words, why do we focus on immediate outcomes at one instance, and shift to more future-oriented view in another?

The research revolves around the concept of *Time Horizons* - the weights that decision-makers ascribe to present versus future outcomes and how much they are willing to sacrifice present utility for future gain (Krebs and Rapport, 2012). For political actors, time horizons reflect the inherent trade-off between current and future implications of a policy (Rapport, 2015), what some authors called 'the now or later' dilemma (Edelstein, 2017). Based on this definition, I investigate how actors' time horizons affect their political choices in the context of foreign policy, and in particular, their decisions facing international conflict scenarios.

The IR literature has explored the effects of time horizons on leaders' behavior in international politics (Axelrod, 1984; Bak and Moon, 2016; Barkin, 2004; Edelstein, 2017; Fearon, 1998; Haynes, 2019*a*; Keohane, 1984; Martin, 1992; Olson, 1993; Tingley, 2011). However, we are still not clear on the exact role that time horizons play, and how it leads to the adoption of certain alternatives. In this project, I emphasize the decision-making *process*, and investigate how our time horizons influence the formation of a *Choice-set* of favored alternatives, prior to the selection of a preferred option.

Another way to describe this puzzle relate to how decisions are made in reality, and the influence of individuals' time horizons. When facing an international conflict, many political leaders turn to the all-too-common proclamation that 'all options are on the table'. Former president Trump has made such statement with respect to the 2019 turmoil in Venezuela, and the US' part in ensuring the transition of power (Caputo and Orr, 2019). Similarly, failing to mobilize the in-

ternational community to address the (potential) nuclear threat from Iran, Israel Prime Minister Benjamin Netanyahu warned in late 2011 that "...Israel would like to make it clear that all options are on the table" (Harkov, 2011). These statements suggest that facing an international security scenario, political leaders engage in an exhaustive deliberation process before deciding which policy to implement.

However, in reality, it is rare that individuals assess a long list of alternatives prior to making a choice. Instead, we focus on a more reduced 'short-list' of our preferred options. How, then, can we explain this 'elimination' (or screening) of alternatives? In this project, I argue that individuals' time horizons are critical in this 'elimination' process as they affect the formation of a choice-set of preferred alternatives, from which a favored policy option is selected for implementation.

Using insights from international relations theory (Axelrod, 1984; Fearon, 1998; Keohane, 1984) , decision sciences (Beach, 1990), and psychology (Liberman and Trope, 2008), I develop a theory that describes individuals' time horizons as a *screening mechanism* that reduces the amount and type of policy options that decision-makers evaluate prior to selecting a conflict strategy. I argue that alternatives that fail to accommodate the decision-maker's temporal views are rejected and are not likely to be considered and selected.

Since individuals' time horizons can vary, different choice-sets of policy options will emerge contingent upon the decision-maker's temporal orientations. In particular, I posit that long-term oriented individuals will entertain more policy options (i.e. will have larger choice-sets) compared to those with short time horizons. The logic for this proposition rests on both rational choice and psychological accounts. First, long-term oriented actors are those who place more value on future outcomes, suggesting they are willing to accept present costs in order to increase the odds of achieving such outcomes. At the same time, these actors also understand that uncertainty plays an important role in shaping future outcomes. As a result, these actors are open to contemplating more alternatives to address the current situation. These dynamics are prevalent in bargaining scenarios. Authors argue that since long-term oriented actors want to ensure the best future outcome, they will

prolong the bargaining process and assess multiple possible options (Bearce, Eldredge and Jolliff, 2015; Fearon, 1998; Hundley, 2020). Stated differently, actors with long time horizons attempt to identify an action that ensures the best future outcome and thus, are willing to entertain multiple alternatives to improve the chances of findings such an option.

Psychological theories also address the effect of temporal orientations on choices. *Construal level theory* posit that actors with long time horizons perceive future outcomes in an abstract way (Liberman and Trope, 1998; Trope and Liberman, 2000). These decision-makers will place more emphasis on accomplishing their long-term (abstract) objective, and will be less concerned with the details of 'how to accomplish' it (Krebs and Rapport, 2012; Rapport, 2015). Individuals that focus on obtaining future outcomes adopt a broader view of the situation, they engage in more creative thinking and are less likely to place constraints on their evaluations (Förster, Friedman and Liberman, 2004; Liberman and Trope, 2008). The result of this 'selected' removal of constraints is that decision-makers assess more alternatives prior to making a choice. Similar to the rational choice framework, the psychological argument states that actors with long time horizons have a future objective, and they are willing to evaluate multiple 'paths' to attain this goal (i.e. assess more options).

The theory I propose also suggests that time horizons affect the composition of the choice-set in terms of the accepted alternatives. Thus, the content of the choice-sets will also be different for short and long-term oriented actors. The main argument in this case is that actors with short time horizons will not evaluate alternatives that do not offer immediate solutions. These decision-makers will ignore alternatives that fail to provide immediate benefits. In the political context, short-term oriented politicians are more likely to pursue actions that minimize the risks for their political survival (Chiozza and Goemans, 2003; De Mesquita et al., 2003). Payne (2019/20) shows how electoral pressures limit debates on certain policies. He argues that policymakers will 'dampen' policy solutions that do not provide beneficial outcomes in the near future.

On the other hand, actors who emphasize long-term objectives accept a diverse set of options, even if some involve short-term costs. Toft (2006) argues that for actors whose primary objective is the long-term survival of a nation or a religious belief, 'suffering' short-term sacrifices in exchange for securing these goals is acceptable (and rational). These dynamics lead to the second proposition of this project - decision-makers with long time horizons will evaluate a more diverse choice-set which consists of both short- and long-term options. Actors with short time horizons will evaluate a more homogeneous choice-set since they do not accept alternatives that cannot offer immediate solutions.

Building on these propositions, I also study the actual selection of an alternative and argue that the composition of the eventual choice-sets (in terms of both size and accepted policy options) are critical for the final selection of a conflict strategy. Using the concept of *Contextual preference reversal* (Howes et al., 2016; Payne, Bettman and Johnson, 1988; Tsetsos, Usher and Chater, 2010), I describe how changing the composition of the choice-set can alter the final selection of a conflict strategy.

The theoretical argument I offer in the previous section presents a central role for time horizons in conflict decision-making. One implication of this discussion is that when we study conflict behavior, we should place more emphasis on understanding which time frame decision-makers face. This suggests we need to explore the time horizons concept itself. Despite its prevalence in the literature, very few scholars explore the question 'what factors explain variations in time horizons?' (Edelstein, 2017). A more general way to ask this question is 'where do time horizons come from?' In other words, why do we favor immediate outcomes in some scenarios, and prefer to 'wait' for future implications in others? In the second half of this project, I address this puzzle by 'moving' the time horizons concept to the 'left-hand' side of the equation and studying it as a dependent variable.

I begin by reviewing work from classic and behavioral economics about time preferences and discounting behavior (Samuelson, 1937; Thaler and Shefrin, 1981; Thaler, 1981). I also assess studies in psychology on *time perspectives* (Zimbardo and Boyd, 2015), as well as work in political science about the temporal dimension of political choices (Fearon, 1998; Krebs and Rapport, 2012). One preliminary conclusion is that time horizons are not strictly situation-based, nor is it an individual trait/characteristic or a simple utility calculus. Instead, time horizons depend on simultaneous effects from the environment and the individual, suggesting we need to adopt a more integrated approach that can explain how different factors lead to changes in our temporal orientations.

In order to explain variations in time horizons facing a conflict scenario, I adopt an *interactionist approach* (Herrmann, Tetlock and Visser, 1999; Kertzer, 2016) and develop a theoretical framework that integrates relevant factors at both the individual, as well as the situational level.

My theory focus on two situational factors - the issue at stake, and the constraints that decision-makers face when making a choice. The main argument is that the more important the issue is, it is more likely that individuals face shorter time horizons as they pursue an outcome that 'solves' the issue as soon as possible. In the political context, the temporal orientation of choices is prevalent in the discussion on the *myopic voter* (Fiorina, 1978; Lewis-Beck and Paldam, 2000).[6] In the IR literature, this logic persists (Auerswald, 1999; Gaubatz, 1991) and focus on the role that elites and the media play in shaping political debates as critical, suggesting a need for 'immediate action' (Baum and Potter, 2015; Gadarian, 2010; Guisinger and Saunders, 2017). For political leaders, I argue that facing important (salient) issues, there is a need to offer an immediate response/solution or face enhanced risks for their political survival. This can be understood in the context of 'critical events' (Koch, 2009; Lupia and Strøm, 1995). Leaders emphasize short-term

[6] Recent literature on this topic challenges many aspects of the original studies (Healy and Lenz, 2014), see an extended debate in chapter 3.

solutions in order to prevent conflict situations from turning into events that risk their political career.

The constraints factor relate to the different limitations on politicians' 'freedom of action' to implement their preferred policies. The most dominant factor is election cycles that create incentives for leaders to emphasize short-term outcomes that can be 'presented' to their constituency. For example, research suggest that closer to elections, leaders will not entertain risky foreign policy options (Chiozza, 2017; Gaubatz, 1991; Payne, 2019/20), and engage in actions such as reducing their troops contribution to international operations (Marinov, Nomikos and Robbins, 2015). Other constraints include deteriorating domestic conditions such as an economic crisis or growing social unrest. In these scenarios, leaders shift their focus to delivering short-term outcomes in order to demonstrate their competence or shift public opinion from these crises. Both of these mechanisms explain why individuals' time horizons vary in certain situations.

In addition to situational factors, I posit that individual dispositions and characteristics play a crucial role in shifting time horizons. The most prominent factor is time preferences or discount rates that describe individuals preference for immediate over delayed utility (Streich and Levy, 2007). This factor is central to the behavioral economics literature, and most studies suggest that for the most part, individuals are myopic and tend to display hyperbolic discounting of the future (Frederick, Loewenstein and O'Donoghue, 2003; Thaler, 2016; Thaler and Shefrin, 1981).

I also describe the role of individual characteristics such as age. The main argument in this case is that younger individuals have longer time horizons due to their longer expected life-span. In the political context, younger politicians have more opportunities to extend their political career (Blake, 2013). Older individuals are quite the opposite and have shorter time horizons since their expected life-span is shorter (Lechler and Sunde, 2019), and they view their expected time in office as much shorter (Horowitz, McDermott and Stam, 2005).

One of the most important aspects my theoretical framework offers is that in order to better understand what drives variations in time horizons, we need to explore the **interplay** between fac-

tors in both levels of analysis. Therefore, I adopt an interactionist approach (Herrmann, Tetlock and Visser, 1999; Kertzer, 2016) which accounts for the direct effects of factors in each level, but more than that, it emphasizes the conditional relations among these factors. My main argument is that situational factors moderate the effects of individual dispositions and lead to shifts in time horizons.

In order to study those puzzles, this research employs an empirical approach that combines different types of quantitative tools. In particular, I implement two innovative survey experiments to assess both research questions. The first experiment includes a multiphase design which estimates how variations in time horizons affect the decision-making process and eventual selection of a conflict strategy. The design also includes an embedded experiment element that complement the main analysis.

For the second half of the research, where time horizons are explored as a dependent variable, I design a survey experiment that includes indirect measures of the time horizons concept. In the experiment, I estimate the effects of situational conditions and individual characteristics on respondents' preferred policy alternatives, which are defined in a way to directly reflect individuals' temporal orientations.

The empirical analysis of this part relies on an additional test. To strengthen the results of the second experiment and reduce concerns about external validity, I conduct a statistical analysis of a large-N dataset of political leaders' behavior in international conflicts between 1918 and 2015. I leverage multiple econometric models to assess how situational and individual factors shape those politicians' time horizons. The results are consistent with most of the experimental findings and strengthen the overall theoretical argument.

In addition to employing multiple quantitative tests, I use qualitative tools and execute an empirical assessment with an exploratory case study. I use this method to demonstrate, using a real-world case, the logic of my theoretical argument about the role of time horizons in decision-

making. In the next section of this chapter, I present the case of the American response to the crisis in Bosnia during the end of the George H.W. Bush, and the early months of the Bill Clinton administrations. I compare the policy choices of both presidents, and demonstrate the role that their time horizons played in shaping their policy choices facing this historical event.

One of the most important questions that underlie this research project is why should we care about the temporal dimension of decisions? As I argued earlier, this aspect is prevalent in almost any choice we make, and in most cases, it is an implicit one. Why then, should we spend time on understanding an element which is not central to our decisions?

My primary response to this question is that by exploring the role that time horizons play in this process, we can uncover answers to questions such as: 'why do we only assess some of the alternatives prior to making a choice?' We can answer such questions by unpacking the decision-making process and investigating the specific role that time horizons play in it (as I explore in chapter 3). Understanding the temporal dimensions also address questions about the effects of various factors (both individual and situational) on conflict behavior. For instance, 'why do younger policymakers tend to accept less certain policy options?' or 'what mechanism explains the role that elections have on politicians adopting risk-averse policies?' These questions can be answered by investigating the 'foundations' of time horizons (as I do in chapter 3).

This research offers several contributions to the literature. First, recent work in IR provide more room for the effects of time horizons as shaping conflict behavior. Those studies use temporal orientations to explain the adoption of either cooperative or competitive strategies in conflict scenarios (Edelstein, 2017; Haynes, 2019*a*; Hundley, 2020; Toft, 2006; Rapport, 2015). My work focus on the central role that time horizons play within the decision process. I highlight time horizons as a screening mechanism in the preceding phase to the strategy choice. This analysis explains how these options become viable to be evaluated by decision-makers. In other words, if and when strategies of competition or cooperation are debated is contingent upon actors' time horizons. Sec-

ond, studies of decision-making employ a multi-phase process framework to better explain how underlying factors influence choices (Beach, 1990; Evans, 2008; Kahneman and Tversky, 1979; Mintz and Geva, 1997). I conceptualize a two-phase decision process in which time horizons directly affect the initial phase of choice-set formation. Then, I show that the subsequent policy selection phase is contingent upon the choice-set composition. As a result, the dual-phase framework helps clarifying the effect of an underlying factor (time horizons) on the eventual outcome (policy choice).

Third, from a practical perspective, evaluating the decision process and in particular the screening phase help clarify why some policies are pushed 'off-the-table' and do not go through a more serious assessment by policymakers. The crisis in Bosnia (1992-1993) and the policy process of the Bush and Clinton administrations offer a glimpse into this issue. I follow this example with a more extensive assessment that demonstrates how time horizons lead individuals to make some alternatives non-viable.

Fourth, I explore a relatively under-studied question of what explains variations in time horizons? While previous studies offer different explanations (see Edelstein (2017)), my work presents a clear framework that integrates theoretically relevant-factors in both the individual (dispositions and characteristics) as well as situational (institutional and contextual) levels of analysis. Moreover, I promote the use of an *interactionist approach* (Herrmann, Tetlock and Visser, 1999; Kertzer, 2016) which accounts for the conditional relations between the factors in these levels of analysis in order to explain why time horizons shift in conflict.

Lastly, from a methodological standpoint, this research presents solutions for a complex task - how to measure and estimate the effect of a latent factor (Bollen, 2002) as time horizons. Using different experimental designs, I introduce both direct and indirect instruments that capture the trade-offs that are inherent to time horizons, and include clearer measures of this concept. In addition, I conduct a statistical analysis of a large-N dataset of leaders' actions in international conflicts. I use both individual and institutional level indicators to capture the temporal element in

those decision-makers choices. This multi-method approach offers a more comprehensive set of tools to empirically test the complex concept of time horizons among different groups of decision-makers (both public members and elites). This approach also address concerns about external validity.

In the following section, I begin the quest of demonstrating the role that time horizons play in conflict decision-making. I present an exploratory case study of the American response to the events in Bosnia (1992-1993), and highlight the effects of leaders' temporal orientations on their actions facing an international conflict.

US intervention in Bosnia (1992-1993)

In this section, I explore the background and decisions taken by two US administrations with respect to the early stages of the crisis in Bosnia. The analysis focuses on the effects of the temporal dimension, in particular the different time horizons of the two presidents - George Bush and Bill Clinton, and how it shaped their actions in regard to the events that unfolded in the Balkans from the Spring of 1992 until the summer of 1993.

The Bush Period (Spring 1992 - January 1993)

The administration of George H.W. Bush officially recognized the sovereign state of Bosnia-Herzegovina in April 1992. It was part of the wider recognition by several western countries and followed the December 1991 invitation by the EU, which required Bosnia to fulfill several conditions to be recognized as an independent country (Zimmerman, 1996). The violence in Bosnia erupted in late March 1992. With the official recognition and emerging violence, the US government found itself in a bind since many believed it was the US' responsibility to lead the policy in the Balkan crisis. As the only global superpower after the fall of the Soviet Union, the United States faced the challenge of responding to the evolving crisis in the former Yugoslavia.

Overall, the approach of the Bush administration can be viewed as a reluctance to deal with the events in Bosnia (and avoiding 'taking the reins' in managing the crisis). In the Spring of 1992, government officials made strong efforts to downplay the crisis and refused to acknowledge the evidence for the mass atrocities that took place. Later that summer, when the global media presented to the world stories of the violence in Bosnia, the American administration had to adopt a more active approach. Nevertheless, until the very last weeks of their time in office, president Bush and his senior advisors contemplated a very limited list of policy options.

The main argument I offer in this context is that the president faced **short time horizons**, primarily due to the upcoming 1992 elections. The November elections served as political constraint that led the president to oppose exploring policies that may create short-term costs, and he was not willing to consider policy options that could not offer any immediate benefits. As a result, the Bush administration rejected most of the options that were offered by lower-level officials, and resorted to one central policy - support the weapons' embargo instituted by the UN in late May 1992. Below, I provide evidence that support this argument and show how the implicit element of temporal considerations was central to the decision calculus of senior officials, and led to pushing most policy options 'off the table'.

The war in Bosnia has been raging for a few months when the global audience finally became aware of the violent attacks undertaken by the Serbs. The US administration, while publicly refusing to recognize the crisis, had substantial amount of evidence for the actions taken by Serb military forces. John Weston, a state department official, claimed the evidence he was inspecting during that Spring fit the definition of genocide. Another official, of the East European desk, acknowledged that the government had confirmed reports of severe violence and the construction of camps by June of 1992 (Jennings, 1994).

At that time, most debates about the proper American response took place among analysts at the lower-levels of the state department, and senior officials were unwilling to take any action.

Some of these discussions raised the possibility of using force. In July 1992, Former ambassador Zimmerman proposed the use of limited aerial strikes, focusing on Serbian artillery which shelled civilian populations throughout Bosnia. His proposal was never accepted by senior members of the state department (Zimmerman, 1996).

The president and his senior advisors presented a very clear position which rejected the use of ground forces in Bosnia. The option of executing air strikes was also tabled as senior officials refused to accept the argument that a limited use of force can be effective (Jennings, 1994). When it came to using force, the only option that was debated was a substantial military intervention with both aerial and ground forces. This policy was strongly opposed by the military, led by Chairman of the joint chiefs General Colin Powell. The prevailing view in that sense was that a 'middle-ground' solution is not possible. Acting secretary of state Eagleburger stated in an interview in September: "I am not prepared to accept arguments that there must be something between the kind of involvement of Vietnam and doing nothing...that there must be some form in the middle" (Western, 2002, p.131). In addition, facing growing pressure from the media and members of congress that supported the limited humanitarian intervention option, the administration initiated a strong public 'counter-attack' in which senior members resisted the calls for such actions and emphasized the dangers of direct American involvement. Those included senior officials such as national security advisor Scowcroft and members of the joint chiefs who proclaimed that despite the tragedy, there is no military solution (Western, 2002).

While the American government stalled, the violence on the ground in Bosnia persisted. One option that was raised by former British Prime Minster Margaret Thacher later that summer was to lift the weapons' embargo. She reasoned that the restrictions on supplying weapons severely harmed the Bosnians' ability to defend themselves. Despite facing continuous pressure from the media, as well growing criticism from the democratic candidate Bill Clinton, who called for using

air power against the Serbs, president Bush rejected this option as well, "...I don't think the area needs more arms; I think it needs less arms".[7]

At the end of the day, up until the November 1992 elections, president Bush was not willing to entertain too many alternatives. The evidence gathered here suggests that the debate revolved around the 'all or nothing' alternatives (as stated by Secretary Eagleburger). In other words, facing the pressures of the upcoming elections, i.e short time horizons, the Bush administration rejected the evaluation of multiple policy alternatives.

This point of view is supported by several of the actions taken by Bush **after** the elections. When the president knew he will not be coming back to another term, his mindset shifted and he seemed less constrained in the policy options he was willing to contemplate. In late December 1992, the administration sent a letter to the Serb leaders warning them against the spread of the conflict to Kosovo "...in the event of conflict in Kosovo caused by Serbian action, the United States will be prepared to employ military force against the Serbs in Kosovo and in Serbia proper."[8] Secretary of state Eagleburger confirmed that Bush was prepared to adopt this more aggressive route. Other actions were given much more room and promoted once the elections were over. Before the end of November 1992, the state department promoted a policy proposal that called for lifting the arms embargo, as well as expanding UN peacekeeping forces and dedicating NATO air assets to support them. The proposal was accepted by the security council on November 16 (Western, 2002).

The Bush period - Summary

The crisis in the Balkans, especially the events in Bosnia, coincided with the peak of the 1992 election season in the United States. For president Bush, the crisis represented a significant dilemma with clear, yet underlying, temporal implications. As the evidence for the mass atrocities per-

[7] Kempster, Norman (LA Times August 1992), accessed November 30th, 2020.
[8] Oberdorfer, Don Washington Post (February 1993), accessed December 15th, 2020.

formed by the Serbs mounted, he could not ignore it, and needed to respond as soon as possible. Yet, with the elections just weeks away, the president (already facing declining political position due to a struggling economy) could not risk the costs of an unsuccessful policy which involved losing American lives. Images of US military casualties would cost him his re-election bid.

Despite never admitting to it, electoral considerations were a prominent factor in the calculus of Bush and his advisors. In a RAND analysis report of the war in Yugoslavia, former ambassador Zimmerman suggested that by the summer of 1992, the elections "undoubtedly bulked large in administration thinking" (Zimmerman, 1996). Other government officials agreed - later that November, former state department official Jenonne Walker criticized Bush for the administration's unwillingness to risk casualties in an election year. She argued that this view led to the rejection of any related option, including providing UN observers to monitor the crisis in Yugoslavia, and ground troops to support the peace-keeping efforts.[9]

In essence, in the summer and fall of 1992, Bush faced extremely short time horizons which pushed him to highlight actions that offer short-term benefits, and even more so, to reject any alternative which had the potential for short-term costs. This logic fits with some of the research regarding politicians' aversion to engage in risky conflict policy close to elections due to political survival considerations (Chiozza and Goemans, 2003; De Mesquita et al., 2003; Gaubatz, 1991). Bush's willingness to explore more options and even directly threaten the Serbs for expanding the war into Kosovo in December further supports the role that the elections played in shaping his temporal orientations and as a result, the decision-making process facing this crisis.

The Clinton Era (January - August 1993)

Bill Clinton entered the white house on January 20th, 1993. At that time, the crisis in Bosnia was raging for over eight months. President Clinton's approach to the crisis in Bosnia was different than his predecessor, especially early-on. From the perspective of this study, in January 1993,

[9] Oberdorfer, Don Washington Post (February 1993), accessed December 15th, 2020.

Clinton did not face serious political risks. First, his re-election campaign was a distant three years away. Second, his recent electoral victory also resulted with the democratic party gaining control on both chambers of congress, ensuring his administration much more freedom to enact their desired agenda. Those conditions allowed Clinton to adopt a much longer time horizons.

Under the theory I propose in this study, a long-term orientation leads decision-makers to have a broader view of the situation and contemplate more alternatives prior to making a decision. In the discussion below, I present evidence demonstrating that the new administration was more open to explore other options to address the conflict in Bosnia. This further strengthen my argument about the underlying influence of the temporal dimension on the choices made by the Clinton administration with respect to the crisis in Bosnia.

President Clinton's 'new' approach was evident from the very beginning. As a presidential candidate back in July 1992, when reports of the camps in Bosnia began to surface, he called for greater American involvement in the crisis, including military support for the humanitarian relief efforts, and initiating air strikes to deter the Serbs from targeting relief operations (Daalder, 2000, p.6).

This more engaged approach persisted when Clinton finally assumed office in early 1993. A January 28th Washington Post article introduced the new administration's approach, clearly separating it from the one implemented by president Bush: "In its first foray into foreign policy crisis management, the Clinton administration has *expanded US consideration of potential actions* in the Balkans civil war beyond the limited objectives pursued by the Bush administration" (emphasis mine).[10] This wider perspective was portrayed when government officials and the president himself met with senior security officials from the Pentagon and other agencies. Chairman of Joint Chiefs Powell recalled that during his very first meeting with the new president, Clinton urged him to examine the possibility of using aerial attacks in Bosnia (Stevenson, 1996).

[10] Goshko, John and Don Oberdorfer, Washington Post (January 1993), accessed November 28th, 2020.

The events in Bosnia played a central part within the agenda of the new administration. During his first week of governing, Clinton issued a presidential review directive (PRD) asking his National Security Council to reassess the situation in Bosnia, probing officials in the state and defense departments as well the CIA to look for a "...more activist US foreign policy options, including those that had long been rejected by the Bush administration" (Daalder, 2000, p.8). Some of the proposed options included the use of air strikes against Serb artillery positions, altering the weapons embargo and enforcing the "no-fly" zone using force. In a meeting with his top advisors on February 5th, the president emphasized the need to act. The meeting concluded with the addition of a few more alternatives to the existing policy, including direct contributions to the relief efforts by using the US Air-force to facilitate the delivery of aid (air-dropping supplies instead of relying on UN convoys that were subjected to Serbs' inspections).

While the new administration contemplated and called for the adoption of more alternatives, one policy was kept from the Bush era - a refusal to engage in a unilateral action using US ground troops. That decision meant that like Bush, Clinton needed to bargain with his European allies for enacting most policy actions (Papayoanou, 1997). As a result, the implementation of many of these proposed policies was either delayed or outright rejected.

Following the Serb assault on the Muslim enclave of Srebenica on March 18th, 1993, senior officials called for additional meetings that led to further assessment of ways to enact policies such as lifting the arms embargo or initiating aerial strikes. As the violence persisted into April 1993, Clinton voiced the administration's position that still searched for various solutions. On April 16th, he stated that "At this point, *I would not rule out any option* except the option I have never ruled in, which was the question of American ground troops" (Daalder, 2000, p.14) (emphasis mine).

The main policy that was promoted by the administration was the "Lift and Strike", intended to lift the arms embargo and threaten the Serbs with air strikes if they attempt to take advantage of their military superiority. The policy was postponed due to lack of support from the European

allies (Papayoanou, 1997; Daalder, 2000).[11] As the "Lift and strike" policy was delayed, Clinton contemplated other options offered by the Europeans, primarily establishing "Safe Areas" in six cities to be defended by NATO forces (including partial US aerial support).

The summer months saw further intensification of Serb attacks on the city of Sarajevo (July 1993) leading the president to push his senior officials to explore all options, including the use of ground troops, and alternatives to deploy the Air-force to pressure the Serbs to halt their offensive and return to the negotiation table (Papayoanou, 1997; Daalder, 2000). In early August 1993, the US proposed to threaten NATO air strikes in response to the deteriorating situation in Sarajevo (Daalder, 2000, pp. 21-22) Yet, it took until early 1994 for NATO and the US to actually display force with an ultimatum demanding the withdrawal of Serb heavy artillery from Sarajevo, and later shooting down Serb airplanes by American pilots (February 1994) (Jennings, 1994).

The Clinton Era - Summary

The Clinton administration inherited the 'problem from hell' (Daalder, 2000, p.5) of tackling the Bosnia crisis. The policy in early 1993 was in complete disarray, and it took until that Spring to come-up with a consensus among all parties involved about the right course of action. Even then, the actual implementation of substantial actions was delayed until early 1994, when events in Bosnia propelled greater support for joint military action.

Like his predecessor, Clinton faced a dilemma, albeit a different one. On the campaign trail, Clinton pushed for a more active and aggressive approach, yet once in office, his reluctance to commit US troops unilaterally (just like Bush) limited his leverage in any debate with his European allies. In that sense, both US presidents did not behave that differently.

[11] In a famous press conference on June 15th, 1993, the president's frustration with the situation was clear as he repeatedly said that the UN and most American allies asked him to postpone the implementation of the arms embargo policy. He stated that his view did not change, and he kept 'pushing' for this option (Jennings, 1994).At the same time, we must remember that the US had no forces on the ground, and therefore faced little risk if such measures were taken.

However, the evidence I presented above offers more support for the *process* aspect of the policy discussions - unlike Bush, the new president was much more open to explore various alternatives. The initial approach was described as much broader and one that is willing to "at least consider a greatly expanded US and international role in the Balkans".[12] One underlying factor in this approach is the different temporal dimension the administration faced. As I described early in this section, Clinton did not face substantial political risks as he assumed his role in January 1993. The democratic party majority in congress offered even greater "freedom". Those conditions and the fact that elections were much further into the future allowed Clinton to adopt a long-term orientation and seek multiple options to address the crisis in the Balkans. In his work on election cycles and foreign policy, Gaubatz (1991) suggest that after winning an elections, leaders have more 'leeway' and are less restricted to pursue their desired policies (see also, (Chiozza, 2017)). The theory I propose in this project argues that with long time horizons, decision-makers are likely to explore more alternatives facing conflict scenarios. The evidence I presented in this section supports this proposition.

Crisis in Bosnia and the American response: A temporal perspective

The case studied above explored the American response to the evolving crisis in the Balkans beginning in the Spring of 1992 and throughout the Summer of 1993. I detail the debates and actions taken by two presidents, showing the similarities, but mostly the distinct approaches they adopted with respect to the events in Bosnia.

The discussion used evidence from studies of that era, media sources, and few government documents that highlight the dilemmas both presidents faced and how the process of decision-making progressed and led to certain policy choices. At the end of the day, in terms of tangible and substantial actions, Clinton did not do a whole lot more than Bush. Both presidents' reluctance to commit US forces into the area restricted their pool of options. At the same time, while Bush

[12] Goshko, John and Don Oberdorfer, Washington Post (January 1993), accessed November 28th, 2020.

focused on the 'all or nothing' approach (choosing to do almost nothing), Clinton expressed much greater willingness to contemplate other options, and tried to come up with ways to make it happen.

The temporal dimension was central, although implicit, in both administrations' calculus. With the 1992 elections just a few weeks away, Bush faced short time horizons, which explains his reluctance to contemplate options that present potential short-term costs. While he never admitted to it in public, this was on everybody's mind at that time (as suggested by former ambassador Zimmerman).

Clinton's approach was different. He pushed for an active and expanded policy as a candidate, and his electoral victory (and political security in early 1993) allowed him to follow a long-term view. This manifested in a greater debate on the events in Bosnia (that kept escalating throughout the American election season) and exploring more options.

The analysis I present in this section offers ample evidence that supports how time served as an underlying factor in both cases. Temporal considerations were never the main factor (or the expressed one), but their effect was critical. This case has some similarity to the behavior of France and Britain as detailed by Ripsman and Levy (2007, 2008). In their work, the temporal dimension served an important, yet underlying role, in explaining the policies adopted by both countries during the 1930's.

Summary

In this chapter, I introduce the concept of time horizons and argue that it has an important role in the way individuals make decisions. I begin with few examples showing that the temporal dimension, while implicit in most cases, affects almost any type of decision, for political leaders, businessmen and ordinary people. I present the overarching objective of this project, primarily to situate the temporal dimension in a more central place as an explanation for the choices individuals make, especially in foreign policy.

After defining the concept of time horizons, I present the first puzzle - despite its prevalence in the IR literature, it is still not entirely clear *how and why* temporal orientations lead to certain choices in international conflicts. To explore that, I argue we need to focus on the decision-making process by unpacking it to multiple phases, and identifying how time horizons shape the evaluation of alternatives and selection of a preferred option.

This discussion leads to the second puzzle this project address - what explains the variation in time horizons? In other words, why do we emphasize the immediate outcomes of a choice in some instances, and prefer to focus on future implications in other instances? It can also be viewed as an investigation into the origins of time horizons - what factors constitute these temporal orientations? Is it strictly an individual trait/characteristic? How do situational conditions affect those views? My main approach in this case it to explore both situational factors and individual dispositions by studying the interplay of these elements and how they lead to certain changes in time horizons. Those are the two challenges I address in this project.

In chapter 2, I take a step back and provide a general view of how time, and specifically, time horizons, are explored in the literature. I begin with presenting the debate about conceptualizing time horizons, and the challenges that scholars face in this context. I end this section by presenting my own definition. My review of the literature begins with work in other disciplines regarding the effects of temporal orientations, in particular in economics and psychology. Then, I shift to political science and international relations, and discuss the main areas in which time horizons are explored. The main conclusion I draw is that despite being a topic of discussion in many studies, it is usually an implicit one. As I expressed at the beginning of this section, this research project aims to remedy this by making the temporal dimension the focus of inquiry.

Chapter 3 presents the main theoretical discussion in which I explore both puzzles mentioned above. First, I study how time horizons affect the choices made by individuals in foreign policy, and in particular, conflict situations, by focusing on the decision-making process. Since we rarely evaluate a long list of alternatives prior to making a decision, I posit that our time horizons influence

the 'short-list' of our favored options (termed choice-set). My main premise is that a decision-maker's temporal orientation shapes her assessment of the different alternatives facing a decision task. Due to variations in individuals' time horizons, those with short time horizons have different choice-sets than those with long time horizons. The final selection of a policy depends on the composition of the choice-set which is contingent upon the decision-maker's time horizons.

The second part of chapter 3 addresses the second puzzle - what explains variations in time horizons? Since existing work describes a plethora of factors, some individual and some more context dependent (or situational), I adopt *an interactionist approach* which accounts for both levels of analysis. In addition, this conceptual view offers greater explanatory power as it places greater emphasis on the interactions between factors in different levels of analysis. Using this approach, I describe theoretically relevant situational factors as well as individual dispositions and characteristics. The framework derives propositions for the main, independent effects, as well as the interactions among these factors.

In chapter 4, I begin a series of empirical tests of my theory and its various propositions. I employ an experimental research design to assess the role of time horizons within the decision-making process in conflict. I design an experiment which reflects the multiphase theoretical framework and employs direct treatments to measure the effects of time horizons, a latent concept. The experimental treatments are designed in a way that isolates the effects of the temporal dimension and offers a clearer test of the theory. The design allows me to explore the effects of time horizons on every phase of the process. Then, I include an embedded experiment that connects the phases of the process, and ties the whole research design to the theoretical framework.

Chapter 5 employs a multi-method approach to empirically test the second part of the theory. In order to investigate what factors explain variations in time horizons, I engage in both a micro-level analysis using an experiment, and a macro-level with a statistical analysis of a large-N dataset. First, the experiment leverages an instrument that relies on indirect measures for the time horizons concept as a dependent variable. I use policy preferences with a description of the

trade-off in their temporal implications to clearly account for the temporal dimension. I use experimental treatments and a post-choice survey to measure the effects of the various factors from the theoretical framework. This empirical method offers the benefit of emphasizing the individual-level measures and test for their interactions with the situational factors that are described with the experimental treatments.

Then, to address concerns of external validity and test the theory with real-world international conflicts, I use observational data on the actions of political leaders in international conflicts after the First World War (1918-2015). I employ multiple indicators from several databases to account for the situational and individual level factors that were established in the experiment. Based on multiple regression model specifications, I find evidence that is consistent with the experimental results and lends further support for the interactionist approach used in this section.

Finally, chapter 6 concludes by examining the theoretical and practical ramifications of the empirical findings. Then, I mention the main limitations of this research and provide avenues for future analyses on the role of the temporal dimension in international politics.

CHAPTER II

LITERATURE REVIEW

In this chapter, I advance the discussion from introducing the topic and its significance to what we know about the concept of time horizons in the context of political decision-making. To accomplish that, I review the extant literature of political decision-making in the context of international politics, and expand on the ways that the concept of time horizons is employed to explain foreign policy decisions.

I begin with the issue of definition. As a concept that is prevalent to decision-making beyond the political world, there are several approaches to conceptualizing the role of time in decision-making. I complete this section with my definition of time horizons for this research.

Then, I delve into a more detailed discussion that addresses the concept of time horizons in several decision-making contexts. First, I offer a brief presentation of the ways studies in economics and psychology employ this concept to describe general behavior patterns. Then, I revert back to politics and explore the various ways that the concept of time horizons is used in the extant literature to explain political choices in foreign policy. I present work that employs time horizons both as an implicit and more importantly, an explicit factor that shapes foreign policy decisions. I highlight the main insights from this literature and point to missing elements that I address in this research. The chapter includes both classic work that introduce the topic and its impact, as well as recent studies that further develop our theoretical understanding, as well as offering empirical evidence regarding the effects of time horizons on decision-making in international politics.

The concept of time horizons

Time plays an important role in almost any political decision. But how can we conceptualize the way actors incorporate the temporal dimension into their decisions? One approach is thinking about the length of time to make a choice, that is the *duration* of the decision process. Another

option is to view the duration of time as it is reflected in various social and political processes (Cohen, 2018; Pierson, 2011). For the purposes of this research, I view the role of time in the sense of political decisions and the inherent trade-off in their implications across multiple points in time. Based on this conceptualization, I focus on *"time horizons"*.

The view of time in the context of present and future policy implications is logical for political choices. This is mostly due to the fact that while policy decisions are made in the present, they also involve multiple future ramifications. The challenge is to offer a clear definition that reflects this dilemma.[13] One of the earliest conceptions to describe the role of time termed it the "Shadow of the Future". It was introduced by Axelrod (1984) who studied how cooperation between actors emerge. His experiments demonstrate that the way participants view future encounters is critical for their behavior: "The future can therefore cast a shadow back upon the present, and thereby affect the current strategic situation" (p. 12). Under this view, time perspectives are the expectations of actors regarding the likelihood of future interactions (Tingley, 2011).

Another angle to describe the effects of time relates to the future outcomes of present choices. Under this prism, the concept of "Time Horizons" refers to the value that an individual assigns to future outcomes, and how willing she is to sacrifice present utility for future gains (Krebs and Rapport, 2012). In a political context, it is the value that a decision-maker places on present versus future payoffs from a policy choice, also called *Intertemporal discounting*, or what is the temporal context of the (political) decision (Edelstein, 2017). In essence, it is the relative weight that an actor attributes to future outcomes when making a choice - do political leaders consider the long-term implications of a policy they choose to enact, or are they focusing more on the immediate outcomes and do not pay much attention to potential future ramifications?

Lastly, some authors adopt the logic from the economics literature regarding future discounting and the trade-offs in payoffs that occur at different points in time (Frederick, Loewenstein and

[13] In his work on the subject, Edelstein (2017) call it as a 'now or later' dilemma. I expand more on his study later in this chapter.

O'Donoghue, 2003). Based on the famous "Discount Utility" (DU) model (Samuelson, 1937), authors view time horizons as depended upon each actor's "discount factor" which measures how much weight she imputes to future units of time, and represents the proportion of utility in period t_i that is incorporated into the discounted present value (Streich and Levy, 2007). According to this conception, if the future plays a very small role in current decisions, then actors have large discount factor.

Those various conceptualizations of time horizons suggest it may be more than just a simple utility calculus. Instead, it is an integral aspect of an individual's mindset that has an effect on how we interpret different situations and make decisions accordingly. Therefore, my definition draws from these previous studies and I view time horizons as *the relative weight that a decision-maker ascribes to present versus future implications of a choice and her inclination to downplay one over the other*.

The literature on time horizons

In the study of human decision-making, research on the role of time has been most dominant in economics and psychology. Prior to presenting work on how time horizons shape political decision-making, I begin with a brief introduction of how time horizons are addressed in the literature that explores general patterns of individual behavior.

In the economics literature, the most accepted term is *Intertemporal choices*: decisions that involve trade-offs among costs and benefits at different points in times (Cohen et al., 2020; Frederick, Loewenstein and O'Donoghue, 2003). Many economists discuss the tendency of individuals to discount the future, leading to inconsistent behavior in which we succumb to present temptation and overvalue immediate benefits at the expense of a larger delayed reward. This behavior reflects a 'present bias' or 'present biased preferences' and describe our discounting of 'now' versus 'later' (Thaler, 2016).

The classic studies address choices with respect to temporal trade-offs based on the discount factor (δ) and its role within the Discounted Utility (DU) model (Samuelson, 1937). This model incorporates intertemporal preferences into the calculation of present utility with the discount factor as the weight that represents an individual's rate of time preference, and then aggregates all weighted utilities into one (present) value (Frederick, Loewenstein and O'Donoghue, 2003).

Since the presentation of the DU model, experimental work in behavioral economics presented multiple limitations of the model. These studies led to the development of more nuanced approaches that offer alternate discounting functions to better describe how individuals make intertemporal choices. Most of these models focus on *Hyperbolic discounting* which better reflect how individuals make time-related decisions in reality. The models describe a relatively steep discounting in the near present and a declining rate of time preference. One of the famous models in this category is the *'beta-delta' model* in which delta captures the exponential discount rate and beta measures short-term impatience (Laibson, 1997; Strotz, 1955).[14]

Work in behavioral economics present another class of models to address time preferences. The 'two-self' ('two system' or 'dual-self') approach captures the inherent conflict along both temporal dimensions. The decision in such models is a result of the bargaining between a myopic 'doer' (present-oriented self) and long-sighted 'planner' (future-oriented self) (Thaler and Shefrin, 1981).

The central premise of the 'dual-self' models is that human behavior is subjected to overvaluing of immediate temptations (short-term benefits).[15] These models are used to study the behavior of individuals in various decision contexts. For example, studies of investment decisions such as pension rely heavily on the concept of intertemporal choices, both from the individual per-

[14] The 'beta-delta' model fits a 'Quasi-hyperbolic' discounting model which complements the exponential discounting models and also offers better descriptive accuracy (Streich and Levy, 2007)

[15] Schelling (1984) discuss this trade-off in an indirect way using self-control or 'anticipatory self-command', focusing on decisions intended to refrain from immediate cost/pain despite the potential benefits in the future. He debates different solutions for these trade-offs using laws or regulations, both designed to support the 'surviving self' (future self). Overall, he discusses the rationality of choices made by both 'selves'.

spective (Madrian and Shea, 2001) as well as issuing recommendations for the design of pension policies by governments (Börsch-Supan, Härtl and Leite, 2018). The 'beta-delta' model serves as a basic framework in studies about how individuals make plans, and especially how devising plans (a commitment device) can help overcome the effects of our tendency to favor the short- over long-term outcomes (Beshears, Milkman and Schwartzstein, 2016).

The temporal dimension is also central for studying individual decision-making in psychology. The most common concept is 'Time Perspectives (TP)'. It is a foundational (often unconscious) process whereby personal and social experiences are assigned to temporal categories, or time frames, and help to give order, coherence and meaning to those events. It is mostly a 'top-down' process that originates within the individual decision-maker, and is less dependent on the environment. The tendency to overemphasize one of the three temporal dimensions[16] is a 'bias', and most importantly, it has a critical effect on our behavior and choices (Zimbardo and Boyd, 1999)

In addition to conceptualizing 'time perspectives', studies in psychology offer different measures and explore which individual level factors are associated with the different temporal dimensions. The most accepted measure, *ZTPI ('Zimbardo Time Perspective Inventory')* (Zimbardo and Boyd, 1999) describes five subcategories of temporal dimensions, these are associated with various behavioral tendencies. For example, *'Past negative'* describes a negative, aversive view of the past and is related to aggressive behavior, depression and anxiety traits. *'Future'* orientations have the opposite effects and are more prevalent in less aggressive individuals, those who report lower levels of depression and anxiety.

Following this work, scholars in psychology validated the ZTPI measure in cross-national studies (Carelli, Wiberg and Wiberg, 2011; D'Alessio et al., 2003). Others have tested it with respect to other accepted psychological scales such as the Big-Five Inventory (Zhang, Howell and

[16] This literature accounts for past, present and future time orientations.

Bowerman, 2013), and a variety of associated behaviors. The common thread of behavioral evidence found in these studies is that all reflect a trade-off between immediate gratification and the potential long-term ramifications, for example problematic practices when using the Internet (Chittaro and Vianello, 2013) or procrastination in the workplace (Gupta, Hershey and Gaur, 2012).[17]

Research on the influence of intertemporal trade-offs in economics and psychology provides valuable insights about the effects of this factor on decision-making in a variety of everyday contexts. Economists provided much rigorous theorizing on the specification of the discount rate, alternate models of behavior, and the consequences of time-related decisions. The work in psychology focus more closely on 'partitioning' the various traits and attributes that characterize individuals who display different time orientations, as well as how each of these orientations impact behavior related to self-control.

This literature serve an important role as the foundation for studying individuals' time horizons and the associated general behavior. My research applies this logic to politics, and specifically, international politics and foreign policy choices. In the next section, I provide an extensive discussion on the application of time horizons in the international relations literature.

Time horizons in International politics

Time horizons play an important role in many political decisions, leading scholars to study its influence in various dynamics in world politics. However, for the most part, time horizons have played an implicit role and were rarely used as the primary factor to explain behavior. For instance, time horizons were an important underlying factor in the choice of the French and British governments to adopt the 'Appeasement policy' that contributed to the rise of Nazi Germany during the 1930's (Ripsman and Levy, 2008, 2007). According to these studies, the British were interested

[17] In their presentation of the revised scale, Zimbardo and Boyd (1999) also discuss various studies that validate the influence of this construct on individuals' behavior.

in stalling any direct engagement with Nazi Germany while they worked to increase their military capabilities. Implicitly, it is a time-related choice involving the trade-off of immediate costs due to confrontation, in exchange for improved chances of success and potentially lower costs in future encounters.

Poznansky (2015) studies what leads governments to favor a covert action when contemplating a forced regime change. He concentrates on how actors perceive the potential survival of current democratic regimes over time. The temporal trade-off is manifested in the choice of executing a covert regime change when democratic regimes are expected to 'decay' in the future.[18]

Authors use experimental work to study the effects of temporal trade-offs on leaders' calculus before and during wars. The main dilemma for leaders is whether to leverage the 'rally effects' from war statements (Gelpi, Feaver and Reifler, 2006; Mueller, 1973) for a short-term boost in popularity, yet face the risk of public criticism due to inconsistency when some of these statements fail to materialize during a conflict (i.e. over the long run) (Huff and Schub, 2018). Trade-offs in temporal implications of policy are prevalent in the reputation literature as authors assume that actors wishing to generate long-term benefits are willing to withstand short-term costs by conceding a current conflict for future reputation (Sartori, 2005). In a similar vein, Walter (2006) describes the temporal element for governments who are engaged in an armed struggle with non-state actors. Faced with a threat that is likely to persist over time, governments adopt a long-term view, counter rebel violence and refuse to accommodate their demands. The author argues that the main benefit of such behavior is building reputation for deterrence and reducing the likelihood of additional demands by other groups. Essentially, governments pay short-term costs of confronting rebels in order to prevent additional costs in the future with other resisting groups.

Finally, scholars debate various aspects of military and conflict strategy and how time horizons underlie many of these plans (Carr, 2018). For instance, the implicit role of time and order

[18] The time aspect is reflected in political actors' long view into the future and how it may shape their choices. This is similar to the discussion offered by Krebs and Rapport (2012).

of events for strategic surprise (Betts, 1982) or the variation in the 'desired duration' of conflict between asymmetric rivals. More broadly, Nelson (2017) argues that the US' ascension to a global hegemonic status towards the end of the 19th century can be explained by the prominence of immediate concerns that influenced the strategic calculations of existing European powers. Thus, short-term concerns prevented Britain and France from resisting actions that allowed the US to grow, for example the Louisiana purchase or the territorial expansions of the 1840's. Focusing on more recent global dynamics among great powers, Brands (2018) suggests that the US faces substantial geopolitical challenges from great rivals such as Russia and China, and fail to adjust to the 'art of long-term competition' for the first time since the cold war and the strategic rivalry with the Soviet Union.[19]

The work discussed above offer an implicit view of time horizons and how political leaders make decisions that do not focus on temporal trade-offs, but consider them 'at the back of their mind'. In most of these studies, the time-related trade-offs, while not central to the decision calculus, are an important aspect of the eventual outcome. In these studies, we are more likely to reveal the role of time horizons by investigating the decision-making process. Such an approach is one of the main objectives of my research. In the following section, I diverge from studies of conflict and foreign policy and discuss a strand of literature in IR in which time horizons serve more of a central role in decision-making.

Time horizon and International political economy

Time horizon is a more explicit theoretical concept within research on international political economy (IPE). One of the early studies to adopt the explicit impact of time horizons is the seminal work by Olson (1993). According to his argument, in order to ensure a more efficient and sustainable economic growth, leaders (including dictators) should possess long time horizons that

[19] For a more theoretical discussion of time and the concept of power in international relations theory, see Drezner (2019)

create incentives for public investment. Similarly, authors use the concept of time-horizons to explain the incentives for expropriation decisions by governments (Li, 2009), or the different types of international cooperation agreements they sign (Barkin, 2004).

Research on foreign direct investment (FDI) places more emphasis on the role of time horizons to explain how states are able to attract foreign funds. Most of these studies explore the behavior of dictators. The central argument is that if dictators have long time horizons, they are more likely to design stronger institutions that protect the property rights of investors, making it more likely that investors will not view the decision to allocate funds as too risky. This dynamic increases the extent of FDI into autocracies and also offer the benefits of improving the survival prospects of these autocratic leaders (Bak and Moon, 2019, 2016; Moon, 2015). Authors also focus on specific aspects within these investment agreements, arguing that leaders' time horizons matter for how some agreement provisions ('carve-outs') are designed (Blake, 2013; Chen and Ye, 2020).

Scholars of political economy also employ time-horizons to explain how dictators use foreign aid and whether it leads to economic growth, or only intended to secure the survival of the autocrat's regime. Wright (2008) offers three potential uses of foreign aid, and links them to the leader's time horizon. His analysis suggests that long-term oriented dictators are able to generate growth using foreign aid (see also, Kono and Montinola (2015)). Others employ similar logic and expand it beyond autocracies, finding relatively similar results (Kono and Montinola, 2009).

Finally, in studies of domestic economic policies, the most famous work relates to political budget cycles (PBC).[20] These studies discuss the intertemporal trade-offs that political leaders in democracies make when they initiate economic expansion prior to an election in order to stimulate the economy and boost their public support (Drazen, 2001; Dubois, 2016; Franzese, 2002). Considering the vast heterogeneity in findings over time, recent work by Philips (2016) conducts a meta-analysis of the PBC literature (2000-2015) and finds evidence for political budget cycles. For

[20] There is extensive work on the temporal dimensions of more general policies and public welfare. For a review, see Jacobs (2016, 2011)

the purposes of my research, this literature suggest that time horizons matter and have an explicit role in political decision-making since politicians are more likely to have short time-horizons before elections and engage in strategic manipulation of the economic conditions in order to increase their popularity. It also presents one of the important underlying motivations for time-related decisions: every politician's basic need to secure her political survival (De Mesquita et al., 2003; Downs, 1957).

Time horizons, International conflict and foreign policy behavior

In this research, I explore the role of decision makers' time horizons in conflict situations and what shapes these temporal views. Before going into the discussion about the effects of time horizons in the realm of conflict/war, I trace the development of research in IR on decision-making and behavior based on intertemporal trade-offs. The classic literature on the temporal dimension of decision-making relies mostly on strategic interaction models to explain the incentives for a cooperative or competitive behavior among actors. From these early conceptions, scholars further developed time-horizons in the context of institutionalist theories, as well as explaining actors' behavior under conditions of a security conflict.

In his study assessing the most rational strategies in a two-player interaction within a prisoner's dilemma setting, Axelrod (1984) devised cooperation theory arguing that even egoistic actors face incentives for a cooperative behavior based on several factors. One prevalent among these factors is that the interaction is not a 'one-shot' game but persists over time. He coined the term 'Shadow of the Future' to describe the importance of future interactions and how it shapes the choice of strategy. Actors that place much value on future interactions (i.e. they face 'longer shadow') have incentives to cooperate in order to generate the largest potential benefits for themselves. He concluded that extending actors' shadow of the future increase the likelihood of fostering cooperation. In other words, actors with long time horizons are more likely to cooperate. Following this work, others discuss similar iterations of the links between time perceptions in

the context of repeated interactions, the role reciprocity plays, and the emergence of cooperative behavior (Keohane, 1986; Oye, 1986).

Cooperative behavior and incentives based on time perceptions serve as the main fundamentals of institutionalist theory. Building on cooperation theory, authors contend that institutions with mechanisms that encourage reciprocity help 'prolong' participants' time horizons, making it more likely that cooperation persists (Keohane, 1984; Martin, 1992). In the context of foreign policy, one application of this logic is with respect to military coalitions. For instance, Kreps (2008) argues that long time horizons guided the decision by American political officials to engage in building a 'selective' multilateral coalition in Afghanistan due to the long-term benefits post-conflict (the 'reconstruction phase' can greatly gain from the participation of multiple actors). In contrast, in the early phase of combat operations, when the US needed immediate outcomes, policymakers' view was more short-term oriented, creating incentives for a (mostly) unilateral action.[21]

Despite the appeal (backed up by empirical evidence) of cooperation based on long time horizon, scholars raise serious concerns regarding the international bargaining process that reflects this positive outcome. First, critics of institutional theories point to the risk of defection from such 'cooperation agreement', especially in the context of national security. Unlike economic relations, where actors expect their relationship to last over a long period of time, in security matters, there is a strong temptation to defect, surprise the adversary, and destroy her capacity to retaliate (Axelrod, 1979; Axelrod and Keohane, 1985; Mearsheimer, 1994). In other words, the immediate benefits of defection may outweigh the long-term rewards of cooperation, leading to competition (and war) between rivals. For example, this logic guided German military decision-makers in 1914 who thought that a decisive (preemptive) action will prevent retaliation by other European powers and allow the Germans to secure a swift victory that will solve Germany's security problems (Axelrod and Keohane, 1985).

[21] For a different interpretation of time and the formation of alliances in the context of militant groups, see Bapat and Bond (2012)

An extension of this argument revolves around the choice of initiating a preventive war. In his seminal work about the causes of war, Fearon (1995) describe the risks of changes in bargaining strength as an incentive for breakdown in bargaining and launching an offensive attack. Further exacerbating this situation is the issue of commitment problems (Powell, 2006). Incorporating time horizons into this 'equation' enhances the problematic nature of cooperation in an anarchic global system, and explain why competition is more likely. Tingley (2011) employs a complex experimental design to test the effect of variations in the 'shadow of the future' under conditions when changes in bargaining strength commence over time. He shows that actors with longer 'shadow' (e.g. long time horizons) are hard pressed to negate any agreement and opt for competition. This 'social inefficient outcome' is evident for the actor who gains strength, since she is incentivized to capitulate on her bargained 'new' position. It is also a rational choice for the weaker actor who has no reason to accept an agreement in which she will lose further ground. The end result is that longer time horizons provide greater incentives for competitive behavior.

These studies added much insight into research on the perversive effects of long time horizons on conflict behavior. Other work show how time horizons increase the likelihood of war when actors wish to leverage winning 'today' to enlarge their advantages in capabilities versus their rivals (Garfinkel and Skaperdas, 2000; McBride and Skaperdas, 2014), or when the discount factors are not following the 'classic' constant-rate form (Streich and Levy, 2007).[22]

Another critique focuses on the bargaining process itself. The most famous iteration is offered by Fearon (1998) who points to the detrimental effects of long time horizons on the bargaining process. According to his argument, actors who emphasize future ramifications are also likely to delay the consummation of an agreement in order to 'hold out' for a better future deal (or a deal that offers better future outcomes). As a result, while long time horizons promote cooperation, it also risks prolonged delays in the bargaining process that makes the end of hostilities

[22] A similar argument based on structural conditions is discussed by Brooks (1997)

more complex (for an empirical assessment, see Bearce, Eldredge and Jolliff (2015); Simonelli (2011)).[23]

The criticism offered by Fearon (1998) unpacked the bargaining process into two-phases and highlighted the risks that long time horizons generate for the sequential, enforcement phase. Extending this logic, some scholars envision international bargaining as *a three-phase process* in which time horizons are most prevalent in the early *'prebargaining'* phase. Their main premise is that actors with long time horizons are more likely to **enter** the bargaining phase, even though a long-term orientation also increase the probability of delays in the ensuing phases of settlement and enforcement (Bearce, Floros and McKibben, 2009).[24] In a way, this latter argument integrates the benefits and costs of (mostly) long time horizons in the context of bargaining, and how international outcomes are shaped by the choices of political actors.

A different iteration of this logic is offered by Toft (2006), who proposes two conditions that increase the risk of conflict, and fit as an additional 'rationalist' explanation for war (Fearon, 1995). First, when both actors have long time horizons, they are willing to extend violence and sacrifice their life for the purpose of a national or religious goal (a long-term goal). Second, when actors' time horizons are asymmetric (e.g. short and long, respectively), the probability of conflict is higher since finding the right bargain to avoid conflict is less likely as one actor accepts sacrificing the present for the future. For example, she describes how Chechen rebels were willing to sacrifice their lives in the fight with Russia. Their view of this conflict is completely asymmetric with the Russians, and they perceive it as a long struggle compared to the more short-term view of Moscow.

Another example that Toft (2006) discuss is the role of religious ideology in promoting a long term view. In religious terms, death is usually not perceived as an end-point, and strong

[23] Recent work employs an experimental design to test this argument. In addition to providing empirical support for the central argument offered by Fearon (1998), the author finds that the welfare benefits of the agreement are higher even if bargaining is delayed. This suggests that when evaluating the total welfare of states (the net benefits from cooperation), a longer shadow of the future is not necessarily detrimental and provisions to shorten time horizons involve additional trade-offs (Hundley, 2020)

[24] For an illustration of the three-phase process in conflict, see Walter (2002)

believers place much value on the 'afterlife' and expected benefits in this period of existence. Such interpretation drives an outlook that sets high value on the future, even if this is not in 'this life'. As an illustration of this view, she mentions suicide bombers who volunteer to essentially sacrifice their lives for a much larger (future) objective. These 'martyrs' also display a long time horizon in the context of taking action with a large immediate cost (their own lives), but also include substantial welfare benefits for future generations (Azam, 2005).[25]

As I describe in much detail above, many studies addressed the effects of long time horizons on the breakdown in cooperation and initiation of war. Short time horizons also influence conflict behavior, and may lead to opposing outcomes in terms of an increase or a decrease in the extent of conflict. For instance, during civil war, an increase of violence, in particular the targeting of civilians, is more likely when rebels suffer substantial material losses. As a result, rebel groups prioritize short-term gains which are easier to obtain by victimizing civilians (Wood, 2014). On the other hand, research on conflict resolution address the conditions leading warring parties to employ strategies such as mediation. In the context of time horizons, authors show that mediation is a result of short-term orientation emphasizing immediate ceasefire in conflict. At the same time, the long-term outcomes of such strategies are less efficient since the mediator is not likely to commit to preserve peace over the long-term, increasing the risk of recurring conflict between rivals (Beardsley, 2008).

Research on the effects of certain time horizons and conflict behavior is vast. Less work address questions about *variations* in actors' temporal orientations and how it may shape decision-making facing conflict. Recently, some authors emphasize how changes in time horizons create incentives for the implementation of cooperation or competition strategies between actors. Edelstein (2017) highlights the trade-offs in short and long time horizons in the context of great power

[25] The time horizon argument for suicide terrorists serves as an additional rational explanation. The most famous discussion regarding the rationality of suicide attacks is Pape (2003)

competition and the emergence of a 'now or later' dilemma. According to this argument, leaders of both emerging and existing powers face a choice of cooperation or competition to resolve their impending 'clash'. The strategy each actor chooses depends on the interaction of their time horizons. Thus, if both actors emphasize the long-term outcomes, competition is more likely since an existing power is concerned about losing its advantage and therefore is better-off by attacking from a position of strength (as argued by others (Fearon, 1995; Tingley, 2011)).

One of the central insights this study adds is with regards to the conditions for cooperation among strategic rivals. Edelstein (2017) argues that great powers may shift to short time horizons, and prefer to cooperate with a rising power in order to gain the benefits of that interaction. Rising powers also display such view in an effort to: (a) gain benefits that fuel their rise; (b) mask their long-term intentions and reduce the risk of a preemptive attack by the declining actor. In his book, he analyzes multiple case studies that demonstrate this dynamic. For example, the British response to the rise of the US in the early 20^{th} century, or how the British and French opted to highlight the immediate benefits of cooperation with Nazi Germany in the 1930's instead of addressing the long-term threats it posed to peace in Europe.[26]

From an overall perspective of research about the role of time in international conflict, the study by Edelstein (2017) is paramount as it highlights time horizons as the central mechanism that shapes strategic behavior of great powers. Haynes (2019*a*) builds on these insights and develops the aspect of uncertainty, also with respect to time horizons. He incorporates the intertemporal trade-offs into the information misrepresentation argument (Fearon, 1995) and shows why actors with short time horizons prefer to signal their true intentions/preferences. In addition, his model shows how this dynamic reduces the likelihood of cooperation in the short term (as well as the credibility of short-term signaling).[27]

[26] This study offers another angle to earlier work that explains the 'Appeasement policy' toward Nazi Germany (Ripsman and Levy, 2008, 2007). The analysis by Edelstein (2017) places much greater weight on the temporal dimension as the mechanism driving political decision-makers in Europe.

[27] In another study, Haynes (2019*b*) further develops the analysis of multiple dimensions of uncertainty and the impact it has, time horizons included, on conflict behavior.

The appeal of time horizons as an explanatory factor in international politics is based primarily on the ability to employ it within strategic interactions models. In other words, time horizons are more common within rationalist views of conflict behavior (Bearce, Floros and McKibben, 2009; Fearon, 1998; Haynes, 2019*a*; Toft, 2006).

However, even scholars who view it in this context accept the notion that time horizons are contingent on factors beyond situation or strategic calculations (Axelrod and Keohane, 1985; Streich and Levy, 2007). Such views led scholars to recognize the psychological aspect of time horizons within international politics. The most accepted psychological interpretation of the temporal dimension relies on *Construal Level Theory (CLT)* (Liberman and Trope, 2008, 1998; Trope and Liberman, 2003).

A theoretical framework from cognitive psychology, CLT explores how temporal and spatial distance shapes decision-making. The complexity of temporally distant events compels individuals to employ pre-existing mental constructs when evaluating these events. As a result, the temporal distance of an event is critical for the way we interpret it. Events that are further away (great temporal distance) are perceived in an abstract form - 'high-level' construals which are general and focus on the reasons an event occurs (the 'why' or abstract objective). On the other hand, a short-term view leads to 'low-level' construal that is detail-oriented and focuses on necessary and concrete steps, the 'how', in order to accomplish an objective (Liberman, Sagristano and Trope, 2002; Trope and Liberman, 2010).

As part of efforts to expand research on time horizons in international relations, Krebs and Rapport (2012) present the foundations of CLT and discuss three of the main theoretical questions in this respect. For example, international cooperation is more likely when actors have longer time horizons since long-term orientations promote productive bargaining and reciprocity. Actors who have such view "...are attracted to deals with high payoffs..., and they are willing to let the details of enforcement to 'work themselves out' over time" (Krebs and Rapport, 2012, p. 535). This interpretation counters the argument presented by Fearon (1998) and fits the original conception

of time horizon and cooperation (Axelrod, 1984). It places greater weight on the 'abstract' goal of cooperation and less on the specifics of how to accomplish said goal.[28]

Following this introduction of CLT to the study of international politics, Rapport (2013) employs this framework to assess the American strategy in Iraq, both in the 2003 war phase as well as the post-war reconstruction efforts. His argument highlights the problems that temporal distance places on decisions, and he demonstrates the changes in US policymakers' time horizons and how it influence their strategy. During the military operations phase, decision-makers display a clear short time horizons with attention to the details of the war (i.e. military plans). However, time horizons shift to long-term for the planning of the reconstruction phase. As a result, an abstract objective emerges, yet policymakers and their advisors had no clear plan on how to accomplish it. Previous work explored the Iraq policy in a two-phase framework and using time horizons (Kreps, 2008), yet the focus in this instance is the problematic effects of changes in time horizons on the outcomes of policy.[29]

Substantial volume of research explores the effects of time horizons on behavior in international politics. Thus far, I have discussed the different angles that previous work used when assessing the role of the temporal dimension on decision-making. The central limitation of the extant literature is understanding the particular way in which time horizons affect conflict behavior. In other words, studies show the effects of time horizons but very rarely take a more in-depth look into the process leading actors to select strategies as cooperation or engaging in violence, and how time horizons shaped these decisions.

[28] The authors also present a detailed discussion of preventive war. In the prism of CLT, existing powers adopt a short-term view and are reluctant to engage in fighting until the very last minute since the threat is far into the future, therefore is more 'abstract' and does not require concrete action. This aspect partially corresponds with some of the arguments offered by Edelstein (2017).

[29] For a more extensive analysis of US wars and non-combat operations based on the CLT framework, see Rapport (2015). An interesting application of this logic is Bugaric (2019) who conceptualizes organizational time horizons based on CLT, and explains the greater propensity for technological inventions and innovation by organizations (such as the US Army and Air Force) with long time horizons.

In this research, I address this gap by focusing on the process of conflict decision-making and argue that the effect of time horizons is *indirect* as it shapes the 'menu of options' (Oakes, 2012) from which a conflict strategy is chosen. I integrate insights from psychology and decision sciences to unpack the decision-making process and explain how actors arrive at selecting certain strategies. This approach fits with recent research trends in international politics as leading scholars have called for greater integration of psychological theories and methods into the more dominant rational choice approach of foreign policy and conflict decision-making (Hafner-Burton et al., 2017; Kertzer and Tingley, 2018).

I apply this approach by focusing on a theoretical concept that is more dominant in strategic models (time horizons) and integrate insight and methods from political psychology to better understand how it shapes behavior in a conflict setting. It is an approach that resembles other recent studies that incorporate political psychology into research on concepts that are more known within the rational choice framework, such as resolve (Kertzer, 2016) or reputation (Brutger and Kertzer, 2018).

What explains variations in time horizons?

As the discussion in this chapter demonstrates, the vast majority of studies in political science employ the time horizon concept as an explanatory factor. Yet, one important question that few address is what 'generates' different time horizons? What factors lead individuals to opt for a short- or long-term view facing conflict situations? In this section, I briefly review the existing literature that explore this question and highlight its main limitations.

Overall, not many scholars devote their attention to the 'origins' of time horizons. There are two central approaches in the extant literature on what leads actors to be either short- or long-term oriented. First, at the nation-state level, studies focus on different political or social institutions that drive actors for either temporal orientation. The most common factor is regime type, and especially electoral pressures in democracies. The central argument is that democratic leaders have

mostly short time horizons due to the prospect of approaching elections and the need to satisfy voters, creating incentives to emphasize immediate outcomes (Pierson, 2011). Within electoral institutions, authors point to election cycles as factors that shape policy choices that are salient to the public such as conflict interventions (Gaubatz, 1991; Koch, 2016), counter-terrorism strategy (Aksoy, 2018; Nanes, 2017), or security policy in the form of involvement in international coalitions (Marinov, Nomikos and Robbins, 2015).[30]

Despite the dominance of the elections argument in democratic regimes, the logic of political insecurity as driving temporal orientations is also relevant for non-democracies. For example, Bak (2020) shows how autocratic political cycles influence these leaders' political security and survival. This dynamic has indirect implications for the time horizons of dictators. Overall, past research demonstrate that political security concerns are not unique to democracies and even dictators face pressures due to audience costs (Weeks, 2008).[31]

Other factors in the state level are more context-specific or highlight certain national characteristics. For instance, Pérez and Tavits (2017) use variations in the temporal aspect of languages to describe public policy preferences, especially for policies that have long-term ramifications and immediate costs. Another specific factor is ideology and the most relevant is religion. Toft (2006) argue that since religions offer benefits in the 'after-life', in many cases strong believers are more likely to have long time horizons.[32]

The second approach that scholars adopt focuses more on individual differences as factors that shape temporal orientations. Within this approach, the vast majority of work in international relations rely on the economic/rationalist view of time horizons as a function of discount rates. The main premise from research in behavioral economics and psychology is that individuals overvalue

[30] In a previous section of this chapter, I briefly mention the PBC literature which presents similar arguments about the effects of electoral pressures on leaders' incentives for short-term economic policies.

[31] For a discussion focusing on the individual traits of tyrants and the associated time horizons, see Rosen (2005, pp. 142-154)

[32] Culture is another factor that has been shown to relate to temporal orientations. According to this view, traditionalist culture are more long-term oriented since it promotes the survival of shared identity/culture, whereas modern cultures are more individualistic and emphasize short-term, material benefits (Wang, Rieger and Hens, 2016).

short-term compared to long-term outcomes, whether this view is based on exponential discounting (Samuelson, 1937) or the more common hyperbolic discounting in which more weight is given to the present compared to the future (Frederick, Loewenstein and O'Donoghue, 2003; Streich and Levy, 2007). This conceptualization regarding the sources of time horizon guide most studies that leverage strategic interaction models to explain behavior in international politics (for example, Fearon (1998) or Axelrod (1984)).

A less dominant approach is rooted in psychology and views time horizons as an endogenous perception according to which individuals assign different weights to the short- and long-term implications of a choice, and this is driven by different psychological traits and individual characteristics. In earlier sections, I mention the *Time Perspective* concept from psychology that involves different sub-categories of time perceptions, those are related to individual characteristics such as gender and race (Zimbardo and Boyd, 1999) or common psychological traits as the Big-Five Inventory (Zhang, Howell and Bowerman, 2013). Another example is CLT that is based on individuals' perceptions of the temporal distance of events and how it shapes their view (Liberman, Sagristano and Trope, 2002).

Other factors better fit the individual dispositions or characteristics category. The most common factor in this context is *Age*. The argument is that older individuals (especially politicians) have short time horizons due to concerns over legacy or understanding that their time in office is short (Horowitz, McDermott and Stam, 2005). Rosen (2005) delves more deeply into the biological aspects of time horizons, he contends that "...biology might affect time horizons by affecting general intelligence and the ability to control oneself on the basis of *the constructed image of the future*" (p. 151, emphasis mine). This view regarding the origins of time horizons places substantial weight on individual dispositions, and describes decision-makers' temporal perceptions as more than a computation of utility. It is prevalent in studies that highlight the individual-leader as the central unit of analysis in conflict (Horowitz, McDermott and Stam, 2005; Kertzer, 2016).

Studying the sources of time horizons, or as I describe it: "what explains variations in time horizons?" is important and relatively under-explored. In his book, Edelstein (2017) contends that the main problem is to explain these variations in each level of analysis, either individual or the state. In other words, there are 'scattered' explanations for why individuals 'adopt' certain time orientations, but the literature lacks a clear theoretical framework that explains the conditions under which decision-makers are more likely to favor short or long time horizons. In this research project, I address this task in the context of international conflict. Based on an interactionist approach (Herrmann, Tetlock and Visser, 1999; Kertzer, 2016), I introduce a theoretical framework that integrates the most relevant factors from each level of analysis and offers clear predictions about decision-makers' time horizons facing international conflict.

Summary

In this chapter, I review the extant literature and present the various theoretical frameworks that authors developed to explain the influence that time horizons have on decision-making in several contexts, highlighted by political choices in conflict situations. Despite the many insights that previous work has provided, I point to some missing elements that will be addressed in the subsequent chapters.

To conclude this chapter, I briefly re-count these issues. First, most research in foreign policy analysis employs time horizons as an explanatory factor. In these studies, the effects of time horizons are most prevalent in the choice of either a cooperative or competitive strategy/policy. One of the missing elements of this work is a more detail-oriented analysis that focuses on *the process of decision-making* and addresses questions such as how exactly time horizons shape the decision process? A process that culminates in the selection of some cooperative strategy such as negotiations, or the opposite - a competitive strategy based on military intervention or other forms of coercive strategy.

A second gap in the literature links both parts of this review chapter. It is the question of what factors explain variations in time horizons? Why do decision-makers favor a short-term view in one situation and a long-term one in another? I probe the literature and present the various factors authors identify. The primary aspect that we miss in order to answer the question posed above is a clearer theoretical framework, one that integrates and accounts for the relevant factors at the situational as well as individual level of analysis.

In the next chapter, I detail my theory regarding time horizons in conflict. I address both missing elements in the literature by presenting two separate frameworks that are not unrelated. Then, I explain how both aspects are linked together, thus supporting and improving our understanding of the role time horizons play in conflict decision-making.

CHAPTER III

TIME HORIZONS IN CONFLICT DECISION-MAKING

How do decision-makers' time horizons affect their policy selection in conflict situations? What part of the decision-making process is most dependent upon these temporal views? Also, what explains the variations in decision makers' time horizons in conflict? In this chapter, I address all these questions by describing two theoretical frameworks that unpack the concept of time horizons and offer explanations to the main gaps in the literature as described in the previous chapter.

The first part of this chapter focuses on time horizons as an explanatory factor. I develop a theoretical framework that disaggregate the decision-making process and highlight the effects of time horizon in the initial phase - the formation of a choice-set of options. I argue that a decision-maker's time horizon is critical for the formation of her choice-set since only policy options that fit with her time horizons will enter the choice-set, evaluated in more detail and can be selected. Therefore, variations in time horizons generate different 'short-lists' of favored options, both in terms of size as well as their composition. Then, I describe the second phase of this process - the actual selection of an alternative, and how it is contingent upon the composition of the choice-set. The central proposition derived of this framework is that the effect of time horizons on policy selection is indirect since it is mostly prevalent in the early phase of choice-set formation. Those different choice-sets (which are a function of the decision-maker's temporal orientation) are important for the final selection of a conflict strategy/policy.

In the second part of the chapter, I complete the discussion by 'moving' time horizons to the left-hand side of the 'equation' and analyzing it as a dependent variable. To address the question of what explains variations in time horizons, I develop a framework that integrates theoretically relevant situational and individual level factors. I adopt an *interactionist approach* that accounts for the independent causal effects of the relevant factors in each level of analysis, but also explains how their conditional relations shape variations in time horizons. In particular, I discuss how

situational elements moderate the influence of individual dispositions and shift decision-makers' time horizons facing a security conflict .

Unpacking the decision-making process

Many studies of international politics focus on an observed outcome such as a war or a negotiations process, and make inferences regarding the decisions that led to this outcome. One downside of this conceptual approach is that less attention is given to the process which generated this particular choice. Consider the context of time horizons and international conflict. Existing work suggest that when two actors display a long-term view, conflict (the outcome) is likely since they care more about preserving an ideology (Toft, 2006), they hold some relative advantage in the bargaining space (Tingley, 2011), or they have an advantage in their power relations with weaker actors (Edelstein, 2017). What is missing in these explanations is a more in-depth analysis of *how* and *why* does a temporal perspective lead to favoring a competitive strategy.[33]

An emphasis on the process leading to the choice of a conflict strategy can clarify the influence of the explanatory factor(s), in my case, time horizons. I adopt an approach that disaggregate the decision process. By investigating the process and its various phases, we can identify the 'exact spot' where time horizons are most powerful and their effect on the final choice. Therefore, in the following, I introduce a framework that unpacks the process into two-phases and highlights the role of time horizons in each phase, leading to the final selection of a conflict strategy.

There are additional benefits to adopting this conceptual approach. First, as I elaborated above, an in-depth investigation of the process allows to identify when time horizons are most influential, and how they shape subsequent phases leading to a policy choice. Second, since time horizons is a latent concept (Bollen, 2002) that is difficult to observe, a phase-based analysis can clarify its role other than just arguing that it is an important element in the final outcome.

[33] A similar argument can be said for a more benign behavior. How time horizons lead to cooperation, other than low discounting and reciprocity Axelrod (1984)? What leads to the focus on the immediate benefits and caring less about future outcomes? (Beardsley, 2008)

Third, this multi-phase framework can be translated to an experiment that empirically evaluates the different propositions, and is a better method to assess causal mechanisms within individual decision-making processes (Morton and Williams, 2008).[34]

The benefits of studying an outcome by focusing on the process led other scholars to adopt this approach. For example, with respect to time horizons in conflict, Fearon (1998) argues that long-term orientation reduces the likelihood of successful bargaining. His explanation dissects bargaining into a two-phase process that include the negotiation phase, followed by enforcement. Further developing this point, scholars identify a third phase to the bargaining process in order to clarify the role of time horizons (Bearce, Floros and McKibben, 2009). These authors present a model that shows in detail how time horizons positively affect the early phase of entering negotiations, yet has a negative effect on the subsequent enforcement phase.

Building on vast literature in psychology (Evans, 2008), work in political psychology utilizes a multi-phase process framework to describe individual decisions/behavior. *Poliheuristic theory* also proposes a two-stage process that includes an elimination of options based on different heuristics, followed by a choice of an alternative that maximizes benefits and minimizes risks (Geva and Mintz, 1997; Mintz, 2004). The main problem, and difference, between this framework and the one I propose here is the lack of clear mechanism to explain the elimination as well as selection phases.[35]. Farnham (2004) discuss the critical role of the political context in foreign policy decision-making. She argues that in order to identify a 'transcendent alternative', actors begin by screening options for acceptability in the sense of political feasibility (Farnham, 1997). In the subsequent phase, surviving options are evaluated further based on 'other grounds'.[36]

[34] In the next chapter I will describe in more detail about the choice to utilize experimental methods and how it benefits my theory.

[35] For other limitations of this theory including the need for clearer scope conditions, see Oppermann (2014)

[36] Similar to poliheurstic theory, one clear problem of this model is that there is no clear mechanism to explain the screening, i.e. what shapes this political feasibility calculus. Farnham (2004, p.447) admits that "...the particular elements of such a calculus are difficult to specify apart from particular situations".

Outside of political science, psychological theories of choice describe multi-phase models of decision. The most famous is *prospect theory*, which explains information processing and choices under conditions of risk and uncertainty. According to this theory, individuals' choices facing risk are based on two phases. First, editing - a preliminary analysis of the offered alternatives which is intended to offer a simpler representation of these options. This phase is followed by evaluation - an additional assessment of the simplified alternatives and selection of the one with the highest value (Kahneman and Tversky, 1979; Tversky and Kahneman, 1981).

The decision-making process in conflict

In the previous section, I establish the logic of adopting a multi-phase framework to explain decision-making and the associated outcomes in international conflict situations. The theoretical framework that follows focuses on the decision-making process in order to explain the role of time horizons in conflict.

To describe the decision process, I rely on work in psychology and decision science. *Image Theory* is a behavioral framework that explains individual decision-making. For my purposes, it offers the benefit of emphasizing the decision process itself and not the various social contexts in which choices are made (Beach, 1990). This focus makes Image theory a compelling framework since it allows me to identify the different phases of the decision process and where time horizons are most prevalent.

According to Image theory, decisions are a function of three types of considerations *(images)*: the morals and values of the decision maker, her desires about the future and lastly, how can she secure this desired future. Essentially, it views decisions as the assessment of options to improve the future with minimum violation of a decision-maker's morals, values and beliefs (Beach, 1993). The decision-making process consists of two phases: pre-choice screening of alternatives, followed by a selection of an alternative from the reduced set. In the pre-choice screening phase, individuals narrow the pool of options by rejecting unacceptable ones. The rejection task is based

on the *compatibility test* (Ordóñez, Benson III and Beach, 1999) - alternatives that fail to meet a standard set by the decision-maker are rejected and do not enter the reduced set. In a series of studies, Beach (1993) demonstrates how pre-choice screening operates in various decision tasks. One important findings is that the information used for the screening phase does not influence the actual choice, leading him to infer that "subjects apparently regard screening and choice as distinctly different tasks" (p. 218). Further developing this point, scholars of decision processes contend that individuals engage in screening of alternatives in order to reduce the mental workload when making decisions to prevent suboptimal choices (Payne, Bettman and Johnson, 1993).

I begin the analysis of the decision process with the pre-choice screening phase. There are several reasons justifying an in-depth investigation of this phase. From a theoretical standpoint, while classic decision models (e.g. rational choice) posit that individuals assess multiple options prior to their selection (Lau, 2019), in reality, it is rare for decision-makers to assess a long list of options. Instead, we tend to focus on a 'short list' of preferred alternatives. By studying the screening phase, we can better understand the process of how actors arrive at selecting a certain policy out of a larger 'supply' of options. Second, the early phase of screening serves as the foundation for the eventual selection of an alternative. The analysis of the process can benefit from a rigorous theoretical assessment that explores how the preliminary phase sets-up the choice and, by extension, the final outcome.[37] Third, studying the screening phase can help improve our predictions of the policy selection. A better understanding of the initial phase provides valuable insight regarding the (smaller 'pool' of) alternatives that are preferred and thus, more likely to be selected after further evaluation. Finally, from a practical perspective, studying the screening phase with respect to conflict choices helps us understand why, under some conditions, some policy options are never really 'on the table'.

[37] In a similar vein, Levy (1992) called for additional theorizing on the early, *editing* phase of prospect theory rather than the more appealing *evaluation* phase.

In the theory I present here, the screening of alternatives facing a conflict situation creates a reduced 'short-list' of preferred options. Decision-makers concentrate on the options in these choice-sets and select their final one. As I argue above, this description of the decision process diverges from classic theories of choice such as the rational actor since it assumes that not all available options are evaluated. Studies in psychology provide multiple explanations to why we tend to assess only part of the available information (Payne, Bettman and Johnson, 1993; Simon, 1956). However, less work is devoted to explain how these reduced choice-sets are formed.

I adopt the logic of pre-choice screening to explain policy selection in conflict.[38] Using both rational and psychological perspectives, I develop an argument stating that actors' time horizons serve as the screening mechanism. Therefore, facing a conflict situation, individuals narrow the 'pool of options' based on their compatibility with the decision-makers' time horizons. Many studies in IR argue that time horizons affect conflict behavior. I employ time horizons as the mechanism that shapes the construction of the reduced choice-set, thus providing a clearer account of how time horizons influence behavior.

In every conflict scenario, actors have both short- and long-term objectives. However, in most cases, they prioritize one temporal dimension over the other.[39] An actor that emphasizes the immediate (short-term) outcomes is likely to consider mostly options that offer such outcomes. Similarly, a decision-maker who is long-term oriented views policy options that offer positive outcomes in the future as more appealing. Therefore, an actor's time horizons shapes the contents of her 'short list' of options by rejecting alternatives that fail to provide desirable outcomes in the relevant time frame. This dynamic materializes at an early stage in the process - facing a conflict, actors are presented with an initial list of potential options.[40] Since they are incapable (and in most

[38] While the framework can be applied to other decision contexts, my focus is security scenarios and I trace the logic of the screening mechanism, as well as the selection of an alternative, based on this type of conditions.

[39] The question of what explains variations in time horizons is one of the under-explored aspects of this literature (Edelstein, 2017). I discuss it in detail in the second half of this chapter.

[40] This initial list is compiled based on the actor's own experience and recommendations by political and professional advisors. Studying the origins of the initial list is beyond the scope of this study.

cases, unwilling) to contemplate a long list of alternatives, they narrow it to a more manageable choice-set. Policies in this 'short list' go through a more in-depth evaluation and eventually, one option is selected.

Based on this theoretical argument, there are two observable implications for the pre-choice screening phase. First, the size of the choice-set will be different based on an actor's time horizons. Second, the composition, in terms of which options are accepted, will also vary dependent upon the actor's time horizons.

Starting with the choice-set size, I posit that under long-term orientation, actors have lower acceptance threshold for their choice-set and they contemplate more options to address a conflict. This lower threshold stems from a combination of two factors - the focus on long-term implications, and the role of future uncertainty (Haynes, 2019*b*). Actors with a long time horizon place greater value on future outcomes, suggesting they are willing to accept present costs in order to increase the odds of achieving these outcomes.[41] Long-term oriented actors also understand that uncertainty plays a more dominant role in shaping future outcomes. As a result, they are willing to contemplate more options to address the current situation. This dynamic is prevalent in bargaining scenarios. Authors posit that actors with long time horizons want to ensure the best long-term outcomes. Therefore, they prolong the process of bargaining (Bearce, Eldredge and Jolliff, 2015; Fearon, 1998; Hundley, 2020). In other words, actors with long time horizons attempt to identify an action that ensures the best future outcome and thus, are willing to entertain multiple alternatives to improve the chances of findings such an option.

Information also plays an important role. By evaluating multiple alternatives, long-term oriented actors obtain more information. That can reduce the degree of future uncertainty and improve their odds of achieving the best long-term outcome (Fearon, 1998). Edelstein (2017, pp.

[41] For example, Walter (2006) argues that governments accept the trade-off of short-term costs from confronting rebels in order to generate long-term reputation for deterring such groups. This deterrence is intended to prevent other rebels from adopting a similar strategy. In essence, a long-term oriented individual is more concerned with securing beneficial future outcomes, and is willing to engage in actions that may create immediate costs.

18-22) posits that actors with long time horizons accept a short-term strategy such as cooperation, since it provides more information and allows a declining power to ascertain the future intentions of its rival, the rising power (i.e. reducing the extent of uncertainty). In other words, facing a security threat, long-term oriented actors evaluate more 'paths of action'. These additional options can provide immediate benefits and help reduce future uncertainty.[42]

Psychological theories also offer supporting arguments. *Construal Level Theory* (Liberman and Trope, 1998; Trope and Liberman, 2000) posit that individuals with a long-term view perceive future outcomes in an abstract way. These individuals care more about achieving a certain outcome (desirability), than how to obtain it (feasibility). In other words, long-term oriented decision-makers formulate an abstract, future objective and are less concerned about the details of accomplishing it (Krebs and Rapport, 2012; Rapport, 2015). With a focus on long-term implications, these individuals adopt a broader view of the situation, are less likely to place constraints on their evaluations, and more likely to exert creative thinking in addressing the task (Förster, Friedman and Liberman, 2004; Liberman and Trope, 2008). This 'selected' removal of constraints allows these individuals to assess more alternatives when making a choice (Liberman and Trope, 1998). Therefore, in conflict situations, actors with long time horizons strive to accomplish a future objective (which can be abstract) and are willing to evaluate multiple 'paths' to attain this goal (i.e. assess more options).

Finally, long-term oriented actors are less sensitive to high future uncertainty (Trope and Liberman, 2000). Thus, they are less likely to view uncertainty as necessarily bad. In other words, these actors accept the possibility that future outcomes may turn out to be positive.[43] As a result, actors with long time horizons do not restrict their response to a single strategy (like competitive actions, (Haynes, 2019*a*)), i.e. they accept more policy options into their choice-set.

[42] This latter point also implies that actors with long time horizons have more diverse choice-sets. They may accept short-term alternatives that can help alleviate some of the future uncertainty.

[43] Edelstein (2017, pp. 20-21) discusses how great powers assess their future relations and suggests that they do not necessarily view future intentions as negative. Instead, intentions may be 'benign' and encourage future cooperation.

The primary proposition that I derive of this discussion is that the the size of the choice-set depends on the decision-maker's time horizon.

H_1: Actors with long time horizons accept more options into their reduced set, compared to actors with short time horizons.

The composition of the choice set is a second, related, aspect of the effects of time horizons as a screening mechanism.

Past work in IR demonstrate that most conflict issues are salient to the public and political leaders (Heffington, Park and Williams, 2019). In addition, short-term oriented politicians pursue actions that minimize the risks for their political survival (Chiozza and Goemans, 2003; Wright, 2008). Therefore, when addressing conflict scenarios, actors will evaluate only alternatives that present immediate solutions to these threats. For example, facing the costs of conflict, actors with short time horizon are more likely to adopt the policy of mediation (Beardsley, 2008) as it provides immediate benefits in the sense of cessation of violence. In recent study, Payne (2019/20) demonstrates that short-term oriented politicians who face electoral pressure tend to reduce debates about policy options that pose significant political risk. His 'dampening effect' reflects an elimination (or screening) of options, in which those who fail to offer immediate benefits are ignored and do not garner serious assessment.

On the other hand, actors who emphasize long-term objectives accept a diverse set of options, even if some involve short-term costs. Toft (2006) argues that for actors whose primary objective is the long-term survival of a nation or a religious belief, 'suffering' short-term sacrifices in exchange for securing these goals is acceptable (and rational).[44]

Thus, actors who are short-term oriented emphasize immediate outcomes and devote less attention to long-term implications. In contrast, those with a long time horizon focus on future

[44] She also argues that a long-term view allows to 'spread' costs over longer period of time, making it easier to accept the costs associated with long-term objectives.

implications of a policy and are willing to accept immediate costs as long as future outcomes are positive. Therefore, the latter are more likely to accept and contemplate policy options that provide future positive implications, even if these alternatives also involve immediate costs.

Based on these arguments, my second proposition address the content of the choice-set as a function of actors' time horizons:

H_{2a}: Actors with short time horizons are less likely to accept policy options that do not provide positive immediate outcomes.

H_{2b}: Actors with long time horizons are more likely to accept policy options with negative short term outcomes, compared to actors with short time horizons.

Policy Selection

A central premise of this study is that a significant part of the decision process is contingent upon the early phase of choice-set formation. Nevertheless, in the vast majority of conflicts, we only observe the selected policy. In this section of the analysis, I discuss how actors make their (observed) selection of policy and how this choice depends on the screening phase.

Studies of decision-making propose different models to explain the strategy used to select an alternative (Lau, 2019). In the context of Image theory, those different strategies represent the *profitability test*. This test is conducted in the second phase of the decision process and is intended to identify and adopt the 'best' alternative from the ones that survived the screening phase (Beach, 1990).

While decision strategies tend to vary among individuals, the selection of an alternative is based on its perceived net benefits. In the context of security conflicts, actors' time horizons generate choice-sets which consist of policies that provide benefits in the same time frame. Then, decision-makers seek the 'best' option out of the surviving policies, and select the one that offers the highest potential net benefits.

Which factors affect this net benefit calculus? In the conflict literature, studies have demonstrated that individuals value the projected success of policy options (Gelpi, Feaver and Reifler, 2009, 2006). These expected chances of success are weighted against the projected (or existing) costs (human, economic, political, etc.). Therefore, I expect that the success of each policy in its respected time frame will be critical for its probability of being selected. That is, actors with a short time horizon favor, and are more likely to select, the most successful short-term policy (similarly for those with long time horizons).

However, since the selection of an alternative is contingent upon its net benefit, actors are sensitive to the trade-off in temporal implications of their choice. Thus, actors also consider implications in the *reciprocal time frame* and prefer policy options with better outcomes over time. Hence, the ideal option for short-term oriented actors is a policy with successful immediate results, but also positive long-term (reciprocal) outcomes. The same expectation applies to those displaying long time horizons.[45]

In reality, most policy options consist of contrasting temporal implications. Under these conditions, actors are willing to compromise and select an option that does not offer the highest chances of success, as long as it provides positive outcomes in the reciprocal time-frame. Thus, actors with short time horizons will select an option that is not the most successful in the short-term, if it also offers positive future outcomes. The logic comes back to selecting the alternative with the highest net benefits - positive outcomes in the reciprocal time frame outweigh lower chances of success in the actor's main time frame. This aspect of the decision-making process is evident in conflict situations. For instance, Oakes (2012, pp. 13-14) suggests that the selected policy to address domestic unrest may not necessarily be the best, but the one offering the highest relative benefits with respect to existing constraints.[46] This leads to the main proposition regarding the

[45] This in-depth assessment is more likely for options that 'survived' the screening phase, the ones in the choice-set. In this phase, decision-makers engage in a more expanded deliberation of the remaining alternatives and contrast their success and costs from a temporal standpoint.

[46] In the literature of foreign policy substitution, studies show how domestic and international constraints drive leaders to adopt policy actions that are not their most preferred, see Clark (2001) or Allen and Machain (2018).

selection phase and the effect of temporal trade-offs:

H_3: Actors are more likely to select a policy with positive reciprocal outcomes and lower chances of success, compared to an option with the highest chances of success in the relevant time-frame but negative reciprocal outcomes.

Is it a two-phase process?

In this chapter, I introduce the pre-choice screening phase, and argue that it is a crucial aspect of policy selection. In other words, the preferred policy is dependent on the composition of the choice-set. One of the observable implications of this argument is that variations to the size and contents of the restricted set drive different policy choices.

The effect of choice-set composition on the preferred alternative is studied extensively in decision science. Scholars explain this behavior with the concept of *Contextual preference reversal* - a situation when a preference for one option over another is altered by the availability of further options (Howes et al., 2016; Huber, Payne and Puto, 1982).[47] For example, when presenting individuals with a binary selection (e.g one of two options), the preferred alternative may be completely different compared to a situation when individuals face the same two options but the set consists of additional alternatives. In other words, when we modify the choice-set composition by adding alternatives, the distribution of preferences for the contents of the choice-set also changes.

Contextual preference reversal is associated with three different effects: attraction (Huber, Payne and Puto, 1982), similarity (Tversky, 1972) and compromise (Simonson, 1989). All three effects describe how changes to the composition of the choice-set (in both the number and attributes of given options) trigger preference reversal (Trueblood et al., 2013). This aspect of the decision challenges classic models of rational choice since it demonstrate that individuals do not assess options independently but relative to the other options in the choice-set (Simonson and

[47] Studies in economics explore a slightly different version of this concept, see for example Tversky, Slovic and Kahneman (1990).

Tversky, 1992; Summerfield and Tsetsos, 2012). Yet, recent studies show how such choices do not necessarily violate rationality and depend on maximizing value given 'noisy' alternative options (Howes et al., 2016).

Work on contextual preference reversal emphasize choices in a multi-attribute decision problems, many of them by consumers (Huber and Puto, 1983; Pettibone and Wedell, 2000; Ratneshwar, Shocker and Stewart, 1987).[48] For political choices, O'Curry and Pitts (1995) test whether this phenomenon is evident when evaluating more complex choices such as political candidates. They find evidence for preference reversal in both presidential (1992), as well as state level elections (1994, Illinois state primary).

I build on these findings and assess the effects of the choice-set on individuals' preferences in another high leverage, complex situation - a security conflict. This analysis is important and complements the theoretical framework. First, it strengthens the role played by the choice-set within the decision process and why we must account for the 'short-list' of options in conflict situations. Second, it completes the analysis of the decision-making process and shows how time horizons have an *indirect effect* on the selected policy. Therefore, I expect that introducing changes to the composition of the choice-set will generate a contextual preference reversal and change decision-makers' distribution of preferences for the alternatives within the reduced set.

H_4: Introducing changes to the choice-set, by adding new options, is likely to trigger contextual preference reversal for decision-makers.

How time horizons shape conflict choices - Summary

The first puzzle I address in this study is how time horizons shape the decision-making process in conflict situation. I introduce a theoretical framework that relies on Image theory (Beach, 1990), and unpacks the decision process to two sequential phases. I argue that the effect of time horizons

[48] Research outside the social sciences show extensive evidence of contextual preference reversal, including in selection of mates among humans and animals. For a summary, see Howes et al. (2016).

is most prevalent in the initial phase, the pre-choice screening of alternatives and formation of a choice-set of preferred policy options. In the second phase, decision-makers conduct a more meticulous assessment of the surviving options and select the one which offers the highest net benefits. In the final section, I use insights from decision science to highlight the role of the choice-set in the decision process. The main premise is that accounting for the formation and contents of the set is crucial since variations in the composition of the choice-set can change the eventual selection of a policy.

What explains variations in time horizons?

In the first half of this chapter, I present a framework that tackles the first gap in the time horizons literature - what is the role that this concept plays in the process leading decision-makers to adopt a certain strategy in conflict. The other central gap I discussed in the previous chapter centers on time horizons as a dependent variable. The question is how can we explain variations in time horizons among individual decision-makers? Why do political leaders (or members of the public) favor a short-term view under some conditions, and a long-term one in others? In his work on this topic, Edelstein (2017) raises this exact question. Also, when he presents a summary of the literature, Haynes (2019*a*, p.1943) points that "Variations in a state's time horizons can derive from countless factors at all levels of analysis...". These arguments emphasize the need for a clearer understanding of the factors that generate different temporal orientations.

In the following, I address this puzzle by developing a theoretical framework that integrates factors from several levels of analysis and explains when and how time horizons vary in conflict scenarios. The vast majority of work on time horizons view it as situation-based. That is, different situational factors or conditions create incentives for individuals to adopt a long- or short-term orientation. However, time horizons also reflect an individual level temporal orientation, and even studies that mostly emphasize the situation contend that there is an individual level aspect to it (Axelrod and Keohane, 1985; Streich and Levy, 2007).

Based on these arguments, I develop a framework that integrates theoretically relevant situational and individual factors. I adopt an *interactionist approach* that accounts not just for the independent causal effect of the relevant factors in each level of analysis, but also explains how their conditional relations shape variations in time horizons. This conceptual approach was first used extensively by Herrmann, Tetlock and Visser (1999) to explain public views of military interventions. Recent work in international politics, and specifically foreign policy, employ an interactionist framework to explain complex concepts such as audience costs (Davies and Johns, 2013), resolve (Kertzer, 2016) or reputation (Brutger and Kertzer, 2018). Others have used this approach to explain conflict behavior by political leaders (Carter and Nordstrom, 2017; Macdonald and Schneider, 2017).

Explaining shifts in time horizons

The framework I propose integrates existing insight about the various factors that contribute to time horizon in politics, and presents a clear model that explains variations in time horizons facing international conflicts.

Before delving into the theory, three important issues must be addressed. First, I propose a theory of actors' time horizons in conflict. These actors can be political leaders or public members. I recognize that there are clear differences between elites and the masses (e.g. skills used (Hafner-Burton, Hughes and Victor, 2013)). Yet, I contend that models of political decision-making can be applied in many cases for both elites and the public. The central theoretical justification for this argument is that decisions made by politicians are at least partially affected by public opinion on these issues (Baum and Potter, 2015). In other words, foreign policy is also a 'bottom-up' process (Kertzer and Zeitzoff, 2017), mainly due to the mechanism of accountability and politicians' desire to stay in office (De Mesquita et al., 2003). As a result, a model of conflict decision-making can apply to public members, as well as their political representatives. An extensive amount of recent literature supports this argument. Using cross national public and elite samples, Tomz, Weeks and

Yarhi-Milo (2019) study two mechanisms (a selection of leaders and governments responsiveness) to explain how public and elite choices converge. Their results show considerable similarity in foreign policy views between leaders and the public. In addition, several studies of foreign policy behavior present empirical evidence about the relative congruence between public and political leaders in these issues (Friedman, Lerner and Zeckhauser, 2017; Kertzer, 2020; Renshon, Yarhi-Milo and Kertzer, 2016; Sheffer and Loewen, 2018; Sheffer et al., 2018).

Second, as argued by Kertzer (2016), when dealing with factors from different levels of analysis, it is important to avoid from constructing a 'garbage-can' model that aggregates all explanations into a single framework. Instead, I highlight specific factors that are important from a theoretical standpoint and directly relate to the temporal dimension. In addition, I utilize an approach that explores the effects at both levels of analysis (the situation and the individual) and highlights patterns of interactions between both types of information (Herrmann, Tetlock and Visser, 1999).

Third, while I contend that this framework fits multiple types of decision-makers (i.e. political leaders as well as the public), it is still bounded in scope for conflict and crisis situations. Therefore, it is not my intention to offer a theory of time horizons that captures all potential explanations in multiple contexts. Instead, I propose a framework that incorporates the most theoretically-relevant factors to time horizons in conflict scenarios. This will allow me to explain potential variations under these conditions.

Situational Factors

The vast majority of studies on foreign policy view time horizons as a function of various situational conditions. In other words, an individual adopts a temporal orientation due to certain external conditions that create incentives (either positive or negative) to emphasize one time perspective over another. This view is rooted in theoretical explanations that highlight the structural features of the environment as shaping the outcome (Waltz, 1979).

Employing a situational view of time horizons is beneficial for three reasons. First, as most structure-based theories, it presents a more parsimonious framework of analysis. In the discussion below, I expand on two situational factors - issue salience and costs/constraints. These are general factors that are more likely to vary between situations, rather than individuals. Assuming a relative homogeneity among individual decision-makers makes the use of such factors less complicated. For example, conflict issues are more salient to most individuals compared to cultural or trade-related issues (Heffington, Park and Williams, 2019). Those differences are common across actors and can be easily generalized. If one argument is that conflict issues are more salient and thus generate a short-term orientation, this can be expected for all relevant individuals.

Second, situational level factors are more readily observable, which makes data collection less complex. Costs is one of the most common elements when assessing conflict behavior (Gartner, 2008; Gelpi, Feaver and Reifler, 2009; Mueller, 1973). Most studies on conflicts and wars tend to highlight military fatalities or other 'human costs'. Yet, even economic or political costs are not too complicated to identify and assess their magnitude.[49] Studying time horizons based on situational factors makes the transition from theory to empirical analysis less complicated.

Third, since the concept of time horizon is complex and hard to define and measure (Fearon, 1998; Streich and Levy, 2007), highlighting simple and generalizable factors allows to both develop a theoretical framework that can be generalized, and also conduct empirical tests using data about real-world conflicts.

Issue Salience

The first 'external' factor I discuss is issue salience. It is the degree of importance an actor attaches to the issue at stake (Diehl, 1992). Others define it as the extent (and mostly) the level of intensity individuals and their leaders value certain issues and their subject matter (Randle, 1987). The

[49] Still, some types of costs are less observable, for example status or reputation. A strategic view of conflict can also argue about the role of opportunity costs.

issues at stake vary across a wide spectrum - from tangible such as control over territory, the removal of political leaders or the implementation of policy, to intangible issues that are more complex to define, identify and measure such as influence, status and reputation (Hensel et al., 2008; Hensel and Mitchell, 2005).

The salience of political issues is a central component of time horizons for both the public and their leaders since the implications of these issues are relevant to both 'audiences'. Conflict issues tend to be highly salient among most political issues. For the public it is because, for the most part, citizens 'carry the burden' in terms of becoming the casualties or paying the economic and social consequences of a conflict. At the same time, political leaders also view conflict as salient, mostly since these are situations that represent a considerable risk for their political survival considering potential audience costs (Fearon, 1994). A decision to engage in conflict may cost politicians their jobs. Yet, a decision to avoid from countering a security threat also carries political risks. The end result is that conflict issues are salient for both 'types' of decision-makers.

Since issue salience is relevant for both citizens and politicians, I address its role in shaping time horizons for each 'target audience'. Then, I show how the outcome, from a temporal perspective, is similar and leads to the first proposition of this framework.

Viewed as a situational factor, issue salience relates to citizens voting decisions - when issues are salient to citizens, they will judge their leaders' actions in that regard and vote accordingly (Edwards III, Mitchell and Welch, 1995). An extensive amount of research links the temporal element to voting with the notion of a 'myopic voter'. Based on the retrospective voting framework, myopic citizens focus primarily on recent policy benefits or economic conditions when making their voting decisions (Fiorina, 1978; Lewis-Beck and Paldam, 2000). The implication is that voters assess recent political outcomes and decide if to reward or punish politicians come election time, a behavior that reflects a short-term orientation.[50]

[50] The 'myopic' voter model serve as a central driver of the political budget cycle (PBC) literature I discussed in the previous chapter.

Despite the prevalence of this model in studies of voters' behavior, recent work on the myopic public challenge these assumptions and suggest a more nuanced view (Healy and Lenz, 2014). For example, authors show that myopic voting is highly dependent on voters having enough information about current (economic) conditions (Hellwig and Marinova, 2015).

In the realm of conflict and security studies, there is less attention to challenge this framework, and the logic of the myopic voter persists (Auerswald, 1999; Gaubatz, 1991; Reiter and Tillman, 2002). The extent of information that is available for the public is critical in conflict issues. Facing international security events, the public faces significant informational disadvantages. As a result, citizens rely on the media and elite cues as a heuristic to form opinions and shape preferences (Baum and Potter, 2015; Guisinger and Saunders, 2017). News reporting on national security issues tend to focus their coverage on negative and threatening situations (Baum and Groeling, 2010), and studies of media reporting show that when security related events (such as terrorism or military conflicts) are framed as threatening, they have substantial impact on citizens' policy preferences (Gadarian, 2014, 2010).

Considering these findings, I argue that security issues (terrorism, disputes over territory etc.), that are portrayed by the media and elites as threatening, are more salient to the public. When this information is provided, it usually highlights the immediate threats/risks of the situation and the need for a quick government response. Therefore, threatening security issues, viewed as salient, increase public propensity for a short time horizon when assessing how to address the threat.

As an example, consider the aftermath of a terrorist attack. Media reporting of such incidents tend to emphasize emotive and sensational aspects (Nacos, 2016). That type of information signals to the public that the event is important and should garner their attention. Adding fuel to this fire are elites suggesting the need to respond to a national security situation. The public,

already alarmed by news reporting, expects the government to respond as soon as possible.[51] The implication of such a scenario is that the more salient the issue, the more likely it is that the public will favor a response that provides short-term outcomes, i.e. a short time horizon.

The view of issue salience as a situational factor for politicians is similar. The main argument I propose is that since conflict issues present a substantial risk for political survival, they are salient for leaders and shape their temporal orientations.

Research on issue salience and conflict behavior show that important issues are more likely to trigger use of military force (Hensel, 2001), but also certain peaceful strategies (Owsiak and Mitchell, 2017). The primary mechanism that explains this behavior is domestic accountability (Gibler and Hutchison, 2013). As argued above regarding the myopic voter, political leaders facing conflict scenarios, perceived as salient by the public, must offer an appropriate response or face significant risks of punishment by voters.

The prospect of losing office due to (salient) security conflicts affects politicians' time horizons. To explain it, I use the concept of *'critical events'*. These are exogenous 'shocks' that can directly change the prospect of political survival. Studied in the context of coalition governments, these are events that alter the bargaining space, or win sets, of parties in and out of government. While not all events are critical, some are more than others and an important determining factor is how much events "...affect the politicians' ability to achieve their legislative and electoral goals" (Lupia and Strøm, 1995, p.652).

Conflicts, wars and security related incidents fit this class of political events, mostly because of their potential to affect public perception of the government competence, and the associated electoral ramifications. While some of these events are clearly exogenous, others become 'critical' based on the domestic conditions and leaders' behavior. Koch (2009) studies the effect of conflict

[51] There are several potential explanations for why an immediate response is needed, including to preserve or restore global reputation, status and honor. It may also be a desire for retribution after an attack on a civilian population (Wayne, 2018).

as a critical event on government survival and how it affects the duration of conflicts. With respect to the temporal dimension, he argues that governments will focus on quick response to a conflict (either escalation or settlement) when they appear less competent. But a short duration is also likely for stronger governments since they want to prevent the risk of growing conflict costs that might eventually lead to losing office.

The logic of a security conflict as a (potential) critical event that poses a risk for the political survival of leaders makes such issues more salient. As a result, facing security threats, political leaders favor actions that provide immediate results in order to reduce the potential political costs of not addressing a salient situation.

Considering the discussion regarding public view of conflict as well as the risk they pose to political leaders, I argue that salient conflict issues increase the probability of short time horizons for politicians. The first hypothesis of this framework assess this proposition:

H_5: The more salient the issue at stake, it is more likely that actors have short time horizons.

Constraints/Costs

Situational costs or constraints are an additional cluster of factors that shape decision-makers' temporal orientations. In the context of conflict situations, I posit that different political constraints alter the time horizons of both policymakers and the public. The effect of this factor is more direct for politicians, and on some level depends on the public, as the latter forms an opinion regarding the conflict largely based on a cost-benefit calculation (Gartner, 2008; Gelpi, 2010), and that can limit the freedom of action for political leaders (Gelpi, 2017). Therefore, if the public display a short time horizons facing a conflict, similar orientation is expected by its leaders.

In order to discuss the effects of political constraints on time horizons within the public, I use the costs of conflicts as a proxy. A central argument of this research project is that actors' time horizons affect the preferred policy in conflict. The prominence of the costs factor means that changes in this situational factor can alter the temporal orientation and then, the favored policy.

For example, a conflict policy with immediate benefits may be less appealing if it also involves high costs, compared to an option that has no short-term benefits but lower costs.

There are different types of costs associated with a conflict context. One is tangible costs, either human (military or civilian casualties) or economic. At the same time, conflict also involve intangible costs (such as reputation), which are mostly indirect but have substantial effects on public perception of the conflict (Fearon, 1994; Tomz, 2007). While conflict situations usually incorporate both types of costs, whenever human casualties are involved, it will dominate the discussion and most likely will be the most influential type of cost that shapes our view of the situation.

Human casualties represent the primary information that citizens use to judge the situation and form opinions on security conflicts (Koch, 2011; Valentino, Huth and Croco, 2010). It is an information that is (a) emphasized by media reporting (Baum and Groeling, 2010), and (b) is a relatively less ambiguous metric. As a result, it is an 'immediate' information that is powerful in shaping public view of the conflict.[52] While research has shown that other aspects are part of the cost-benefit calculation, including the probability of success (Gelpi, Feaver and Reifler, 2006) or victory (Eichenberg, 2005), this type of information is less clear and tend to be more abstract. Therefore, I argue that human casualties shape actors' time horizons. Since the public is mostly casualty-averse (Gartner and Segura, 1998; Mueller, 1973), it will favor a policy that reduces the expected level of casualties, especially in the short-term. The main implication for citizens' time horizons in conflict is that when immediate costs are high, the likelihood of short-term view is lower.

H_6: High immediate costs reduce the likelihood of actors displaying short time horizons.

[52] In their study of public opinion and terrorism, Huff and Kertzer (2018) argue that information about terror casualties is objective and circulated faster. Thus, it has a strong effect on public view of a terror incident.

For politicians, the most powerful situational factor is domestic political constraints. In the context of time horizons, the two primary political constraints are electoral institutions and domestic conditions led by the state of the economy and the degree of social stability.

The link of electoral institutions and time horizons is based on the mechanism of accountability. Elections in democracies may lead to government replacement and thus present a risk for leaders' political survival (De Mesquita et al., 2003). With respect to conflict behavior, the literature on election cycles supports this argument. The work by Gaubatz (1991) show that closer to elections, political leaders are more aware of the risks involved and tend to avoid from engaging in conflicts. At the same time, at the beginning of the cycle (right after winning an election), conflict initiation is more likely as the government is less concerned about public criticism. The main implication is that approaching elections 'shorten' the time horizons of politicians. On the other hand, after winning an election, and well before the next one, leaders are more long-term oriented and may entertain the prospect of going into a conflict.

Additional studies show how election cycles affect conflict behavior with more attention given to aspects such as different types of democracies (Williams, 2013), the choices of leaders to implement costly foreign policies (Chiozza, 2017; Payne, 2019/20; Potter, 2013), and the constraining effect of term limits (Potter, 2016; Zeigler, Pierskalla and Mazumder, 2014). Recent work extended this argument showing that closer to elections, leaders reduce their troop contribution to international operations since the benefits of this policy are not realized in the short-term (Marinov, Nomikos and Robbins, 2015). In other words, close to elections, leaders are more concerned about presenting immediate benefits or minimizing the costs from policies they enact, i.e. they display short time horizons.

Research on government behavior facing terrorism threats further illustrate this argument. Authors focus on the type of counter-measures used as elections approach. Most findings suggest that the primary concern for these governments is to 'demonstrate' strong capabilities to their supporters who view terrorism as a salient issue (Bueno De Mesquita, 2007). Therefore, politicians

emphasize counter-terrorism efforts closer to elections to gain political credit (Aksoy, 2018; Nanes, 2017).[53] The main implication of this discussion is that the prospect of elections facing the threat of conflict increase the likelihood that political leaders display a short time horizons to ensure their political survival.[54]

In addition to electoral institutions, domestic conditions are an important situational factor that affects time horizons. The emphasis again is on political survival facing public criticism. Two contexts are most prevalent for this factor - the state of the economy and the emergence of social unrest. Both situations can be related, but not necessarily, and both lead to similar outcomes in terms of temporal orientations of government officials.

Worsening economic conditions and/or an increase in social tensions enhance leaders' concerns about their political survival. As a result, they face incentives to satisfy the public with immediate benefits. From a temporal standpoint, these conditions make leaders short-term oriented. Government actions can be based on one of two mechanisms - diversion of public attention from deteriorating economic or social conditions using the 'rally effect' (Brody, 1991; Mueller, 1973) that results from conflict, or taking actions that present immediate benefits and demonstrate their competence (Haynes, 2017; Oakes, 2012; Smith, 1996, 1998; Tir, 2010). Regardless of the mechanism, the implication for temporal orientations is similar - facing social unrest or economic hardships as well as a potential conflict, politicians are more likely to display short time horizons and adopt policy actions that reduce citizens' criticism, and the associated risk for their political survival.

The discussion about domestic constraints as shaping time horizons for political actors in conflict generate the following hypotheses:

[53] An important factor that adds to this dynamic is partisanship as studies demonstrate that political orientation also shapes the type of policy response to terrorism closer to elections.

[54] While dominant in democracies, autocrats also face time-related constrained due to political cycles. The main argument is that dictators, early in their tenure and right before the end of tenure, face the highest risk to their survival from political rivals (Hummel, 2020), making them more amended to immediate pressure. After consolidating power, they tend to adopt the more accepted long-term orientation of autocrats (Bak, 2020).

H_{7a}: Facing a security conflict and approaching elections, actors are more likely to have short time horizons.

H_{7b}: Facing a security conflict and worsening domestic conditions, actors are more likely to have short time horizons.

Individual Factors

Assessing variations in time horizons requires a discussion on the impact of relevant individual dispositions and characteristics. The recent surge in conflict studies and the role of individual leaders (Fuhrmann and Horowitz, 2015; Horowitz and Fuhrmann, 2018; Horowitz et al., 2018; Horowitz, Stam and Ellis, 2015; Lupton, 2020; Saunders, 2011; Yarhi-Milo, 2018) makes it essential to address this dimension when studying decision-making in conflict. Therefore, the framework I propose incorporates individual factors into explanations of time horizons in conflict.

Unlike the situational dimension, the evaluation of how individual-level factors contribute to time horizons can jointly discuss citizens and their leaders. The main reason is that this dimension views factors that are internal and not contingent upon social or political situations. Thus, an internal short-term orientation is driven by factors that are similar to both members of the public as well as politicians.

Research on time horizon in this level of analysis is dominated by studies in behavioral economics. Scholars use either *time preferences* or *discount rates* to describe individuals' preference for immediate over delayed utility (Thaler, 2016). Most studies in economics have shown that individuals are myopic and tend to (hyperbolically) discount the future (Frederick, Loewenstein and O'Donoghue, 2003; Thaler, 1981). Based on this work, the following hypothesis describe the basic individual disposition that drives time horizon in conflict:

H_{8a}: The more an individual discounts the future, the more likely she is to display short time horizons.

In the discussion above, I proposes time preferences as an individual level trait that affects actors' temporal orientations in conflict. The main challenge for this factor is that it is hard to distinguish between time preferences as an individual trait and time horizons as the outcome that is a function of this trait combined with other factors in several levels of analysis. I address this issue in the empirical section of this research using a variety of measures.[55]

The second factor in this level of analysis is less complicated and is the only one that has been mentioned in past work on time horizons and conflict. The argument is that decision-makers' temporal orientations are consequential of their age and how they view their expected life span. Thus, older individuals have short time horizons mostly since their expected life span is shorter (Lechler and Sunde, 2019). In the political context, older leaders recognize that their time in office is not expected to last much longer (due to tenure or physical conditions) and are thus more likely to have short time horizons (Horowitz, McDermott and Stam, 2005).[56] Therefore, facing a conflict situation, older decision-makers emphasize a response that provides immediate outcomes. At the same time, younger individuals tend to have longer time horizons, both in the sense of expected life-span but more so in having more time to extend their political career (or opportunities to have a political career) (Blake, 2013). These arguments lead to a hypothesis about the relationship of age and conflict time horizons:

H_{8b}*: Older individuals are more likely to display short time horizons*.

The last individual-level factor that I account for is risk preferences. The logic is that decision-makers that are less sensitive to risks are more open to the uncertainty of conflict and are willing to adopt a long-term orientation in which the desired outcomes are further in the future.

[55] Overall, most empirical results show that even with high (innate) discounting, we can identify variations in conflict time horizons.

[56] In recent work by Lechler and Sunde (2019), time horizon are conceptualized as dependent on age and life-span perspective, and related to public opinion on democracy.

On the other hand, those that are risk averse find it difficult to cope with this uncertainty and favor addressing it and resolving the conflict as soon as possible.

The effects of risk perception on conflict behavior has been studied extensively in the literature (Horowitz, Stam and Ellis, 2015; Vertzberger, 1998). I contend that since conflicts involve high level of uncertainty and ambiguity (Macdonald and Schneider, 2017; McDermott, 2001; Vertzberger, 1995), the degree of actors' risk aversion will shape their time horizons as they attempt to cope with this uncertainty and address the security threat.

The link between risk aversion and time horizons is based on insights from *Construal level theory* (CLT). It is a psychological approach that explores how spatial, social and temporal distance shapes decision-making by addressing how individuals construe (i.e. represent) events in their minds (Trope and Liberman, 2010, 2000). The theory distinguishes between short- and long-term orientations and suggests that for more distant events, individuals apply a schematic (higher level or abstract) interpretation. On the other hand, events which are temporally closer prompt a low-level interpretation which is detail-oriented and more specific (Liberman, Sagristano and Trope, 2002).

I argue that risk preferences shape time horizons as part of addressing the uncertainty of a conflict situation. Thus, individuals who are risk averse have short time horizons since emphasizing shorter temporal distance means greater attention to details, which helps reducing the degree of uncertainty in the conflict situation. On the other hand, risk accepting individuals possess longer time horizons since they are focused on achieving a greater outcome (an abstract objective) and are less concerned about the details required to accomplish this goal. It also means they are open to accept that some uncertainty exists in the situation and it will 'resolve itself' in the future. The hypothesis in this case is:

H_{8c}: High risk aversion increase the likelihood of short time horizons.

An Interactionist approach

The theoretical framework discussed above details the relevant factors that explain variations in time horizons in conflict situations. As I argue in the previous chapter, some of these factors are discussed in the literature but there is no clear theoretical structure to explain why temporal orientations vary in certain situations.

In order to address this gap, I develop the framework further and explain how the interplay between these factors generate variations in time horizons in conflict.

The logic of using an interactionist approach is to explain the outcome, in my case, time horizon in conflict, as a function of the interactions between the actor and her environment. While this approach is not new to political science (Sprout and Sprout, 1957), it is less common as many theories focus on parsimonious frameworks that have as 'few moving parts as possible'. Nevertheless, several studies of foreign policy and conflict behavior adopt this conceptual approach. One of the classic papers is Herrmann, Tetlock and Visser (1999), who assess public opinion regarding military interventions based on situational as well as individual factors. Recent work adopt this approach less directly in order to explain leaders' choices in conflict (Carter and Nordstrom, 2017; Macdonald and Schneider, 2017).

In addition, scholars employ an interactionist approach to explore complex concepts that are difficult to define and measure. Two studies stand-out in the context of foreign policy. First, Davies and Johns (2013) leverage the logic of individual and situation to explore *Audience costs* with a public sample in the UK. Second, Kertzer (2016) address the question of *resolve* and uses an interactionist approach to identify the 'micro-foundations' of actors' resolve in international politics (see also, Kertzer (2017)).

I follow a similar path as the concept that I explore is also latent and complex to define and measure (Bollen, 2002; Fearon, 1998). In his discussion of this conceptual approach, Kertzer (2016) present different 'types' of interactionist theories. My work employ two of these - first, understanding the variance of the outcome based on factors in both dimensions by using an additive

model. This is the basic and most simple version that provides a baseline for understanding the relative contribution of each relevant factor to the observed outcome. Second, I utilize the more common (multiplicative) interaction model[57] in which the outcome depends on the conditional relations between factors. Such an approach allows to estimate both multiplier effects (how the presence of both sets of factors enhance the observed outcome) as well as define scope conditions in the sense of when certain traits are bound to be activated and contribute to an outcome.

One important goal that I accomplish by applying an interactionist approach is that it better mirrors reality. While we strive to present parsimonious models of behavior, very rarely do factors operate independently in social situations. In most cases, our time horizons are a function of the combined effect of factors operating simultaneously. For example, salient conflict situations also involve costs (in terms of casualties) and as such, our time horizons will be shaped by the effect of both factors 'working together'.

Considering this approach, what should be our expectations of the conditional effects between factors and how it shapes the resulting time horizons?

I offer two propositions in this context. According to the main proposition, the situational factors moderate the effects of individual dispositions and shift decision-makers away from their preferred temporal orientation. For example, older politicians have higher propensity to display shorter time horizons in their policy actions (Blake, 2013; Horowitz, McDermott and Stam, 2005). Yet, those decision-makers may face a situation that compels them to shift away from that orientation due to certain constraints such as high immediate costs. Similarly, I described the logic according to which individuals who are risk-acceptant are more likely to display long time horizons. However, facing high future costs, these actors are likely to shorten their time horizons. Therefore, the main proposition is that the situational factors are likely to moderate the effects of individual dispositions and shift decision-makers' time horizons.

[57] Herrmann, Tetlock and Visser (1999) describe this type as 'ordinal interaction'.

H_{9a}: Situational factors will moderate the effects of individual dispositions and are likely to shift actors away from their preferred time horizons..

I explore an additional iteration of these interactions. In particular, the second proposition focuses on an interaction that fits with *the multiplier effect* interpretation - the interaction between two factors enhances the effect (i.e. the outcome) in the same direction.

Individuals who are long-term oriented (discount the present) tend to place higher value on future outcomes. If such individuals face a context in which the expected benefits in the future are high, they may be 'pushed' even further towards a long time horizon. For an individual decision-maker in a conflict scenario, benefits are less clear than costs and as a result, the latter outweighs the former when assessing the situation. In other words, individuals that evaluate a conflict situation tend to emphasize minimizing the expected costs at the expense of securing potential benefits. Therefore, the conditional effect of costs on time preferences will generate a multiplier effect and enhance the dispositional tendency in the same direction. Thus, facing high immediate costs, individuals who display long-term time preferences are even more likely to have a long time horizon.
H_{9b}: High immediate costs and long-term time preferences increase the likelihood of long time horizons.

Summary

In this chapter, I present my theory about time horizons in conflict and address two of the primary gaps in the literature of time horizons and foreign policy.

First, in order to assess more explicitly the role of time horizons within conflict behavior, I use insights from decision science (Beach, 1993, 1990; Beach and Strom, 1989) and develop a theoretical framework that unpacks the decision-making process to two sequential phases. I argue that the effect of time horizons is most prevalent in the initial phase - the pre-choice screening of alternatives and formation of a choice-set of preferred policy options. Following the screening

phase and formation of a 'short-list' of preferred alternatives, decision-makers engage in a more rigorous assessment of the 'surviving' options and select the one which offers the highest net benefits. I complete this part of the analysis by discussing the role of the choice-set within the decision process. Based on research on *contextual preference reversal* (Huber, Payne and Puto, 1982; O'Curry and Pitts, 1995; Trueblood et al., 2013; Tsetsos, Usher and Chater, 2010), I posit that the composition of the choice-set is critical for the eventual selection of a conflict strategy. Therefore, when assessing conflict decision-making, we must account for the formation of the choice-set based on time horizons, and how it may lead to variations in these choice-sets that can alter the final choice.

In the second half of the chapter I address the question: what explains variations in time horizons in conflict? (Edelstein, 2017). To explore this puzzle, I develop a framework that integrates theoretically relevant factors from the situational and individual levels of analysis. I adopt an interactionist approach (Herrmann, Tetlock and Visser, 1999; Kertzer, 2016) that goes beyond the independent causal effect of the various factors in each level of analysis, and explains how their conditional relations shape variations in time horizons. The framework details how these factors generate different temporal orientations for elite decision-makers as well as members of the public. In addition to describing the independent causal effects of these factors on time horizons, I derive several propositions regarding their conditional relations and how it leads to different temporal perspectives.

In the following two chapters, I conduct several empirical tests of these frameworks at the micro- as well as macro-level. I begin with an empirical assessment of the framework that employs time horizons as an explanatory variable and utilize a survey experiment in which respondents engage in a two-phase decision process. The experimental design manipulates respondents' time horizons as well as conflict information in a mixed factorial design. I employ several tests to evaluate how those varying temporal orientations affect the screening of policy options, followed by the selection of preferred alternative.

Then, a second empirical chapter includes several tests of the integrated framework which evaluates time horizon as a dependent variable. I begin with an internal validity assessment using an experimental research design that measures time horizon based on respondents selection of their preferred policy options. I employ two treatments to manipulate the situational conditions, and use a post-choice survey to account for individual dispositions. Using several analyses, I estimate how the various factors shape variations in time horizons. The second part of the chapter builds on the experiment and includes an external validity test of the framework. I use observational data on political leaders in conflict situations to study how the factors in both levels of analysis explain their different time horizons facing international conflicts and security crises from 1918 to 2015.

CHAPTER IV

TIME HORIZONS IN CONFLICT: THE DECISION-MAKING PROCESS

The prospect of a costly conflict situation propels many political leaders to proclaim that they evaluate every possible option to address the potential threat. For example, facing the continued political turmoil in Venezuela, former US president Donald Trump stated in February 2019 that "all options are on the table" to ensure the transition of power (Caputo and Orr, 2019). Failing to mobilize the international community to address the (potential) nuclear threat from Iran, Israeli Prime Minister Benjamin Netanyahu argued in late 2011 that "...Israel would like to make it clear that all options are on the table" (Harkov, 2011). These statements by political leaders suggest that in the face of a national security conflict, they engage in an exhaustive deliberation process before selecting a response policy.

However, in reality, most decision-makers focus on a more restricted 'short-list' of their preferred alternatives, evaluate these options, and make their final selection out of this reduced list. For example, during the Cuban missile crisis (October 1962), the Kennedy administration proposed six policy options (Allison, 1969), yet most historical accounts suggest that only two of them - a surgical air strike and the eventual quarantine policy, were seriously debated.

In contrast to the political statements presented above, the Cuban missile crisis example illustrates that in most decision-making scenarios, we tend to focus our evaluation and subsequent selection of an alternative on a reduced 'short-list', *a choice-set*, that consists our most favored policy alternatives. In the previous chapter, I introduced a theoretical framework that unpacks the decision process into two-phases to explain how these choice-sets are formed. Time horizons have a prominent role in the first phase as they serve as a screening mechanism that affects the construction of these 'short-lists' of policy alternatives. In the subsequent phase, a more thorough assessment of the surviving options is conducted and the decision-maker selects the one which offers the highest net benefit.

In this chapter, I conduct an empirical assessment of the theory and the role of time horizons as an independent variable that shapes the entire decision process. To evaluate this framework, I design an experiment in which participants are situated in an explicit conflict scenario and are asked to assess multiple policy options to address a security threat. The central treatment manipulates participants' temporal orientations as either short- or long-term. In addition, the policy options to address the conflict vary in their short- and long-term implications. To assess the role of time horizons, respondents complete two decision tasks. First, screen policy options into a 'short-list' of their favorite alternatives. Then, they select a preferred option from the restricted choice-set.

The results indicate that time horizons shape the formation of choice-sets in terms of both size and composition. I find that the choice-sets of actors with long time horizons are larger and more diverse compared to short-term oriented actors. Thus, decision-makers with a long time horizon set lower threshold for accepting policies into their reduced 'short lists'. For the subsequent phase of policy selection, the results suggest that actors prefer the option with the highest chances of success. However, under certain conditions, they are open to selecting 'less successful' policies. Such a choice is more likely when a policy offers positive outcomes in the reciprocal time frame (e.g. positive outcomes across time), as well as relatively high chances of success (but not necessarily the highest). Lastly, using a separate analysis based on an embedded experiment, I demonstrate that both the size and composition of the choice-set shape the final policy selection. Modifying these elements results in a contextual preference reversal of policy options, and decision-makers changing their initial choice of policy.

Using experiments and public opinion

For the empirical analysis in this chapter, I utilize an experimental research design. Assessing the theory with this method offers several benefits. First, one of the main advantages of an experiment is the ability to introduce treatments that allow the researcher to control the direction of causality and estimate the effect directly (Morton and Williams, 2008). For my purposes, this is a critical

element since it allows me to estimate the effect of a latent factor that is difficult to measure (Bearce, Floros and McKibben, 2009; Fearon, 1998; Streich and Levy, 2007). In order to provide a clear measure of time horizons, I use multiple treatments in a mixed factorial design that controls for a host of potential confounding factors.

Second, the theory I test in this chapter unpacks the decision process into several phases. Using observational data, it may be difficult to identify and test the different steps in this process. With an experiment, I can model, and specifically measure each phase separately. As argued by Kertzer (2016), the use of an experiment can reduce the problem of inferring decisions from outcomes. This method offers the tools to measure the phases within the process and how it leads to the final outcome.

Lastly, as the focus of the theoretical framework is the individual decision-making process, I employ the research design which is most appropriate for accounting for the various factors in this level of analysis. An experimental design allows me to collect information about actors' individual characteristics and ask for their preferred choices in a specific context.

Despite the appeal of the research design and the easy access to public samples, the main limitation of using an experiment in this context relates to issues of external validity (McDermott, 2011, 2002). I discuss decision-making in a political conflict, which is more prevalent for elite decision-makers (Renshon, 2015). The main argument is that elites rely on domain-specific experience and thus possess different decision-making skills. These skills allow them to better handle issues such as loss aversion, use of heuristics and overall displaying behavior which is closer to rational choice models (Hafner-Burton, Hughes and Victor, 2013). Therefore, using convenience public samples places participates in a position in which they lack such experience and as a result, the evaluation of the theoretical mechanism is less precise and may introduce biases to the observed outcomes.

As I briefly discuss in the previous chapter, I recognize the challenge of applying my decision-making model for all types of actors (both citizens and elites) and, at this point, offer a more de-

tailed justification for this choice. The central argument in this context is that politicians' decision calculus is at least partially influenced by public opinion (Baum and Potter, 2015). Thus, foreign policy choices are also a function of a 'bottom-up' process (Kertzer and Zeitzoff, 2017) which results in relative similarity in foreign policy views between the public and its leaders as the latter responds to its base of support, mostly due to the mechanism of accountability and the desire of political decision-makers to remain in office (De Mesquita et al., 2003).

An extensive amount of research provides evidence for these arguments. Earlier studies found a match between elite and public opinion regarding the use of force after adjusting for demographic differences (Wittkopf and Maggiotto, 1983). Based on their assessment of public surveys, Page and Shapiro (1983) suggest that it is possible to predict leaders policy decisions when considering public opinion on salient IR issues.[58]

Recent research by Tomz, Weeks and Yarhi-Milo (2019) uses cross national public and elite samples to study two mechanisms that explain how public and elite foreign policy choices converge. Their results show considerable similarity between leaders and public opinion with respect to using military force. In another study, Friedman, Lerner and Zeckhauser (2017) assess how individuals conduct probability estimates for national security issues. Their experiment compares the assessment of both experts and public samples, finding a fairly similar results for both populations. They contend that such results further enhance the credibility of using non-elite samples to study national security issues. Several other studies of foreign policy behavior present empirical evidence about the relative congruence in views between the public and political leaders in these issues (Renshon, Yarhi-Milo and Kertzer, 2016; Sheffer and Loewen, 2018; Sheffer et al., 2018).[59]

While this argument is most prevalent in democratic regimes, recent body of work challenge the assumption that the public in autocracies is irrelevant for leaders' foreign policy decisions

[58] Herron and Jenkins-Smith (2002) show similar belief structures between elites and the masses in the context of nuclear security. Holyk (2011) finds comparable foreign policy opinion structures among elites and the mass public.

[59] A recent meta-analysis of studies that measure both elites and public opinion finds that both populations respond to treatments in very similar ways, see Kertzer (2020).

(Weeks, 2008; Weiss, 2013). Weiss and Dafoe (2019) use surveys in China and find that, even in non-democratic regimes, leaders face the risk of substantial public criticism due to foreign policy choices. While their findings describe the effect as 'relatively muted and malleable', it suggests that public opinion also matters outside democratic regimes, albeit to much lower degree.[60]

One final point of this discussion is more general. Criticism of external validity of public samples has been a long debated issue in political science as a whole, and within IR and conflict studies. However, my main contention is that experiments are designed mainly to test hypotheses that are deduced from a given theory. Further echoing sentiments expressed by Mook (1983, p. 386) that "Ultimately what makes research findings of interest is that it help us understand everyday life. That understanding, however, comes from theory or the analysis of mechanism; it is not a matter of 'generalizing' the finding themselves". He suggests, then, that the results simply support the logic of the theory, given that the experiment is an appropriate representation of the theory. Further supporting this logic, in their recent review, Hafner-Burton et al. (2017) argue that for theories which are expected to apply to *any decision-maker* (emphasis mine), using convenient samples for empirical analysis is appropriate as long as researchers assure that the investigated treatment is randomly assigned, thus allowing an appropriate identification of the causal effects.

Research Design

In order to test the theoretical propositions regarding the effects of time horizons on the decision-making process in conflict scenarios, I design a two-phase experiment that mirrors the theoretical framework. This section details the instrument used in the experiment, followed by results of internal validity tests and then, the main results.

[60] See also Quek and Johnston (2018) on how public support varies based on the choice of foreign policy by China's leaders.

I utilize Amazon Turk services to recruit a national sample of 1100 participants during June 2019.[61] The use of MTurk is prevalent in political science and past work demonstrates that participants in these surveys provide results that are relatively similar to a national representative sample (Coppock, 2019; Coppock, Leeper and Mullinix, 2018; Huff and Tingley, 2015). The sample consists of 50% females and 50% males. Similar to other MTurk samples, most respondents have an undergraduate (46.8%) or graduate (15%) degrees, while 28.6% have some college education. Income levels are moderate (42% earn between $50k to $100k annually) to low (about 45% earn less than $50k annually). Respondents' age ranges between 20 and 79 with a mean of 38, and median of 35. Lastly, sample respondents are more liberal with 45% on the democratic side of the scale, another 19.4% rank as center (4 on a 7-point scale) and the remaining 35% on the republican side.[62]

The Context

One of the primary challenges of estimating the direct effects of a latent factor as time horizons is to introduce appropriate measures in the survey instrument. Therefore, the design incorporates several tools to address the issue. The first is situating the decision-makers in a relevant context. As I study the role of time horizons in conflict, I introduce an explicit conflict scenario that respondents can recognize - a large American military base in Afghanistan under severe attacks from enemy forces. I ensure that respondents are aware of the threat by adding that the base *"...has been under constant attacks over the last 6 months (resulting in both casualties ans damages)"*. The main task in the experiment is to select a policy to address this situation. In order to stress the importance of this task, the scenario includes the statement: *"Military decision-makers need to implement a policy that will provide a secure environment"*.

[61] In pre-tests, I ran the design on a large sample of undergraduate students recruited from a south-western public university during Spring 2019. Most results of these pre-tests are similar to the main results.

[62] For a more comprehensive analysis of the sample, see Appendix A.2 (power analysis for sample size), and descriptive statistics (Appendix A.3)

Using the context of American military intervention in a foreign dispute is prevalent in studies of conflict choices (Herrmann, Tetlock and Visser, 1999; Levendusky and Horowitz, 2012; Levy et al., 2015; Tomz, 2007). I employ a more explicit scenario that describes a relatively long campaign of insurgents targeting a major American military base in Afghanistan. The logic behind this design choice is to increase the likelihood that respondents understand the severity of the context and properly assess the proposed policy options prior to making a choice. As more studies address the issues of respondents' attention and seriousness (Bayram, 2018; Berinsky, Margolis and Sances, 2014), the context of my experiment is intended to amplify the incentives for a serious evaluation of the options.

Dependent variables: Policy screening and selection

The empirical analysis tests the effects of time horizons on the two-phase decision process. The design accounts for both phases with separate measures.

Phase 1: Pre-choice screening. After reading the scenario (which presents the main time horizon treatment, see below), respondents face an initial list of seven policy options. These options are presented with their projected chances of success in the relevant time frame (55%-85% in five percent intervals). The first task involves the decision of whether to accept or reject these options for further evaluation. Therefore, I use a dichotomous variable coded 1 for accepting an option into the choice-set, and 0 for rejecting it (see figure 4.1 below for a partial screen-shot of the screening task page, full instrument is detailed in Appendix A.1). In order to collect more sensitive measures, I ask respondents to rate, on a 1-7 scale, how confident they felt about their choices.

Phase 2: Policy selection. In the second phase of the experiment, I focus on the selection of a policy from the restricted choice-set. After screening the initial seven policies, each respondent faces her own unique choice-set (only the options she choose to accept for further evaluation). To measure the preferred policy in this 'short list', I employ two indicators: (1) respondents select

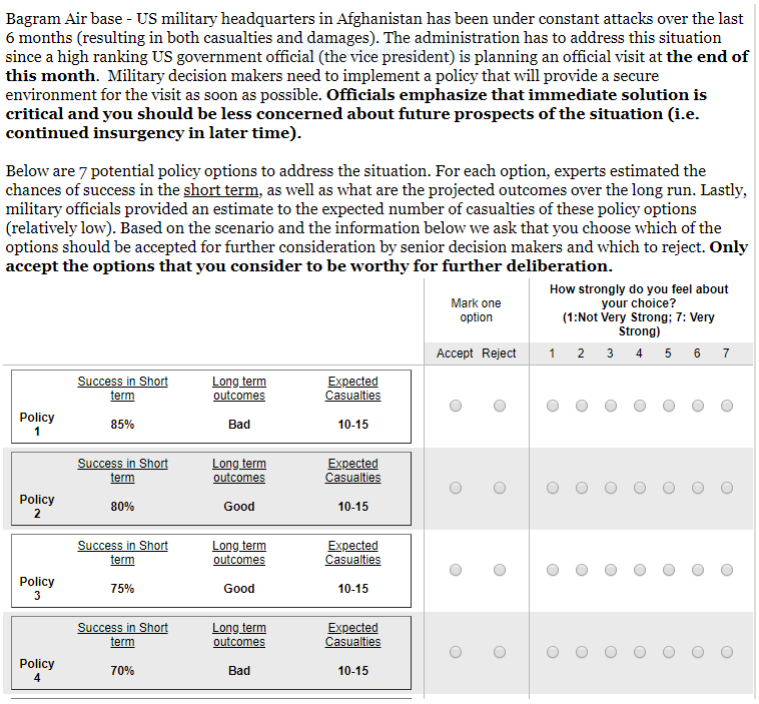

Figure 4.1: The pre-choice screening phase

their favored option of the surviving alternatives; (2) respondents rate each policy in the restricted set on a 1-7 scale (see figure 4.2 below).

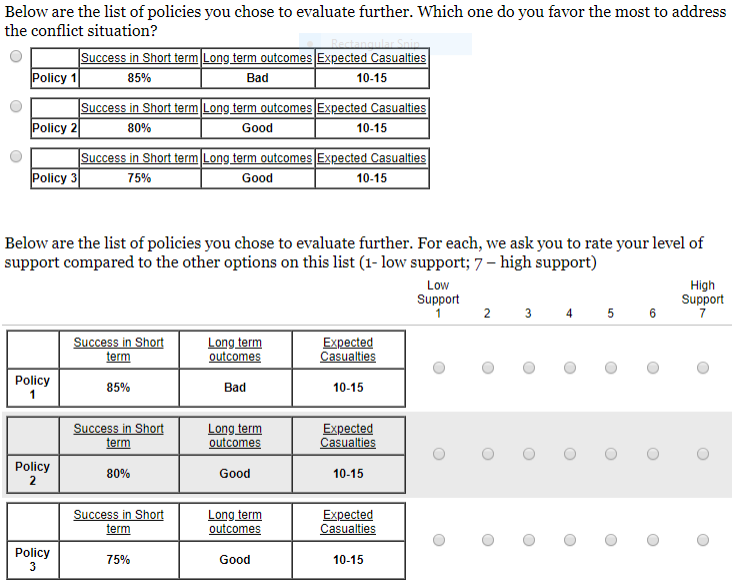

Figure 4.2: The policy selection phase

An embedded experiment. The second empirical analysis I conduct in this chapter focus on testing H_4 - how does introducing changes to the choice-set composition affect the distribution of support for the alternatives in the choice-set. I test this question by adding an embedded experiment into the design. After completing both tasks in the two-phase decision process (as described above), I begin this section with a reiteration of the scenario (to ensure respondents are still aware of the context). Then, I introduce two combinations of choice-sets (figure 4.3 below illustrates one combination: sets A and B).[63] In set A (and C), I ask respondents to select a policy out of two options. Then, I ask for the preferred policy from set B (and D): a three-option choice-set in which the first two options are the same as first set, and an additional option is added.[64] I use two indicators for this decision task: A dichotomous variable measures the preferred policy in the binary choice-sets (two alternatives), for the three-option choice-sets, I use a variable with the values 1-3 to fit all three alternatives.

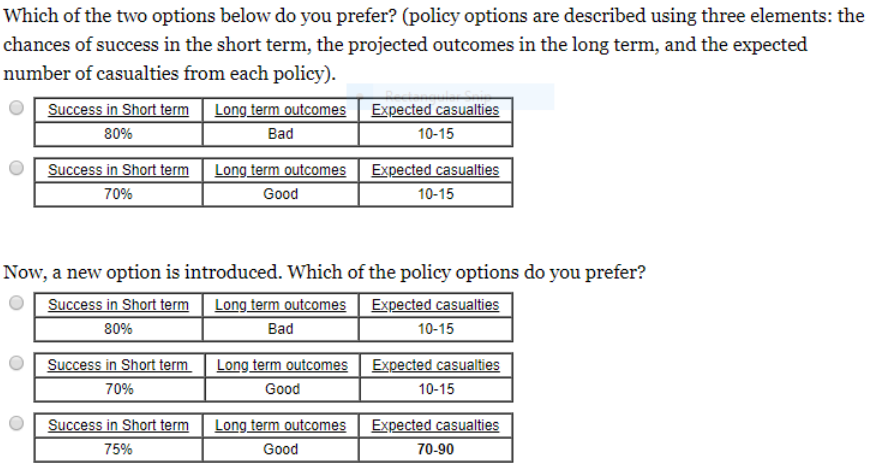

Figure 4.3: Policy Selection: The embedded choice-sets

[63] All respondents face sets A-D and in the same order.

[64] The components of all policies are similar to the previous phases: chances of success in the relevant time frame (depend on the main time horizon condition), outcomes in the reciprocal time frame and the extent of casualties. More detailed description is given below.

Independent variables: Experimental treatments

The experiment employs a 2x2x2 factorial design[65]. The main explanatory factor in the analysis is the decision-maker's time horizon. Due to the complexity of measuring this concept, I introduce two treatments.

1. **Time horizon (main)**: A between-group treatment in which I introduce variations in time horizons by describing a time related objective for the conflict. The objective is to address the security threat and reduce tensions since a senior administration official is scheduled to visit the military base. In the short-term condition, the visit is scheduled at the end of the month. For the long-term condition, the visit is planned for the following year (about 8 months away). To further emphasize the temporal dimension of each condition, I complement this treatment by describing the projected probabilities of success for each policy option in the related time frame (for short time horizon, chances are for short term, and vice versa for long term, see figure 4.1 for an example).

2. **Outcomes in the reciprocal time frame**: Since time horizons describe an individual's view in both the short- and long-term, I introduce another between-group treatment that describes the projected outcomes for each policy option in the reciprocal (complementary) time frame. These outcomes are described generally as either positive or negative (I randomly assign outcomes to each of the seven policy options, and reverse their values in the second condition). Thus, the reciprocal treatment for the short-term condition also describes the projected outcomes in the long-term (and vice versa for long term condition).[66]

[65] The factorial design (2x2x2) generates a total of 8 experimental cells. I add two baseline conditions in which the only treatment is the main time horizon (short / long). These conditions involve less information and serve as controls for the analysis.

[66] In the example presented in figure 4.1, the participant is assigned into the short time horizon condition. Thus, the first column described chances of success in the short-term and the second column presents the reciprocal (long-term) outcomes. For the long-term condition, the description of items is reversed.

Costs (Human casualties) treatment - While my primary concern in this analysis is to estimate the effect of time horizons on respondents' choices, there are other factors that drive policy preferences. In the context of conflict, costs (especially human costs) are a central aspect of policy support (Gartner, 2008; Koch, 2011; Valentino, Huth and Croco, 2010). Therefore, I introduce an expected (human) costs treatment with high and low conditions.[67] In order to refrain from overcomplicating the design and subsequent analysis, in each pertinent condition all policy options have the same level of costs.

In addition to the experimental treatments, the post-choice questionnaire collects information about several demographic characteristics of the participants: age, gender, education, foreign policy knowledge, income and partisanship. For most measures, I have no preregistered expectations of their effects on the choice. Yet, based on previous research, I expect age to correlate with time horizons in the sense of older respondents displaying shorter time horizons (Horowitz, McDermott and Stam, 2005; Lechler and Sunde, 2019).

Internal Validity

One of the main advantages of experiments is their ability to measure direct causal effects in complex situations (Hyde, 2015; Morton and Williams, 2008). However, it is essential to ensure the internal validity of the design. Therefore, before delving into the main results, I provide evidence regarding the internal validity of the experimental design. The findings of this section show that for the most part, the design properly captures the different concepts and respondents are aware of the information in both the scenario and experimental treatments.

First, a central concern in studies that employ survey experiments is that respondents pay attention to the details described in the text (Berinsky, Margolis and Sances, 2014; Clifford and Jerit, 2015) and complete their tasks seriously (Anson, 2018; Bayram, 2018). To address these

[67] High costs condition is 70-90; low costs condition is 10-15 casualties.

concerns, I utilize two items as factual manipulation checks (FMCs) (Kane and Barabas, 2018). For both items, a high proportion of respondents recognize details such as the location of attack (91%, a military base), and the country where the conflict takes place (90%, Afghanistan).

The other concern for internal validity is to ensure that the experimental treatments operate as expected. I utilize several items for these checks. The first item asks whether respondents are aware of the main temporal treatment ("When is it more critical to address the attack?"). The results from probit and ANOVA models show that the time horizon treatment is significant and in the expected direction.[68] A second item asks respondents to rate the level of human costs in their preferred policy. The results of an ANOVA model show that the high costs condition led respondents to evaluate the expected costs as higher than the low cost condition. The final item is intended to assess the degree of importance responders assign to this scenario. Measured on a 1-7 scale, the mean response is 5.73 which is relatively high. In addition, I run an OLS regression model with the importance item as a dependent variable and the experimental treatments as independent variables. The results show that the time horizon treatment is negative and significant suggesting that respondents perceive a short-term objective as more important ($m = 5.82$ for short-term vs. $m = 5.65$ for long-term, $p < .05$).

Taken together, the results of these tests indicate that the design offers a relatively strong internal validity. Most of the findings show that participants are aware of the differences between conditions and understand the context of the conflict situation.

Results

Time Horizons - a screening mechanism

I begin the analysis with the pre-choice screening phase. Since I assess potential changes in the size of the choice-set, it is useful to identify differences in size based on the experimental conditions.

[68] About 85% of respondents in the short-term condition answer this item correctly, for the long-term condition, the number is almost 80%.

I employ two ANOVA models.[69] In model 1, the time horizon treatment is significant ($F = 2.82, p < 0.1$). The casualties treatment is also significant ($F = 21.07, p < 0.01$) and the reciprocal outcomes treatment is not significant. For a clearer discussion of the differences in size, I calculate the contrasts for the mean choice-set size based on the experimental conditions. For the main time horizon treatment, the contrast indicates a small difference in size on the verge of statistical significance ($m = 3.21$ and $m = 3.36$, $p = 0.11$). These mean values suggest that respondents in the short time horizon condition formed a smaller choice-set. The casualties contrasts indicate significant differences between the control and treatment conditions. Thus, with no information on costs, the mean set size is larger ($m = 3.97, p < .05$) compared to either low costs ($m = 3.10, p < .05$) or high costs ($m = 3.11, p < .05$) conditions. The contrast comparing low and high casualties is not significant suggesting that whether the casualty figures are high or low does not impact the set size. The contrasts of the reciprocal outcomes treatment are similar to the casualties. That is, the average choice-set is smaller for respondents who view this information compared to the control condition (no information on reciprocal outcomes).

Model 2 replicates the analysis and includes all individual covariates. I find similar effects for the experimental treatments. Two additional findings are relevant for this discussion. First, *age* is statistically significant ($F = 1.26, p < 0.1$). I compute the means for different age groups and compare the size of their choice-set. The oldest respondents (older than 55, 90$^{\text{th}}$ percentile) accept less items into their restricted set. Younger individuals (less than 30 years old, the 25$^{\text{th}}$ percentile) evaluate a choice-set approximately 15% larger ($m = 3.38$) than the oldest respondents ($m = 2.89$). Previous studies argue that older actors have short time horizons (Horowitz, McDermott and Stam, 2005; Lechler and Sunde, 2019). This argument fits my results since older respondents (who have shorter time horizons) rejected more options and formed smaller choice-sets.

Second, both the foreign policy knowledge and education level indicators are statistically significant. Comparing high versus low levels of education and foreign policy knowledge demon-

[69] A complementary analysis using OLS regression models is presented in Appendix A.4

strate that the average choice-set is larger for the former group. These differences support the argument that possessing more knowledge increases the amount of options under consideration. In the bargaining literature, individuals who are long-term oriented opt to prolong the process, obtain more information and consider more options in an attempt to secure what they perceive as the best bargain (Fearon, 1998). My results fit this logic as I find that more informed individuals weigh more alternatives.

The results thus far provide preliminary evidence for the role of time horizons as a screening mechanism and how it affects the choice-set (H_1). The lack of robust statistical support can be attributed to the design that captures the time horizon concept with a main indicator (the time horizon treatment) and a complementary one ('reciprocal' outcomes that tap into the trade-off in temporal implications). While the experimental treatments have independent effects, they are conceptually related to one another. To conduct a clearer test of time horizons as a screening mechanism, I use a more restricted test in which I compare the mean size of the choice-set only for the baseline conditions. Such an analysis allows a direct comparison of the effects of time horizons since the only difference between both conditions is whether the available policies are projected to succeed in the short- or long-term (the values for chances of success are similar for both conditions).

I run a univariate regression model to estimate how the time horizons treatment affects the choice-set size. The coefficient is positive and statistically significant ($\beta = 0.341, p < 0.1$), and the mean size of the choice-set for respondents with short time horizons is smaller ($m = 3.98$ vs. $m = 4.31, p < .05$). Figure 4.4 displays two density plots of the mean choice-set size and the time horizons conditions based on the full and reduced samples. The probability distributions in both plots are derived from 2,500 bootstraps to provide estimates of uncertainty. Panel A displays the mean choice-set size of both conditions, short and long time horizons, for the full sample. Panel B displays the means for the reduced sample. In this plot, the difference in means is larger and statistically significant.

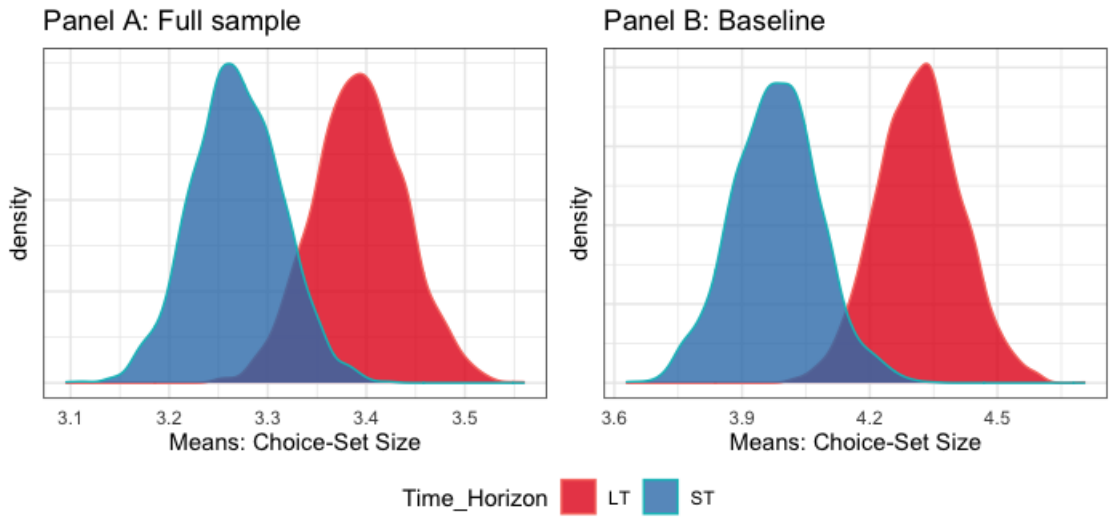

Figure 4.4: Time horizons and choice-set size

A substantive interpretation of this analysis is that long-term orientated actors are willing to consider more policy options that have, by design, lower chances of success compared to those with a short time horizon. In other words, the threshold for accepting policy options into a choice-set is higher for individuals who are short-term oriented. This finding is important since it is the 'cleanest' possible test for the effect of time horizons - it directly evaluates the different temporal implications and does not contain potential confounders such as casualties. In addition, this finding supports H_{2a} - actors with short time horizons are less likely to accept alternatives that have lower chances of success, i.e. those actors reject options that have lower probability of providing immediate outcomes.

In addition to the size of the choice-set, I argue that actors' time horizons also affect its composition, i.e. some options are more likely than others to enter the set, contingent upon the decision-maker's time horizons. To test this proposition, I utilize probit regression models and estimate the likelihood of accepting certain policy options into the choice-set. Within my data, the average choice-set size is approximately three, thus I focus the analysis on the top three policies. In figure 4.5, I depict box-plots of these policies with their predicted probabilities of entering the

choice-set. Policies 1 and 2 are most likely to survive the screening, followed by policy 3 with a mean probability of 56.3% to enter the restricted choice-set.

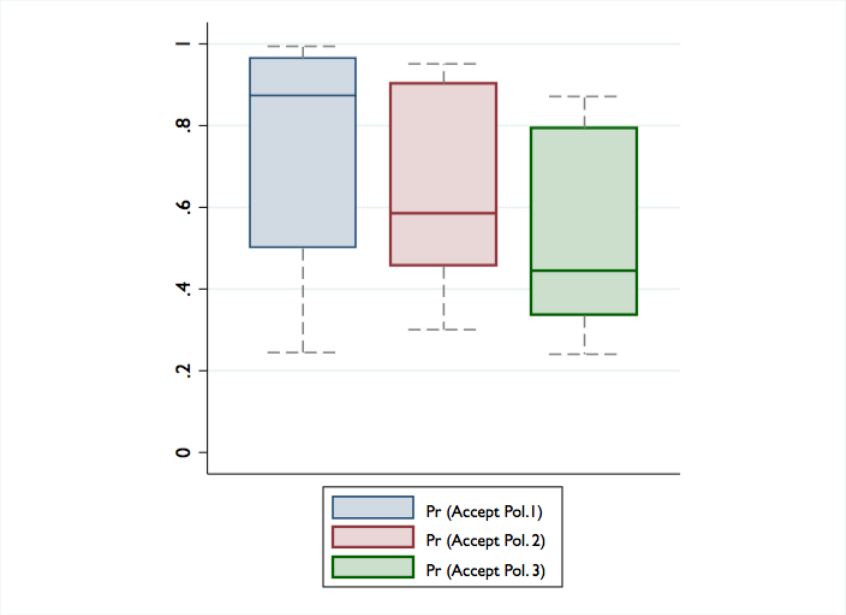

Figure 4.5: Screening policies 1-3: Predicted probabilities

To estimate the effect of time horizons on the likelihood of accepting a policy into the choice set, I run probit interaction models that account for the conditional relations between both elements of the time horizon concept (the 'horizon' and 'reciprocal' treatments).[70] For a clearer presentation of these effects, I derive marginal effects plots in figure 4.6 below. In both plots, the x-axis represents the conditions for the reciprocal outcomes treatment, and the main time horizon conditions are represented with the colored markers.

The left-hand plot displays the probabilities for accepting policy 1. For a policy with high chances of success, when reciprocal outcomes are positive, there is no difference between both time horizons. In other words, the likelihood of accepting this policy into the choice-set is high regardless of the temporal dimension since there is no downside for such a choice.

[70] For this analysis, I use a reduced sub-sample (without the baseline conditions) since I cannot analyze the interaction terms for the full sample due to empty cells in the baseline conditions. Full results are presented in Appendix A.5

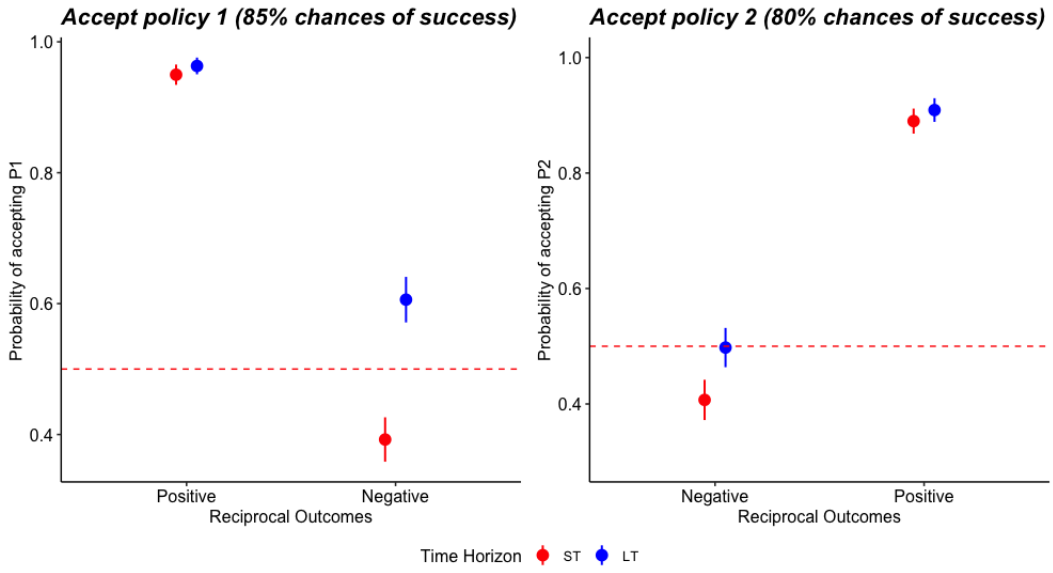

Figure 4.6: Screen policies 1&2: Conditional effects

When reciprocal outcomes are negative, a trade-off emerges and the effect of the temporal implications becomes clearer. Under such conditions, a short-term policy 1, with negative long-term outcomes, is less likely to be accepted ($m = 39.3\%$, the red marker) compared to more than 60% likelihood of accepting a long-term policy with negative short-term outcomes (the blue marker). This outcome is significant since it reflects a preference for long-term results at the expense of negative immediate outcomes, supporting H_{2b}. In addition, the casualties factor is insignificant, suggesting that when actors engage in pre-choice screening, they emphasize the temporal implications and are less sensitive to the human costs involved in each option.

The right-hand plot displays the likelihood of screening policy 2. The interaction between both conditions is not significant. Yet, once again the trade-off is evident when we compare between 'reciprocal' outcomes. A short-term policy 2 with negative future outcomes is 40.2% likely to enter the set; a similar long-term policy is about equal-odds ($m = 49.7\%$). This result, while weaker, is on-par with policy 1 above showing that long-term oriented actors set a lower bar for accepting alternatives for additional evaluation.

Thus far, the analysis demonstrates that both elements of the time horizons concept affect the size, as well as the composition of the choice-set. One missing aspect in all these tests is that in reality, actors assess policies simultaneously. In other words, the analysis can be improved by assessing the effects of these factors while accounting for potential correlations between the different policy options.

In the screening phase, respondents are asked to evaluate seven policy options. To account for potential inter-correlations, I conduct a multilevel analysis using a random effects model specification. First, I reshape the data to a long-form structure in which each respondent has seven separate observations (one for each policy). While the time horizon and casualties treatments do not vary within the seven policies proposed, the chances of success and reciprocal outcomes do. Therefore, I add two variables to the formatted data. *Success* describes the projected chances of success for each policy and ranges from 55% to 85% in a five-percentage intervals. *Other outcome* is a binary variable coded 1 for each policy that has positive outcomes in the reciprocal time frame, and 0 when the outcomes are negative.

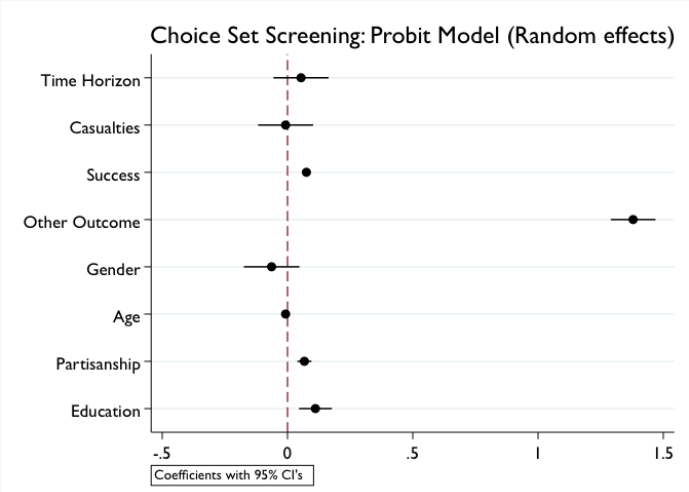

Figure 4.7: Screening policies: Multilevel analysis

Figure 4.7 presents a coefficients plot from a probit regression model with random effects. The two factors that do not vary between policies, time horizon and casualties, are not signifi-

cant. However, both success and other outcomes (represent the reciprocal factor) are positive and statistically significant. Beginning with success, this result suggests that better odds of success increase the likelihood of a policy entering the choice set. The effect is mostly evident for the high values of success as only policies with at least 80% chance are more than 50% likely to enter the set (the best chances, 85%, are highly likely to be accepted with a mean of $m = 91.5\%$). The success factor is a dominant predictor of policy support in many conflict studies (Gelpi, Feaver and Reifler, 2009), and is less an evidence for the time horizon argument. The 'Other outcomes' factor provides a clearer evidence for the trade-off in temporal implications. A policy with positive reciprocal outcomes is more likely to enter the choice set, irrespective of its chances of success.

This analysis adds to the evidence of the effects of the temporal factors on the screening of policy options. First, I implement a test that demonstrate the direct effect of time horizons as a screening mechanism. Then, I use multi-level models that account for potential correlations between policy options that are evaluated simultaneously by the decision-makers. Findings of these additional tests suggest that the trade-off in policy implications affects the screening phase. Overall, results of all these tests show that time horizons are critical in the initial phase of pre-choice screening and influence which alternatives are more likely to be accepted for further evaluation.

The findings above offer support for the role of time horizons as a screening mechanism. Using multiple tests, I demonstrate that the temporal trade-offs in policy implications affect the type of alternatives that are accepted into the choice-set and consequentially, its size.

Policy selection and temporal trade-offs

In the decision-making theory I present, the screening phase (i.e. how the choice-set is constructed) carries a substantial weight in the entire process. However, in most conflict situations, we are more likely to focus on the (observed) selected policy. The experimental design accounts for this phase - after screening the initial options, respondents are asked to select their preferred policy of the

'surviving options' (the restricted choice-set). The central measure for this phase is an indicator for the selected policy out of the (k) remaining in the choice-set.

I estimate the likelihood of selecting the various policies using a multinomial regression model with all three experimental treatments as independent variables. I also account for individual covariates. Lastly, I add a variable for the choice-set size to control for the its potential effect on the policy selection.[71] The results are in Table 4.1, with policy 1 as the reference category. The time horizons factor is negative and significant for policies 2-4, suggesting that for respondents with a long time horizon, policy 1 is the most likely option to be selected. Thus, long-term oriented actors prefer the policy with the highest possible chances to succeed.

The 'Reciprocal outcomes' factor complements the time horizons aspect. It is positive and statistically significant. This result indicates that when the reciprocal outcomes for policy 1 are negative, respondents prefer policy 2 (which has positive reciprocal outcomes), even though it has lower chances of success.[72] A similar effect is evident for policies 3 and 4 - respondents are more likely to select the (relatively) less successful policies when they offer positive outcomes over time. Therefore, decision-makers are sensitive to the temporal trade-off in policy implications, and are willing to select options that are not the most successful, as long as they offer positive outcomes over time. These findings support the main proposition regarding the selection phase (H_3).

I add to these findings an analysis of the long-form data. Exploring the selection phase with this data improves the analysis since it accounts for potential correlations between policy options that are evaluated simultaneously. I add a binary variable *Choice*, coded 1 for the specific policy that is selected (out of the restricted choice set), and 0 for the other policies. Then, I run a mixed effects logit model to assess how the different conditions affect policy selection.

[71] While this variable fits my theoretical argument, it introduces the problem of post-estimation bias (Montgomery, Nyhan and Torres, 2018). I run additional analysis and drop this variable from the model, the results remain consistent, see Appendix A.6

[72] Under such conditions, policy 2 has a 75.6% probability of being selected in the short-term condition, and 69.8% in the long-term condition.

Table 4.1: Policy selection - Multinomial logit model

	Policy Selected		
	Policy 2	Policy 3	Policy 4
Time Horizon	-0.482^{***}	-0.882^{**}	-0.972^{*}
	(0.202)	(0.414)	(0.562)
Reciprocal Outcomes	3.696^{***}	2.73^{***}	1.176^{**}
	(0.217)	(0.400)	(0.542)
Casualties	-0.801^{***}	-0.568	-0.104
	(0.197)	(0.377)	(0.486)
Set Size	0.218^{***}	0.609^{***}	0.478^{***}
	(0.075)	(0.142)	(0.172)
Age	-0.024^{***}	-0.091^{***}	-0.013
	(0.008)	(0.026)	(0.022)
Gender	0.205	-0.432	-0.381
	(0.206)	(0.433)	(0.547)
Partisanship	-0.012	0.100	0.068
	(0.050)	(0.105)	(0.135)
Education	0.203^{*}	0.120	-0.126
	(0.124)	(0.280)	(0.328)
FP knowledge	0.194	0.398	0.045
	(0.129)	(0.260)	(0.334)
Constant	-5.591^{***}	-6.027^{***}	-5.304^{***}
	(0.755)	(1.457)	(1.665)

Notes: N = 1,020; Pseudo R^2 = 0.342; Base category is select Policy 1

*p<0.1; **p<0.05; ***p<0.01; Standard errors in parenthesis

In figure 4.8, I plot the predicted probabilities of selecting either policy one, two or three. The figure illustrates how the outcomes in the reciprocal time frame condition the effect of the chances of success on the predicted probabilities of selecting either policy. In other words, even for highly successful alternatives, the reciprocal outcomes are crucial in the final selection. Therefore, actors prefer a policy with lower chances of success (80%) if it also offers positive outcomes in the reciprocal time frame (the red marker to the right of 80%), compared to a policy with higher chances of success but negative reciprocal outcomes (the blue marker to the right of 85%). The likelihood of selecting a policy with even lower odds and positive reciprocal outcomes (the red marker to the right of 75%) is almost equal to the policy with 80% success and negative reciprocal outcomes (8.7% vs. 14.9%, yet the 95% CI's overlap).

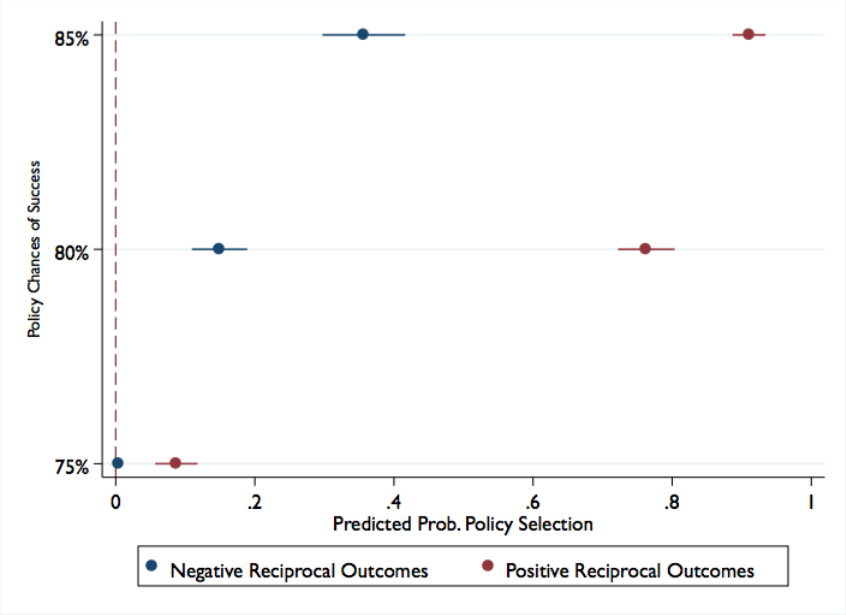

Figure 4.8: Policy selection: Mixed effects logit model

The analysis above provides evidence for the effect of the different temporal implications on the (actual) selection of policy. I demonstrate that actors do not necessarily choose the option with the best chances of success (Oakes, 2012). Facing a trade-off due to negative outcomes in the reciprocal time frame, actors gravitate toward an alternative that provides positive results across

time, even if such a choice requires them to accept lower probabilities of success.

Do choice-set size and composition influence policy selection?

To complement the analysis of the selection phase, I explore the role of the choice-set within the decision-making process. The primary objective of this section is to demonstrate that variations in the size and composition of the choice-set influence the preferred policy (i.e. trigger contextual preference reversal). This is an important step in the overall assessment of the process as it addresses the question of why the screening phase (and the choice-set itself) are important for the eventual selection of policy.

First, I estimate the effects of variations in the choice-set size on the selection phase. I add a binary variable (*PolicyOne*) coded 1 for respondents who selected policy 1 (85% chances of success) and 0 for any other alternative selected from the reduced choice-set. Then, I use a binary regression model to regress this variable (*PolicyOne*) on the choice-set size variable, the experimental treatments and the individual covariates.

Figure 4.9 illustrates how changes to the size of the choice-set affect the predicted probability of selecting policy 1. The downward slope indicates that as the size of the choice-set increases, the likelihood of selecting the most successful policy decreases. Since policy 1 has the highest chances of success, it makes sense that most respondents prefer it. Indeed, across the entire sample, almost 60% of respondents favor this option. However, this analysis suggests that changes to the 'menu of options' are important - the probability of selecting the most successful policy drops by more than 4% when the choice-set size doubles from two to four alternatives.

These findings provide initial evidence for the role of the choice-set within the decision process. Yet, my research design limits the extent of experimental control over potential changes in the choice-set size and composition. To overcome that issue, I conduct a more thorough analysis using data collected in the embedded experiment section: after respondents complete the previ-

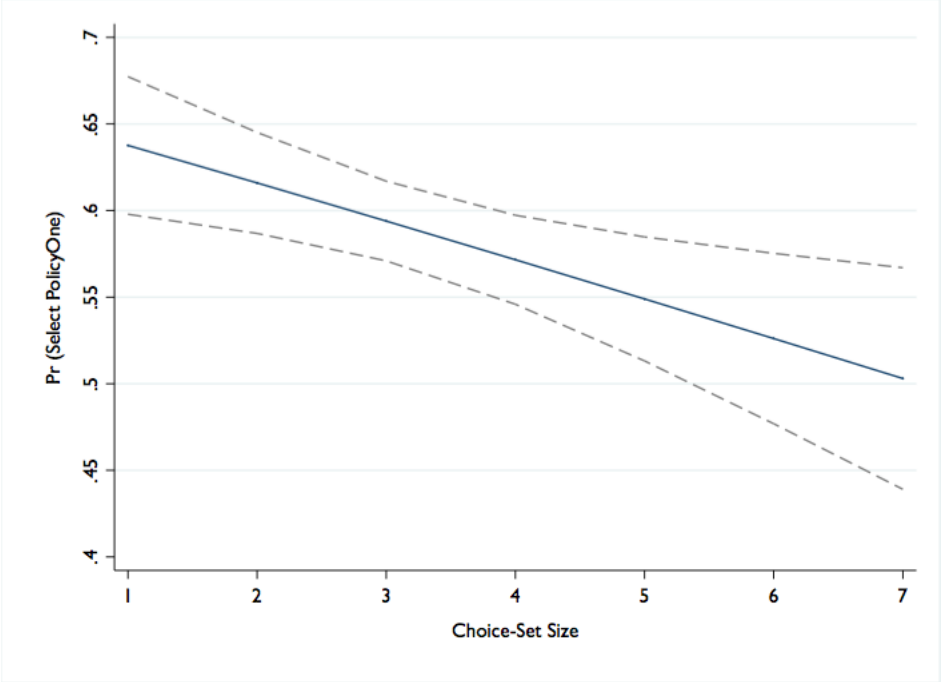

Figure 4.9: Choice-set size and preference reversal

ously mentioned screening and selection tasks, I introduce two combinations of new choice-sets and ask respondents for their preferred policy.

Set A consists of two options. The first has high chances of success (80%) and negative reciprocal outcomes; the second has lower chances of success (70%) and positive reciprocal outcomes. Expected casualties for both options are low (10-15). The adjacent set B consists of three policy options. The first two are similar to set A; the third option includes success chances that are between the previous options (75%), positive reciprocal outcomes and high number of casualties (70-90).[73] In the analysis, I compare the preferred policy between these two choice-sets with the objective of assessing if and how the introduction of a new option (that involves some better and some worse aspects than the existing ones) changes the distribution of preferences to the policy options within the choice-sets.

[73] An example for this combination is presented in figure 4.3 above.

A similar type of analysis is employed for sets C and D. The first option describes high chances of success (80%), but this time, reciprocal outcomes are positive. Option 2 has lower chances of success (70%) and negative reciprocal outcomes. The number of casualties for both policies is high (70-90). I compare the preferred policy to set D which, again includes two options similar to set C. The third option in this set has the middle range chances of success (75%) and negative reciprocal outcomes, but the expected number of casualties is low (10-15).

I run two repeated-measure ANOVA models to evaluate how the introduction of a new alternative changes the proportion of respondents selecting policy 1 (the policy with the highest chances of success). The logic of this analysis is to test whether changes to the choice-set influence the extent of support for the most successful policy option. The use of a repeated-measures model accounts for potential correlations between policies within the choice-sets. The results in both models are significant for comparing sets A and B ($F = 51.9, p < 0.05$), as well as sets C and D ($F = 783.4, p < 0.05$).

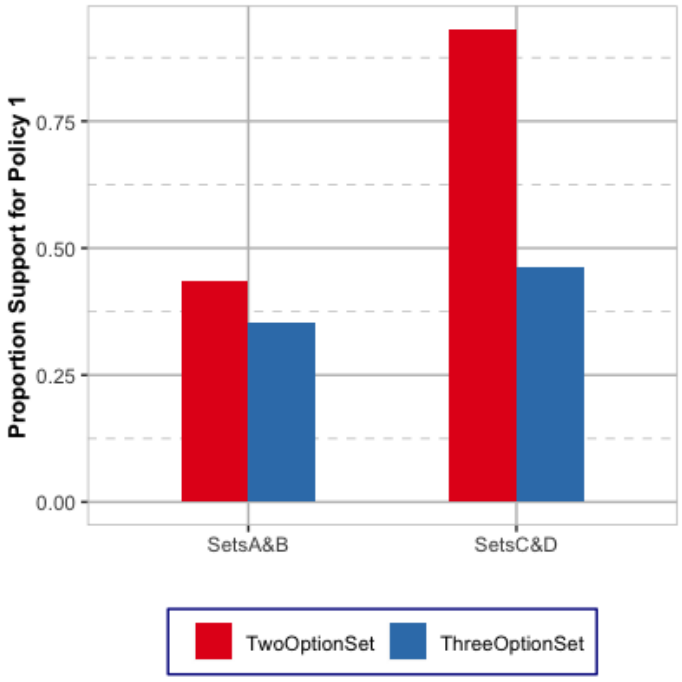

Figure 4.10: Choice-sets and preference reversal

Figure 4.10 illustrates these findings by presenting the proportion of support for policy 1. Comparing sets A and B, the mean proportion of respondents choosing the most successful policy decreases by approximately 8%. The change is even more profound when comparing sets C and D, a 46.8% decrease. These results provide evidence supporting H_4 - altering the composition of the choice-sets triggers contextual preference reversal, and has a crucial effect on the final selection.[74]

Summary

This chapter consists of the first part of the empirical assessment of my theory regarding time horizons and conflict decision-making. I conduct several empirical tests for the effects of time horizons as an explanatory factor on actors' choices in conflict situations. The theoretical framework unpacks the decision-making process, and I argue that time horizons are most effective in the initial pre-choice screening phase. Options that are incompatible with the decision maker's temporal view are rejected from the 'short list' of preferred options, and thus are unlikely to be evaluated and selected. Then, I expand on the influence of these restricted choice-sets on the actual selection of a policy alternative in conflict.

Using an experimental research design, I provide evidence that actors' time horizons serve as a screening mechanism by shaping both the size and composition of the reduced 'short-lists' of policy alternatives. The findings demonstrate that variations in time horizons generate different choice-sets. First, actors with long time horizons form larger choice-sets and are likely to entertain more policy options, compared to short-term oriented actors. In other words, a long-term orientation leads decision-makers to set a lower threshold for which policy alternatives they evaluate. Second, different temporal views also influence the composition of the choice-sets. As expected, I find that actors with short time horizons are less likely to accept into their choice-set options

[74] In Appendix A.7, I present cross tabulations of these proportions. The differences are significant based on a chi-square test.

that do not offer immediate benefits. On the other hand, long-term oriented actors are willing to entertain policies that are less successful in the short-term as long as future outcomes are positive.

While the effects of time horizons are most prevalent in the pre-choice screening phase, most studies of conflict behavior focus on the observed policy/strategy adopted by political leaders. My empirical analysis also accounts for this phase. The main argument is that decision-makers select the alternative that offers the highest net benefits from the ones which 'survived' the screening phase and are present in the reduced choice-set. The experimental design assess this net benefits calculation by accounting for both elements of the time horizons (implications in the short- and long-term). The analysis of the selection phase show that actors are sensitive to the temporal trade-off and do not always prefer the 'best' option. Thus, a policy with very high chances of success and negative outcomes in the reciprocal time frame may be less appealing than an option that is positive in the reciprocal time frame but has lower chances of success. This finding fits with studies that argue that the selected policy may not necessarily be the best one, whether under the prism of a substitution framework (Oakes, 2012) or strategic interactions between rational actors (Edelstein, 2017; Haynes, 2019*a*).

The last set of results address an important issue that ties both the screening and selection phases, and explain their role within the overall decision process. The theoretical framework suggest that time horizons are more powerful in shaping the choice-sets, and that the actual policy selection depends on the composition of these 'short lists'. To assess this argument, I use data from an embedded experiment and demonstrate that changing the composition of the choice-set triggers contextual preference reversal (Howes et al., 2016; Huber and Puto, 1983; Tsetsos, Usher and Chater, 2010). That is, the extent of support for a certain alternative changes when decision-makers face a binary versus a three-option choice-set. This result suggest that the pre-choice screening phase is a substantial part of the decision-making process and has a crucial effect on the eventual policy selection in conflict situations.

Overall, research on real world decisions in conflicts tends to study time horizons as an implicit element. Yet, the results of this chapter demonstrate that the temporal dimension has an effect, and a substantial one, when described in a more explicit way as in my experiment. The findings suggest that actors' choices in conflict are influenced by factors that are beyond the classic cost-benefit calculus. In other words, our models of decision-making in conflict situations must account for latent factors that are difficult to measure yet their effect is critical for actual behavior.

The findings in this chapter provide additional insight to our understanding of conflict choices. First, I place the time horizon concept as a primary explanatory variable in conflict. Most previous work explore how time horizons affect the choice of a conflict strategy as cooperation (Axelrod, 1984; Beardsley, 2008; Keohane, 1984) or competition (Edelstein, 2017; Fearon, 1998; Hundley, 2020; Toft, 2006). The findings of this chapter highlight the preceding phase and explain how these options become viable to be seriously evaluated by decision-makers. In other words, if and when strategies of competition or cooperation are debated is contingent upon the actor's time horizons. Second, by focusing on the earlier phase of choice-set formation and rejection of unacceptable alternatives, this part of the study helps us understand which policy options are more likely to be (seriously) evaluated and which ones are never really 'on the table'. As I discuss in much details in chapter 1 when I analyze the actions of the Bush administration in the face of the crisis in Bosnia, considering the short-term orientation of the president facing the upcoming elections in November 1992, the likelihood of contemplating multiple options, in particular, policies that pose a risk for the re-election campaign, was very low. Immediate concerns made it more likely that any alternative which may lead to negative outcomes will be rejected. The analysis in this chapter supports this argument by offering a more micro-level account of the decision process and how variations in time horizons affect which type of options are removed from further consideration.

The analysis in this chapter offers one of the first attempts to empirically test a theoretical framework that consolidates insights from psychology and political science in order to explain how time horizons influence the process of decision-making in conflict. The evidence show that time

horizons play a significant role in this process and in essence determine which policy alternatives are more likely to remain 'on the table'.

Despite the encouraging results of my analysis, many more empirical questions need to be addressed.[75] First, in my research design, respondents choose among policy options that are relatively generic and, for the most part, vary only in their temporal implications.[76] While recent work show that there are no substantial differences in the results when using an abstract or an over-detailed experimental design (Brutger et al., 2020), additional studies need to assess the choice-set framework using actual policy options such as negotiations, military intervention, sanctions and more. A related question in this context is how individuals define foreign policies from a temporal standpoint. That is, what factors lead certain policy option to be perceived as either a short- or long-term alternatives?[77] Third, a central challenge for my analysis is the argument that I am able to show the pre-choice screening phase since the research design forces respondents to form a choice-set prior to making an actual selection. This is a fair criticism, yet I contend that there is less debate about the existence of a separate screening/editing phase within studies of decision-making (Beach, 1990; Kahneman and Tversky, 1979). To empirically test such a framework, we must compel individuals to engage in descriptive screening, and some work does just that (Mintz, 2004; Mintz et al., 1997; Ordóñez, Benson III and Beach, 1999). By not forcing such tasks when studying multi-phase processes, we fail to harness the advantages of experimental methods for a more nuanced analysis of the causal effects for elements that are not clearly observable.

[75] I focus in this section on empirical issues and engage in a more extensive discussion of additional avenues for theory in the concluding chapter of this project.

[76] A relevant limitation in this context is that while I posit that time horizons are most prevalent in the screening tasks and have an indirect effect on the selection phase, the empirical analysis shows that temporal considerations affect both tasks. In my theory, I posit that selection is predicated on the net benefit of surviving policy options. Yet, in the research design, the only available information to assess these options is their temporal implications. As a result, respondents rely more explicitly on it when making their final selection.

[77] In a future project, I will address this question by building on work in IR that leverage a conjoint experimental design to assess how individuals define a latent concept such as time horizon in the context of foreign policies (in a recent study, Kertzer, Renshon and Yarhi-Milo (2021) employ such a framework for the concept of resolve)

Finally, this chapter sets the stage for the following one - after addressing the question of how different time horizons influence the decision-making process, another central gap of the literature is how to explain these variations in time horizons. The next chapter answers this question with two empirical tests: a micro-level test using an experiment, as well as a macro-level assessment of political leaders in conflict situations between 1918 and 2015.

CHAPTER V

VARIATIONS IN CONFLICT TIME HORIZONS

A trade-off in time horizons is prevalent in almost any decision made in the context of international politics. Decision-makers must assess the situation and choose whether they care more about the immediate or future implications of a conflict scenario. Whether its launching a preventive war, since actors prefer to pay the costs of conflict immediately rather than waiting and dealing with the uncertainty, taking a costly action in the short-term to enhance future reputation, or entering into negotiations to fasten the end of hostilities, time horizons are a central aspect of policymaking.

Despite this important underlying role, the concept of time horizons in international politics is relatively under-explored. While scholars have used it to explain conflict behavior (Edelstein, 2017; Fearon, 1998; Haynes, 2019*a*; Tingley, 2011; Toft, 2006), very few address the question of what leads to these time horizons. In chapter 3, I introduce a theoretical framework in which I posit that variations in time horizons are a product of the interplay between situational factors and individual dispositions. I adopt an interactionist approach (Herrmann, Tetlock and Visser, 1999; Kertzer, 2016) and offer several propositions about the concurrent effects of both sets of factors on time horizons.

In this chapter, I conduct empirical analyses of the framework using a multi-method approach. The first part of the analysis employs an experimental design and engages in a micro-level test of the various factors. The use of this research design serves as a test of the internal validity of the theory and allows me to focus on individual-level factors such as time and risk preferences. In addition, I introduce a more direct and relevant measure for the time horizons concept - choosing among specific policy options that vary in their temporal implications (thus reflect individuals' preferred time perspectives). The experiment also situates the respondents in a relevant security context and avoids from the accepted practice of measuring time horizons in a vacuum.

In the second part of the chapter, I utilize a macro-level approach to address concerns about external validity when measuring behavior with public samples. I augment the international Crisis Behavior (ICB) dataset with additional measures for individual leaders' characteristics as well as domestic conditions, and test the framework by estimating how situational and individual factors (and their interactions) lead to different time horizons. By assessing the theory with real-world events and the choices made by actual political leaders, I offer a more robust test of the theoretical framework and complement the micro-level analysis.

The combination of both empirical tests address the second central gap in the literature - what explains variations in time horizons? In addition, this empirical analysis also complements my earlier findings. In the previous chapter, I focus on time horizons as an explanatory variable and show how temporal orientations shape the decision-making process in conflict. This chapter shifts the concept of time horizons to the 'left-hand side of the equation' and study it as a dependent variable. Combining the findings of this chapter with the earlier analysis offers a more comprehensive view about the role of time horizons in international conflicts.

The chapter is composed of two main parts. The first half includes a micro-level empirical analysis using an experimental research design. In the following section, I introduce the experiment and discuss the results. Then, in the second half of the chapter, I use observational data to test the theory. I begin with describing the dataset and empirical model. Then, I present the results of the analysis. The final section concludes both empirical tests, discuss their implications and limitations before offering several avenues for additional research.

Research design: The experiment

The concept of time horizon is defined at the individual decision-maker level. Therefore, many recent studies leverage the advantages of experimental research designs to account for it when studying foreign policy behavior (Hundley, 2020; Kertzer, 2017; Tingley, 2011). The main benefit

these research designs offer is providing tools that can account for the temporal perceptions of individual actors.

However, time horizon is a latent concept (Bollen, 2002), which we cannot directly observe, making measurement very complex (Fearon, 1998; Streich and Levy, 2007). As a result, finding clear measures is complicated. Most experimental work elicit individual time preferences based on matching tasks in which participants select between monetary rewards in different time frames (now or in the future).[78] The main problem with this approach is that it does not put enough emphasis on the decision context and the potential effects of specific situational constraints. In other words, assessing temporal views based on individual willingness to delay an abstract monetary reward provides only a partial view of time horizons for situations such as international conflict.[79]

In order to overcome this measurement issue, I employ a research design that offers better construct validity by introducing several procedures. First, I 'place' the decision-maker in a specific context, an explicit conflict situation, thus making the issue and situational constraints more relevant in the evaluation of her decision. Second, to measure time horizons, I relate the context of conflict to individuals' time horizons by asking for their preferred policy to address the situation. I introduce two policy options and describe specific temporal implications for each. As a result, the selection of an alternative reflects decision-makers' time horizons.

The experiment was fielded during June 2019. I utilize Amazon Turk services to recruit a national sample of 945 participants.[80] The sample consists of 50.9% females and 49.1% males. Similar to other MTurk samples, most respondents have an undergraduate (40.4%) or graduate (17.7%) degrees, while 32.9% have some college education. Respondents' age ranges between 18 and 71 with a mean of 31.5, and a median of 30. Lastly, sample respondents are more liberal with

[78] For a recent discussion on measuring time preferences in economics, see Cohen et al. (2020)
[79] I expand this discussion below when I describe the dispositional measures used in the experiment.
[80] On the use of MTurk samples, see chapter 4.

56.3% on the democratic side of the scale, another 17.8% rank as center (4 on a 7-point scale) and the remaining 25.8% on the republican side of the partisanship scale.[81]

The Context

In the experiment, I introduce an explicit conflict scenario that situate decision-makers in a context they can recognize. This design aspect is also intended to reduce concerns about respondents' attention and seriousness (Bayram, 2018; Berinsky, Margolis and Sances, 2014; Clifford and Jerit, 2015). The vignettes describe a security conflict involving US interests: an attack by insurgents on a large military base in Afghanistan. I describe a large scale raid by insurgent forces following prolonged period of smaller attacks on the outpost. The attack results in multiple casualties and extensive damage.

"A major military outpost in northern Afghanistan has been under constant duress over the last 6 months. Mortar launches and small scale attacks had become daily challenge for the Marines occupying the base. Last week, a large coordinated attack was commenced by Taliban forces. Heavy mortar and snipers' fire masked an attempted infiltration of the base. Under heavy fire, the Marines held their defenses for more than 8 hours suffering multiple casualties and severe damages to the base. Finally, using air support and under the cover of darkness, the main attacking force was pushed back ending the violent clash."

To address this security situation, participants are asked to choose a specific policy response (reflecting their time horizons, see below) and then answer a series of follow-up questions.

The dependent variable: Measuring time horizons

As I discuss above, measuring the concept of time horizon is one of the primary challenges of this project. I introduce clearer and more relevant indicators by measuring time horizons with two policy options that address the conflict situation, and ask participants to select their preferred one. Both policies involve a military action intended to address the administration's objectives. The

[81] Full summary statistics of the sample are available in Appendix B.2

central aspect that separates the policies and allows to account for variations in time horizons is their expected outcomes and associated uncertainty with respect to time.[82]

I describe a short-term policy that provides immediate outcomes, but also involves high level of uncertainty with respect to long-term projections regarding the resolution of the threat.

*"The main result is that **the immediate threat is** highly likely to be removed and no further attacks will materialize **in the short-term (i.e. 6-8 months)**. However, **long-term projections are less certain** and officials estimate that such a plan is less likely to remove the threat altogether."*

Alternatively, the long-term policy option entails high certainty regarding future outcomes but it does not provide immediate results when addressing the conflict.

*"The plan will result in **enhanced stability** and almost complete removal of the threat, **at least for a few years**. At the same time, this plan is **less likely to provide immediate relief** for the Marines and **in the short-term**, frequent attacks on the outpost are expected to persist."*

The independent variables: Experimental treatments

In order to assess how the situational factors (issue salience and expected human costs, detailed in chapter 3) shape participants' time horizons, I embed two treatments into the script.

First, an *issue salience* treatment that includes two aspects: (1) the targeted military base is described as either American or Afghan (with small number of US military advisors); (2) I describe how local American military officials view the base. In the non-salient condition, local US commanders deem the base as not too important for US security interests and object to a significant counter-attack. For the salient condition, I describe the outpost as critical for the anti-terrorism alliance and US interests. Thus, an American base that is essential to US interests is a salient issue. On the other hand, an Afghan base that local US commanders view as not too important to US interests is a non-salient issue.

[82] In order to prevent issues with naming the policies using ordered terms (i.e. policy/plan A and policy/plan B), I name the policies "Bravo" (short-term) and "Delta" (long-term).

Second, the *human costs* treatment details the expected number of American casualties as a result of the military operation to address the threat. This treatment involves two aspects: (1) I vary the number of casualties as low (15) or high (150) in each policy option. The large gap between those figures is intended to make it clearer to the public what are the main costs associated with each policy; (2) I include an uncertainty component that is indirectly related to human costs. In the short-term option, I describe high uncertainty about additional attacks over the long-run (suggesting more casualties). For the long-term policy, I emphasize that short-term aggression is likely to continue with more attacks (i.e. additional casualties). These two elements clarify the distinction between the policy options and their associated costs.

Lastly, I include a third treatment - *Items order*. This treatment accounts for potential methodological concerns about the order of items impacting the choice (Gaines, Kuklinski and Quirk, 2007). Therefore, in half of the vignettes, the short-term policy is presented first, and in the other half, the long-term policy is presented first.

Individual Dispositions

The experimental design randomly assigns the participants to the two situational treatments (salience and costs). To measure individual dispositions, I employ a series of items that are common in the literature that measures time and risk preferences (Falk et al., 2018; Frederick, 2005; Kertzer, 2016; Wang, Rieger and Hens, 2016).

Time preferences

I include two matching tasks in which participants are presented with a hypothetical choice between receiving $100 reward immediately or $X in one (or 10) year(s). Then, respondents are asked what is the amount that $X has to be so they will prefer the second option (delay) over the first (immediate $100). The use of two matching tasks allows me to construct hyperbolic

discounting curves for each participant and compute two accepted measures of individuals time preferences: present bias (β) and long-term discounting (δ).

Building on work in behavioral economics, I add several more items. Two questions about time preferences that involve a cost, physical and material (preferred timing for scheduling a dentist appointment while in pain; preferred timing for paying a traffic fine, both measured on a 1-7 scale). Then, another item asks about monetary rewards, and varies the amounts based on the length of time that the respondent is willing to wait (higher amount for waiting, a binary measure). Three more items ask about behavioral aspects such as the tendency to procrastinate or engaging in impulsive actions (all items are ranked on a 1-7 scale).

Finally, I use items from studies on time perspectives (Zimbardo and Boyd, 1999). I include two sets of questions that tap into present (short-term) and future (long-term) perspectives. The items ask respondents to rank on a 1-5 scale different behaviors that fit with the different time perspectives.[83]

Risk preferences

To measure individual risk preferences, I rely on work in psychology and include a general dispositional item that measures risk attitudes (Ehrlich and Maestas, 2010). Since my focus is risk aversion, I code the item, measured on a 7-point scale, with high values indicating higher degree of risk aversion.

Internal Validity

In order to ensure the internal validity of the design, I address both the aspect of respondents' attention as well as ensuring that the experimental treatments worked as expected.

First, I include two items as factual manipulation checks (FMC) (Kane and Barabas, 2018). Those items ask participants about the location of the incident (country and setting). For the

[83] For the full experimental material, see Appendix B.1.

location item (Afghanistan), over 95% answer correctly. Also, about 93% correctly recognize the setting (attack on a military base). Then, I check that respondents distinguish between the polices, especially their temporal perspective. Again, almost 90% correctly identify the short- and long-term policies described in the scenario.

To assess the validity of the treatments (salience and costs) I introduce several checks. First, I use an item that asks how important is the situation to US national security. The mean value for the importance item is 4.88 (on a 1-7 scale). Also, an analysis using both ANOVA and regression models show the positive and significant effect of the salient treatment. Thus, the degree of importance is higher for those respondents who were assigned to the salient condition. Second, two items ask respondents to evaluate the level of costs in each policy option. An analysis using both ANOVA and regression models show that participants rate the costs of the short-term policy as higher when the costs treatment describes high number of short-term casualties. Similarly, for high long-term costs, the analysis yields a negative and significant coefficient, supporting the description of the scenario.[84]

The analyses above provide a robust support for my experimental design in terms of internal validity. The treatments appear to tap into the concepts of salience and variation in the level of costs. Also, participants are able to correctly identify the specifics of the scenario, reducing concerns of low attention that may dampen the expected effects.

Results

What shapes time horizons in conflict?

I begin with presenting the results of models that test how the relevant factors affect respondents' time horizons. Since the measure for participants' time horizons is their policy preference, short or long, I employ probit regression models to evaluate how the different factors affect the probability of selecting each policy option. The results of these models are detailed in table 5.1.

[84] Full models of this analysis are detailed in Appendix B.3.

Table 5.1: Time horizons main effects: Probit regression models

	Situational		*Situational&Individual*		
	(1)	(2)	(3)	(4)	(5)
Salient	0.021	0.016	0.019	0.016	0.000
	(0.094)	(0.095)	(0.095)	(0.097)	(0.096)
Costs	0.919***	0.948***	0.949***	0.979***	0.930***
	(0.097)	(0.099)	(0.099)	(0.102)	(0.100)
Order	0.148	0.164*	0.173*	0.171*	0.154*
	(0.094)	(0.095)	(0.096)	(0.097)	(0.096)
Present Bias (β)			0.536*		
			(0.276)		
LT Discount (δ)			−0.391		
			(0.457)		
Time Pref:Dental				−0.056*	
				(0.031)	
Time Pref:Reward				0.539***	
				(0.109)	
Zimbardo ST					−0.065***
					(0.024)
Zimbardo LT					−0.026
					(0.027)
Risk Aversion			−0.087	−0.015	−0.022
			(0.032)	(0.033)	(0.033)
Age		−0.007	−0.007*	−0.008*	−0.009*
		(0.004)	(0.004)	(0.004)	(0.004)
Gender		0.008	0.035	−0.020	0.035
		(0.097)	(0.098)	(0.099)	(0.098)
Partisanship		−0.065**	−0.068**	−0.054*	−0.062**
		(0.026)	(0.026)	(0.027)	(0.026)
Education		0.079	0.064	0.075	0.069
		(0.055)	(0.055)	(0.056)	(0.055)
Constant	0.271***	0.652	0.737*	0.231	1.148***
	(0.089)	(0.296)	(0.452)	(0.319)	(0.411)
Observations	945	945	945	940	937
Pseudo R^2	0.095	0.106	0.111	0.135	0.112
AIC	927.13	925.64	920.45	910.1	937

Notes: *p<0.1; **p<0.05; ***p<0.01; Standard error in parenthesis
Models 1&2 display situational factors only
Models 3-5 display situational and individual factors

Model 1 serves as the baseline. It includes only the experimental treatments that represent the situational factors. Model 2 also includes individual covariates. In both models 1 and 2, the costs treatment is significant and positive. I code this variable with respect to short-term human costs (1 is high and 0 is low). Therefore, when immediate costs of the proposed policy are high, individuals defer to a long-term orientation. I find that when the short-term policy consists of high costs, almost 90% of participants favor the long-term option.

Models 3-5 account for both situational and individual factors. I use a variety of measures for time preferences and add the risk aversion measure. Overall, across all three models, the costs factor remain the most powerful predictor of long time horizons. Yet, individual factors have an effect. First, in model 3, the present bias parameter (β) is positive and statistically significant. The interpretation of this measure is that higher values imply a long-term orientation (Wang, Rieger and Hens, 2016). Therefore, higher present bias increase the likelihood of long time horizons. At the same time, the long-term discounting (δ) parameter fails to reach statistical significance.

Second, in model 4, I use two other measures of time preferences - the *Dental* item accounts for short-term orientation, and the *Reward* item, for a long-term view. The *Dental* indicator is negative and significant suggesting that responders who display a short-term orientation, since they prefer to postpone a painful treatment and are unwilling to accept the immediate cost, are less likely to select the long-term policy. On the other hand, the *Reward* item is positive and significant which indicates that respondents who prefer to receive the higher amount in the future, i.e. they display long time preferences, are more supportive of the long-term policy. Third, in model 5, I utilize two measures from psychology (Zimbardo and Boyd, 1999), each accounts for a different time frame. The short-term item is negative and significant, suggesting that respondents who score high on the short-term scale are less likely to favor the long-term policy. Finally, the risk aversion parameter does not reach statistical significance in any of the models.

With respect to the individual covariates, there are two interesting results. First, age is negative and significant in most models suggesting that older respondents prefer the short-term

policy. This result fit with my expectation that older individuals displays shorter time horizons. Second, across all models, partisanship has a consistent negative effect, indicating that republicans are less likely to favor the long-term policy and have shorter time horizons.

In order to present the substantive effects of these models, I depict the predicted probability of choosing the long-term policy based on different factors in both levels (the situation and the individual). The probability distributions in the density plots are derived from 2,500 bootstraps to provide estimates of uncertainty. First, in figure 5.1, I display the predicted probability of selecting the long-term policy based on both situational factors. In contrast to my expectations, changes to the degree of issue salience has no effect on the preferred policy (plot A). On the other hand, in plot B, there are clear differences in the effect of the high and low cost conditions. When immediate costs are high, the likelihood of long-term view is higher ($m = 0.898$) compared to low immediate costs ($m = 0.63$).

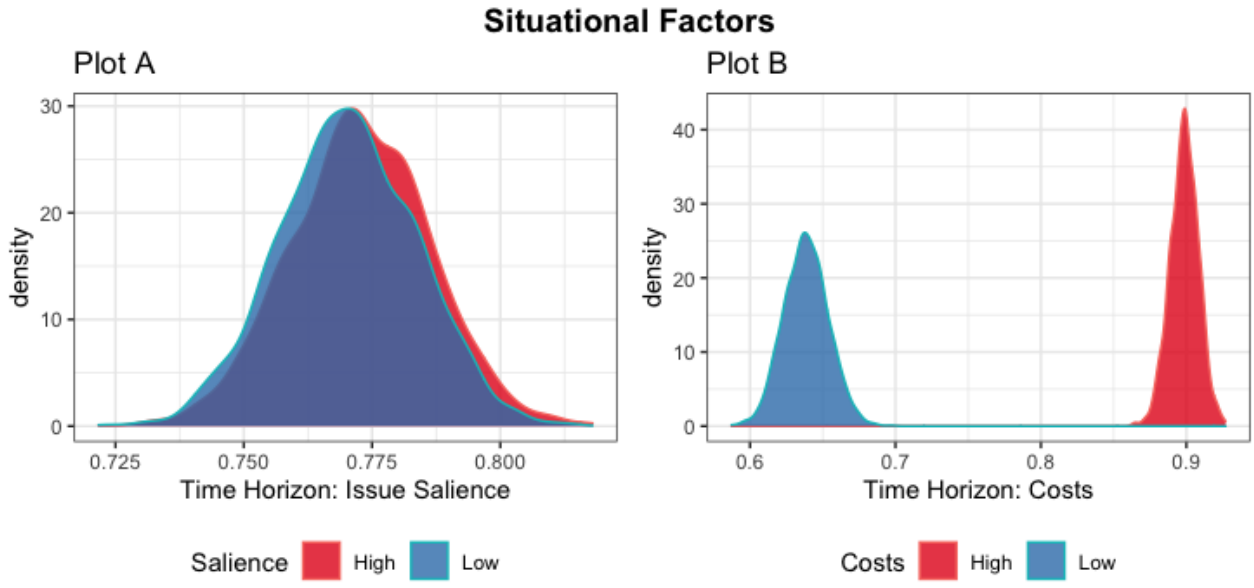

Figure 5.1: Long time horizons probabilities: Situational factors

Second, I depict the predicted probability of selecting the long-term policy based on two individual factors. Plot A of figure 5.2 is based on a binary measure of time preference. As

seen in model 4, respondents who favor long-term view have a higher probability of selecting the corresponding policy ($m = 0.81$ and $m = 0.64$). Plot B is based on items from the Zimbardo Short-form scale (D'Alessio et al., 2003). I use the 25th and 75th percentiles to generate the short- and long-term values. Despite the overlap of the distributions, those who score higher on the short-term scale have a lower probability to choose the long-term policy.

Figure 5.2: Long time horizons probabilities: Individual factors

The models presented in table 1 test the main effects of the various factors on respondents' time horizons. The results provide support for some of the associated hypotheses. I find that issue salience does not affect the preferred policy (refuting H_5), yet the costs factor is the most powerful predictor of the choice, which fits my expectation as described in H_6. With respect to individual dispositions, using multiple measures, I show that short-term time preferences drive individuals towards shorter time horizons (H_{8a}). Also, older respondents display short time horizons (H_{8b}), similar to most findings in past work (Horowitz, McDermott and Stam, 2005; Lechler and Sunde, 2019). Lastly, I find no statistical support for H_{8c} regarding risk aversion and time horizons.

Variations in time horizons: An interactionist approach

The findings thus far provide evidence regarding the independent influence of the relevant factors in my theoretical framework. These are the baseline results for what shapes variations in time horizons facing conflict scenarios. Nevertheless, a central argument that I offer in this study is related to the simultaneous effect of factors. As such, the analysis that follows employs interaction models to test these propositions.

The main premise of the interactionist approach is that outcomes are based on the interplay between factors (or variables) in multiple levels of analysis. To test this argument with respect to time horizons, I employ probit regression models that assess the conditional relations between the costs treatment (a situational factor) and several measures of individual dispositions, and estimates the probability of respondents' favoring a short- or a long-term policy.

The first model includes an interaction between the costs treatment and a binary measure of time preferences. The survey item asks respondents' whether they favor an immediate reward of $3400 or a delayed reward of $3800.[85] Choosing the higher (delayed) reward represents a long-term orientation since it also involves the opportunity costs of no immediate payment.

The model results demonstrate the independent and conditional effects of the situation and individual factors. First, the constituent terms in the model are significant and in the expected directions. Thus, similar to models 1-5 in table 5.1, high immediate costs increase the likelihood of long-term view. Similarly, the *Time Pref:Reward* factor is positive and significant suggesting that respondents who prefer the future reward are more likely to select the long-term policy, reflecting a long time horizon. Second, while the interaction term fails to reach statistical significance, I plot the marginal effects of this interaction and show how the costs factor moderate the effects of the individual disposition. I depict these results in figure 5.3 below.

In this bar-plot, I separate the individual propensity for short- or long-term view (on the x-axis) and demonstrate how the costs treatment moderates the individual dispositions. For re-

[85] I adopt this measure from research in behavioral economics (Frederick, 2005).

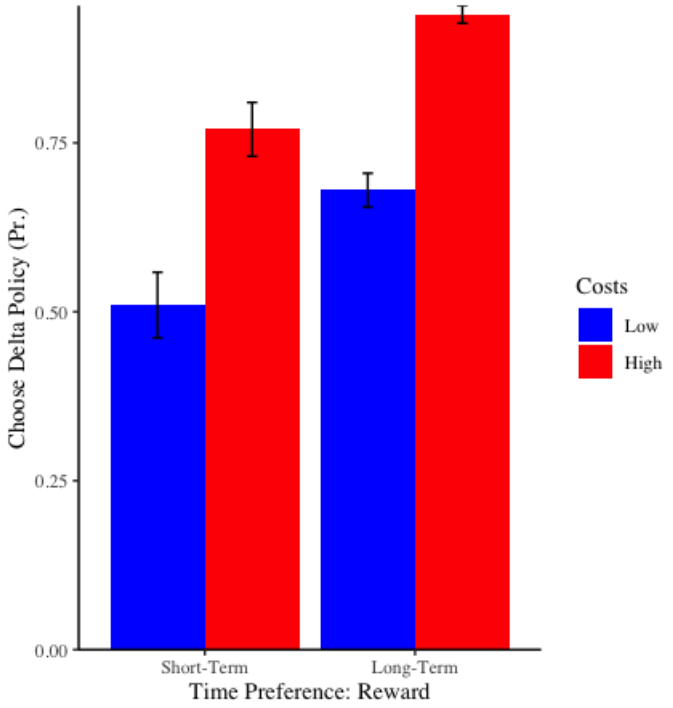

Figure 5.3: Situation and individual factors interaction

spondents who are short-term oriented (the left bars), low immediate costs have small effect since it does not substantially alter their preferred policy (about 50% probability for either policy option). However, when present costs are high, the likelihood of a short time horizon drops to 21.9%. For respondents who favor future outcomes, when future costs are low (the red bar on the right side of the plot), they are almost certain to go with their preferred option (about 93.3% probability). Yet, if long-term costs are high (the blue bar in the right grouping), then the likelihood of long time horizon decreases to 67.3%. These results suggest that despite the lack of clear interaction between the factors, the situational factor is important as it conditions the effect of the individual disposition and it alters the temporal view of the conflict scenario.

Another interesting finding of this analysis is the way costs are perceived between both time horizons. For those who focus on immediate benefits, high number of human casualties are very costly as it alters their predicted policy preference from 50% to less than 25% support for the short-term option. At the same time, future oriented respondents view high number of casualties as less

prohibitive. While the probability of support for a long-term policy drops by approximately 25% (from 93.3% to 67.3%), it remains relatively high (especially compared to short time horizon facing high costs). This findings fits with some previous arguments that long-term oriented individuals tend to downplay costs. This may be due to a longer time frame that allows them to 'spread' the costs (Toft, 2006). Another explanation fits CLT (Liberman, Sagristano and Trope, 2002; Liberman and Trope, 1998) - those who emphasize future implications are less concerned about the details (in this case, the extent of human costs) and care more about the long-term outcome of stability and removing the threat.

Further tests of the interplay between the situation (costs treatment) and individual (dispositions items) employ additional interaction models. In figure 5.4, I depict marginal effects plots of these models.[86]

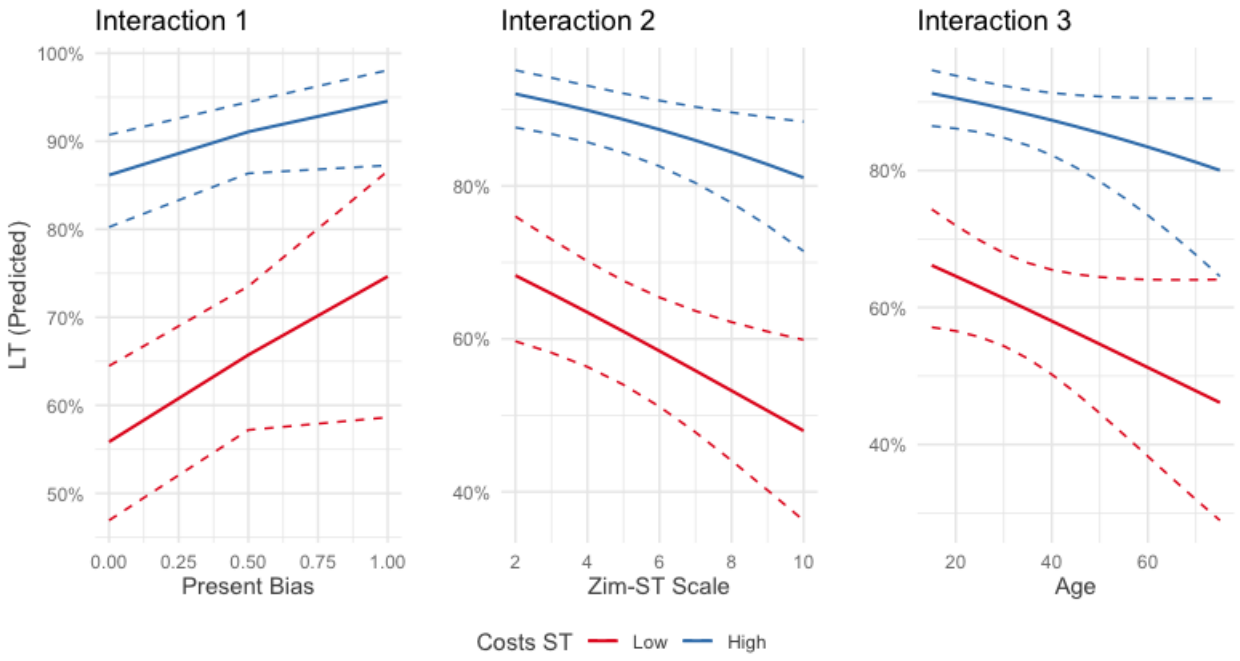

Figure 5.4: Situation and individual factors interactions: Marginal effects

Panel 1&2 display the conditional effect of costs on two different continuous measures of time preferences. The first measure I use is the present bias parameter (β) based on the matching

[86] Full regression models are detailed in Appendix B.4.

tasks. The results demonstrate how the situational factor of costs moderate the effect of the individual disposition. Thus, for respondents with high values of β (represent long-term view), future high costs (the red line) reduce the likelihood of selecting the long-term policy to 68%. When future costs are low (the blue line), these individuals are almost certain to display long time horizon (likelihood of selecting long-term policy is 94%). Individuals who favor the short-term (low β value) but face high immediate costs increase their support for the long-term option from less than 60% to almost 90%. Therefore, respondents who have a dispositional propensity for the future are 'pushed further' by low costs in this time horizon. High future costs reduce their support for future-oriented policy but not by much. On the other hand, respondents with short time horizon who are close to even-odds (probability of selecting the long-term policy) with low immediate costs, shift towards a long time horizon facing high immediate costs.

The second plot further demonstrates the effect of the situation and a short-term disposition. Using the measures for time perspectives (Zimbardo and Boyd, 1999), I plot the interaction of *present* time perspective with the costs treatment. High values of this measure indicate greater propensity for short-term view. Respondents in the 75th percentile who face low immediate costs have a 60% likelihood to favor a long-term policy, but 86% if the short-term costs are high. Those lower on a short-term view (the 25th percentile) have a 93% likelihood to display a long time horizon when future costs are low. When future costs are high, those individuals have a 64% probability to display a long time horizon.

In the 3rd plot, I evaluate the interaction between the situation and another individual factor - respondents' age. As seen in table 1, the effect of age is negative, i.e. older individual have shorter time horizons (Horowitz, McDermott and Stam, 2005; Lechler and Sunde, 2019). According to the interaction model, for respondents who are 50 and older, and face high immediate costs, the probability of a short-term view decreases to less than 15%, compared to about 50% when short-term costs are low. Younger respondents have approximately 90% probability for long time horizons when future costs are low. However, when long-term costs are high, those chances drop to 61%

(30 years old) and 65% (20 years old). These results show how the expected costs of the situation moderate the propensity of individuals for either short- or long-term orientation.[87]

The results in this section focus on testing the main proposition regarding the interplay between situational factors and individual dispositions. Using multiple measures, I find support for my hypotheses. The results depicted in figures 5.3 and 5.4 above show how situational costs moderate the effects of dispositional time preferences and can shift decision-makers away from their preferred temporal orientation (H_{9a}). The last model demonstrate how changes in costs affect the temporal perspectives of older versus young individuals. The evidence in figure 5.4 supports H_{9b}.

Micro-level test: Summary

The first part of this chapter includes an empirical analysis of the theoretical framework focusing on explaining variations in time horizons. I use an experimental research design to investigate situational factors as expected costs and issues salience, as well as individual dispositions such as time and risk preferences.

I find support for the main effects of most relevant factors. Among the situational factors, expected costs are the most powerful predictor of respondents' temporal orientations, as high level of human casualties shifts individuals away from the respected time frame. At the same time, contrary to my expectations, issue salience has no effect on time horizons. One explanation for this null result is that respondents do not make clear distinctions on military issues as long as US forces are involved. In other words, since both the salient and non-salient conditions include a US military soldiers under risk, it masks possible differences in respondents' views when the base under attack is either American (salient) or Afghan (non-salient). Since the manipulation checks of the salient measure show that responders are aware and understand the differences between both

[87] The sample is skewed to younger respondents as only 15% are older than 40 years old.

conditions, it may be additional evidence for the difficulty to measure issue salience of relatively similar topics among public members (Levendusky and Horowitz, 2012).[88]

I also find strong support for the role of individual dispositions, primarily time preferences, as well as the role of respondents' age. With respect to time preferences, these are intuitive results since we should not be surprised that dispositional long-term orientation (or focus on future outcomes) drive individuals to display long time horizons. Nevertheless, some of the tests reveal that situational conditions shift these dispositions and the final outcome, time horizon, is different from the observed time preference. An interesting finding with respect to time horizons is that the dominant view in my sample is future-oriented. Across all experimental treatments, support for the long-term policy was high (over 75%) which contradicts research in economics regarding individuals' tendency for myopic perspectives (Frederick, Loewenstein and O'Donoghue, 2003). The long-term orientation of most respondents can be a function of their relative younger age. Another potential reason is that for issues of national security and foreign policy, individuals are more likely to favor positive long-term results and reduce the risks that are associated with many 'quick fixes' to conflict scenarios.[89] Despite this 'bias' in the data, I am able to demonstrate variations and, under some conditions, shorter time horizons. These results provide support for my arguments regarding the relevant factors that shape variations in time horizons in conflict situations.

Taken together, the results of the experiment provide evidence, at the micro-level, for my theoretical framework regarding the simultaneous effects of situational and individual factors on time horizons. In order to offer a more comprehensive evaluation of the theory, the second part of this chapter uses observational data on world leaders in security conflicts. The analysis of real-world events with actual political leaders serve as an external validity test for the theory and can strengthen my confidence in the findings from the experiment.

[88] One important caveat to this argument is that in pre-tests of the design, I did find significant effect for the salience measure. The effect is, as expected, negative and also held in some of the interaction models.

[89] I expand on this findings in chapter 6.

Time Horizons of Political Leaders in Conflict (1918-2015)

In the first half of this chapter, I engage in a micro-level analysis to answer the question: what explains variations in time horizons in conflict? I leverage the benefits of an experimental research design in order to evaluate the framework and account more directly for situational and individual effects on decision-makers' time horizons. I find evidence for significant effects at both 'paths' - situational conditions as well as individual dispositions. These results serve as an internal validity test for the model that I presented in chapter 3.

The central problem of conducting a micro-level analysis with experimental designs is the issue of external validity. My analysis of a public sample supports the propositions of the study. Yet, can we infer that these factors are also relevant among elite decision-makers? This is an important question since the theory I develop in this project explain behavior in international conflicts, which is more prevalent for political leaders. Earlier in this chapter (as well as in chapter 4), I provide a detailed discussion on the issue of external validity. Now, I add to this discussion by shifting the focus to elite decision-makers. I complement the experiment with an analysis of the theoretical framework using observational data on political leaders in international conflicts from 1918 to 2015.

The analysis in this section mirrors the experiment and I utilize several types of models to assess variations in time horizons. I begin with estimating the independent (unconditional) causal effects of the situational and individual factors. Then, I test propositions regarding the interplay among these factors and how their conditional relations shape politicians' time horizons in global conflicts.

The main findings demonstrate the effects of factors in both levels of analysis. Among the situational factors, the domestic environment serves a crucial role in shaping the time horizons of political leaders. The most powerful factor is electoral institutions as the prospect of approaching elections substantially shortens time horizons. I also find strong effects for domestic conditions that shape leaders' survival probabilities and thus their time horizons, led by worse economic con-

ditions and a rise in social unrest. In addition, I find support for individual factors led by leaders' age, as well as their risk attitudes. Tests of the interactions among situational and individual factors show that, for the most part, the simultaneous effects of these factors vary the dependent variable of time horizons.

The complexity of measuring time horizons

One of the main reasons that I adopt the use on an experiment in this research project is that it offers a relatively powerful solution to a central concern for studies of time horizons - how to measure and test it empirically. In my experiment, I address this challenge by presenting to individuals two policy options to choose from. The temporal element is the primary difference among both policies, allowing me to infer that opting for a short-term policy reflect short time horizons and vice versa for selecting the long-term policy.[90]

Outside the context of experimental research, authors solve the issue of measuring time horizons using mostly case studies. The main benefit of such methodology is having access to primary evidence about decision-makers' perceptions of the situation and thus, identifying their temporal perspectives. For instance, Edelstein (2017) provides ample evidence about discussions and reports by government officials in France, Russia and the UK that demonstrate their time horizons between both world wars. To illustrate his analysis of time horizons and uncertainty, Haynes (2019*a*) describes British relations with Germany and the US at the beginning of the twentieth century.

A less common empirical approach is using observational data. Most studies which comment on the complexity of measuring time horizons describe the lack of relevant data, and that there is no consensus on an operational indicator (Bearce, Floros and McKibben, 2009). Accord-

[90] Other scholars who employ experiments tend to account for time horizons using respondents' discount rates (Hundley, 2020; Kertzer, 2017; Tingley, 2011).

ing to Haynes (2019*a*), it is "a fundamentally unobservable mental construct, rendering the model extremely difficult to test empirically using observational data" (p. 1957).

The main implication of this argument is that since time horizons is a *latent factor* (Bollen, 2002), we cannot observe it, and as a result, empirical testing is complex. I confront these challenges by utilizing measures that capture the individual leader's perception of her survival prospects. In addition, I rely on multiple indicators of time horizons to empirically test the models.

Research design: Large-N data

The main objective of this section is to use a large-n observational data and assess the model of time horizons in conflict. Based on a large cross-national data of world leaders over a long period of time, I assess the independent causal effects of the various factors. Then, I test their conditional relations and how they shape time horizons facing conflict situations.

Data

I use the International Crisis Behavior (ICB) data set v.12 (Brecher et al., 2016; Brecher and Wilkenfeld, 2000).[91] The ICB is a large database that consist of the sources, processes, and outcomes of all military-security crises since the end of World War I, within and outside of protracted conflicts, and across all continents, cultures, political, and economic systems in the contemporary era. The dataset covers the time period 1918-2015 and contains information about 476 crises and 1052 actors. As my analysis involve political actors' decisions, I focus on the state-level data, with the unit of analysis is crisis-actor.

The decision to use this data for the empirical analysis is based on three reasons. First, its reliability and acceptability in studies of international security and foreign policy (Chiozza and Goemans, 2004; Maoz and Russett, 1993; Oneal and Bryan, 1995). Second, this dataset codes multiple variables in the state-actor level, for example, power discrepancy or alliance involvement.

[91] ICB Dataset homepage (Duke University - Link)

At the same time, it also codes individual-level variables, such as perceptions of threat, which are crucial for my focus on political leaders. Third, and most important, is its compatibility for my study objectives. The theory I present relates to time horizons in certain context - conflict scenarios, therefore, all cases in the ICB dataset represent a natural starting point for the analysis.

The analysis in this section relies on multiple indicators from the ICB dataset. I augment this data with additional information from other data sources to account for individual leaders and domestic factors (presented in the variables section below). Lastly, I remove a total of 119 cases from the original data, all these cases took place during World War 2. In order to reduce the problematic nature of security crises within a global conflict, I remove them from the data. The final size of the dataset is 933 observations.

Dependent variable: Time horizons

From an empirical standpoint, the main challenge when studying the concept of time horizon is finding an appropriate measure. In the vast majority of studies in international politics, this concept serve as an explanatory factor and many indirect indicators are common. One prevalent measure is regime type (Edelstein, 2017). The main logic of adopting this proxy is that in democratic regimes, leaders have shorter time horizons due to electoral pressures, while dictators are not privy for such risks and thus have longer time horizons. Another example of an empirical test of time horizons is the work by Bearce, Floros and McKibben (2009). They use multiple indicators including membership in intergovernmental organizations (IGO), economic growth, and two measures related to election timing.

I contend that while these types of measures offer some benefits, mostly accounting for government durability, they lack clarity for a certain context. In other words, economic growth offers information about the degree of government stability (or lower risk for removal) over a longer span of time and cannot speak directly to conflict situations. The timing of elections is a useful proxy, yet Bearce, Floros and McKibben (2009) measure it in years before the next elections, which is

less clear in terms of concerns about political survival at a specific point in time. Lastly, regime type is even more general in terms of its implications. Recent work suggest that for dictators, the risk of political survival also varies along different political cycles (Bak, 2020). For democracies, Gaubatz (1991) points to variations in concerns about political survival (i.e. time horizons), mostly the different view before and after elections.

To overcome the limitations of these measures, I use an indicator for time horizons that proxies leaders' perception regarding their political survival (De Mesquita et al., 2003). I utilize a measure that is closely associated with the conflict situation - *Days to tenure end*. It is the number of days between the inception of the conflict/crisis and the end of the leader's tenure. The main logic of using this measure is to reflect the leader's perception regarding her prospective survival in office as the crisis begins (De Mesquita and Siverson, 1995). It is fair to argue that politicians cannot be certain about the amount of time they have left in office, but they do have a sense for the projected survival risk based on the time left on their tenure. Therefore, high number of days represent a long time horizon. That is, a secure leader who is less concerned for her survival. On the other hand, a leader that perceives a substantial risk for her survival displays shorter time horizons, measured with a small number of days from the crisis till the end of the leader's tenure. The measure of political leaders' tenure (and parts of it) is common in previous work, and authors argue it is intended to represent perceptions regarding the risk of losing office (Cheibub, 1998; Chiozza and Goemans, 2004; Li, 2009).

Another common measure which I use in this study is *executive turnover rate*. It measures the number of changes in the executive position over a fixed period of time (Cheibub, 1998; Li, 2009). To compute this variable, I collect data from the Archigos dataset (Goemans, Gleditsch and Chiozza, 2009) regarding changes in leadership in all relevant countries in the 20 years prior to the crisis. Then, I calculate the number of leadership transitions and divide it by 20.[92] Higher turnover

[92] Kertzer (2016) employs a similar strategy.

rates reflect shorter time horizons and greater concern for losing office facing security conflicts, compared to those who expect to remain in their position for the foreseeable future.

Independent variables

In the theoretical framework, I describe time horizons as depended upon both situational and individuals factors. Therefore, I use multiple indicators from both levels of analysis.

Situational Factors

The first factor is issue salience. To account for leaders' view of the issue at stake, I use two indicators from the ICB dataset. First, *Trigger* is the precipitating cause of the crisis. This is a nine-scale variable that ranges from verbal (1) to a violent act (9). As the theory suggest that more salient issues drive short-term orientation, I expect that higher values of this variable will shorten leaders' time horizons. Second, *Gravity of threat* identifies the object of gravest threat at any time during the crisis, as perceived by the principal decision-makers of the crisis actor. The values range from 0-6 but involve some unclear sub-categories including an 'other' value. I recode the values of 'other' based on the case description in the dataset and fit these cases on a 1-6 scale. From a temporal perspective, I expect that higher values of threat shorten time horizons and prompt immediate actions to address these threats.

Expected costs is the second situational factor. In the experiment, I focus on human causalities in conflict. As I discuss in the theoretical framework, for politicians, the costs factor relate to their perceived risk of survival in office, and is represented by several constraints, in particular electoral institutions and domestic political conditions.

I begin with elections. I collect data on the timing of elections in all democracies (countries with a polity score higher than 6) from Bormann and Golder (2013) for the years 1946 to 2011. The observations not included in this dataset were completed with on-line resources. Based on this data, I construct two variables. *Elections Proximity* is a binary indicator coded 1 whenever elections are

scheduled within six months of the crisis inception, and 0 otherwise. I also use *Election Days* - the number of days between the crisis to the next election. This continuous variable complement the proximity measure. My expectation is that closer to elections, leaders display shorter time horizons in the face of a security crisis (Gaubatz, 1991).

Domestic conditions include two types of indicators - state of the economy, and the degree of social instability. *Economic Conditions* is an index that accounts for changes in elements such as cost of living, inflation, unemployment and labor disruption. As the focus of the theory is on the deterioration of the economy, I recode the index into a binary indicator with value 0 for normal/stable economic conditions, and 1 for increases in economic problems. The expectation is that worse economic conditions in the context of a security conflict make leaders more short-term oriented since they need to 'provide' immediate results, minimize the likelihood that a security crisis becomes critical event (Koch, 2009) and thus face growing risks for their political survival.

The other variable is social unrest. I account for various events that reflect domestic tensions and growing public criticism of the government based on indicators from the CNTS data archive (Banks and Wilson, 2017).[93] I employ the *Weighted instability index* which aggregates events that might destabilize the regime such as strikes, riots, government crises and anti-government demonstrations (measured annually). It is a continuous measure that aggregates the events and assigns various weights in order to generate a single value. Higher index values suggest a more unstable situation. Similar to the economic conditions indicator, I expect that higher values of the index increase the likelihood of short time horizons for political leaders.

Individual Factors

In the theoretical framework, I describe three individual-level factors that are most relevant for the time horizons of decision-makers. Time preferences is a strong dispositional measure (as the

[93] CNTS Data: https://www.cntsdata.com/domconflict

results of the experiment demonstrate). Yet, I cannot directly measure this factor in a cross-national sample of political leaders.

There are two factors that can be used with observational data. *Leader Age* is calculated with information from the Archigos dataset (Goemans, Gleditsch and Chiozza, 2009). I account for each leader's age at the time of the crisis. With respect to temporal orientations, I expect older leaders to have shorter time horizons (Horowitz, McDermott and Stam, 2005).

To measure risk preferences, I adopt an indirect approach and follow earlier work (Horowitz and Stam, 2014; Kertzer, 2016) that link military experience and risk perceptions. The central logic of this approach is that previous experience in the military shapes individuals' views of the risks associated with conflicts and wars.[94] My theoretical argument focuses on the effects of risk perceptions and the uncertainty in conflict on time horizons. Therefore, I utilize the refined measures that distinguish between military and combat experience. I collect data from the LEAD dataset (Horowitz, Stam and Ellis, 2015) that uses binary indicators for both military and combat experience. With respect to time horizons, having combat experience makes leaders more sensitive to the risks of uncertainty in a prolonged conflict and thus, they are more short-term oriented. Having only military experience makes leaders more likely to view the use of force as the default solution and less averse to the risks of conflict. Horowitz and Stam (2014) show that such individuals are more likely to engage in conflict. For my purposes, it suggests higher degree of risk acceptance and a long-term view.

Lastly, I include two control variables, both relate to leaders' perceptions of their probability of survival in office. First, *Previous Tenure* accounts for the time in office until the crisis. This measure also influence a leader's perceptions of her expected survival. I compute the measure using the tenure data from the Archigos dataset - it is the number of days since the leader enters into office until the inception of the crisis. Then, I multiply the democratic leaders' measure by

[94] See also, Feaver and Gelpi (2011). For a different view of the military experience, see Grossman, Manekin and Miodownik (2015).

(-1). The logic of this operation is to differentiate between democratic and autocratic leaders since the former tend to have a negative view of their survival prospects the longer they are in office, and the opposite is likely for dictators. Second, since some of the leaders in the data occupy their position more than once, I add *Previous Office* that measure the number of times the leader served in this position prior to the current one.[95]

Results

Time horizons in international conflicts

I begin the analysis with testing the baseline (unconditional) relationship between the various factors and the time horizons of leaders in international conflicts in the period 1918-2015. In table 5.2, I present the results of the regression models that assess how situational and individual level factors affect the dependent variable - the number of days between the inception of the conflict and the end of the leader's tenure. I employ standard least-squared regression in models 1,3, and 5. Then, in models 2, 4, and 6, I use a random effects specification to account for potential correlations between observations as some leaders face multiple crises over time.

All six models include the *Trigger* and *Gravity of threat* indicators, I vary the other situational factors and also include all individual level variables. Overall, across all models, the evidence suggests that both situational and individual factors matter for the expected survival time of leaders, reflecting their time horizons facing an international conflict.

First, I detail the findings of the situational factors. In models 1 and 2, both the *Trigger* and *Gravity of threat* indicators are negative and significant (at the 90% level) suggesting that more violent and threatening events shorten time horizons as they represent higher issue salience. Based on model 1 coefficients, the decrease in the predicted value of the dependent variable between a non-violent (political) trigger event to a violent one is over 22%. Even for less extreme triggers as

[95] The values of this variable range from 0 to 4. The vast majority of leaders (98%) serve for the first time or served only once before in that role.

Table 5.2: Time horizons factors: OLS regression models

	Models:					
	(1)	(2)	(3)	(4)	(5)	(6)
Trigger	−44.6*	−48.4*	-6.42	-8.15	19.03	10.48
	(26.0)	(24.8)	(34.1)	(28.8)	(33.9)	(29.8)
Gravity of Threat	−88.9*	−112.1**	39.9	-14.2	85.71	65.26
	(50.02)	(49.4)	(66.0)	(56.5)	(67.0)	(60.1)
Election Prox.	−385.2**	−398.9**				
	(200.6)	(193.8)				
Economic Cond.			−407.0**	−337.5*		
			(207.1)	(173.6)		
Social Unrest					−0.19***	−0.16***
					(0.04)	(0.04)
Leader Age	14.5*	8.11	−92.48***	41.3***	−100.3***	−63.6***
	(8.3)	(8.7)	(8.5)	(8.8)	(8.3)	(8.8)
Military Exp.	-132.1	-81.2	939.7***	1252.9***	838.3***	1018.4***
	(263.6)	(275.6)	(290.0)	(302.7)	(289.1)	(315.4)
Combat Exp.	48.2	171.8	−990.0***	−636.7***	−938.7***	−579.2*
	(280.4)	(268.1)	(308.8)	(310.2)	(308.5)	(323.9)
Previous Tenure	0.12**	0.09	0.21***	−0.07*	0.21***	-0.05
	(0.06)	(0.06)	(0.03)	(0.03)	(0.03)	(0.03)
Previous Office	−451.0***	−307.6*	−436.1*	-182.3	−587.9()*	-219.8
	(166.4)	(160.8)	(235.4)	(201.8)	(238.5)	(213.1)
Constant	1206.3**	1608.8***	7439.1***	5025.7**	7936.2***	6170.5***
	(539.0)	(562.8)	(600.1)	(580.8)	(587.7)	(591.5)
Observations	311	311	799	799	885	885
R^2	0.06	0.05	0.20	0.08	0.21	0.13
RE	-	Yes	-	Yes	-	Yes

Notes: $^{*}p < 0.1$;$^{**}p < 0.05$;$^{***}p < 0.01$
Standard errors in parenthesis.
Models 2, 4, 6 are random effect models.

economic versus indirect violent act, the difference is about 16%. Similarly, when the degree of threat increases, the time horizons of leaders shortens. The difference between a limited military threat to a territorial one is about 12% drop in the expected time of survival post-crisis. The main situational factor in these model is *Election Proximity*. The coefficient is negative and significant suggesting that a security crisis closer to elections substantially reduce the time horizons of leaders (almost 30% decrease in the predicted value of the dependent variable when elections are within six months or less).

Model 3-6 do not account for electoral institutions, and therefore include both democracies and non-democracies. As a result, the sample size is larger. In models 3 and 4, the main situational factor is *Economic Conditions* which is negative and statistically significant. This result indicate that when economic conditions worsen and a security conflict emerges, politicians' time horizons are shorter. For models 5 and 6, the *Social Unrest* variable is negative and significant suggesting that facing a conflict situation when social unrest increases, leaders have shorter time horizons as they focus on addressing the security threat and 'present' to their supporters immediate 'benefits'. Based on the model coefficients, comparing low to high level of social unrest (the mean value versus the 75th percentile) reduces the expected time in office by 12% (a 15% decrease for comparing the 25th versus the 75th percentile).[96]

The results of these models provide support for most of the relevant hypotheses. I find partial evidence that salient issues drive shorter time horizons (H_5) as the variables are significant at the 90% level in models 1 and 2, and fail to reach statistical significance in the other models. At the same time, models 3-6 show that the other situational factors are quite powerful as a deterioration in domestic conditions, either economic or social unrest, reduce the length of leaders' time horizons in conflict situations. These findings support both H_{7a} and H_{7b}.

[96] Recent work by Carter (2020) suggest that in times of difficult domestic conditions, a leader wishing to strengthen her public approval will engage in a harsh foreign policy rhetoric due to its short-term advantage in generating an increase in public support. This research offers supports my argument that difficult domestic conditions drive a short-term orientation for leaders.

In addition to the situational variables, all models account for individual-level factors. Models 1 and 2 includes only democratic nations and have a smaller sample size. That can be part of the explanation for the lack of strong support for the military and combat experience indicators. The age variable is significant but in the opposite direction of my expectation. Another explanation for these results is that the domestic institutions in democracies have powerful effect and they mask the effects of individual factors on such outcomes. In their work on leaders' age and conflict behavior, Horowitz, McDermott and Stam (2005) offer this argument for the weak effect of the age variable in democracies.

A stronger evidence for the individual factors is presented in models 3-6 which include all types of regimes. The effect of *Age* is negative and significant across all models, supporting my expectation that older leaders have shorter time horizons. Based on the coefficients in model 3, the effect is quite strong as comparing the predicted value of time horizons for young leaders (ages 40 and less or 48, the 10^{th} and 25^{th} percentiles) to the median age of 56 or older leaders (ages 64 and 70+ for the 75^{th} and 90^{th} percentiles), the differences vary from 70% (youngest to oldest), to 44.9% (25^{th} to 75^{th} percentile). The measures for risk attitudes are military and combat experience. These indicators are statistically significant and in the expected direction in models 3-6. Thus, having only military experience prolongs leaders' time horizons. Even more fitting to my argument about risk aversion and time horizons, those with combat experience have shorter time horizons. The difference in the predicted values of the dependent variable is approximately 30% lower for those displaying risk aversion in terms of combat experience (predicted values based on coefficients in model 3).

These findings provide support for both relevant hypotheses about the individual factors. First, older leaders have shorter time horizons (H_{8b}). In addition, political leaders who display higher risk aversion are more likely to have shorter time horizons, supporting H_{8c}.

Time horizons in International conflict: An interactionist approach

The results above provide evidence of the independent effects of various relevant factors on the time horizons of political leaders in international conflicts. Similar to the analysis in the first half of this chapter, I also conduct an assessment of the interactionist approach that accounts for the conditional relations between these factors. Therefore, in this section, I rely on the findings of the relevant factors as the baseline and employ interaction models to evaluate leaders' time horizons in conflict situations.

The main premise of the interactionist approach is that the outcomes are based on the interplay between factors (or variables) in multiple levels of analysis. To test this argument, I employ several models that assess the conditional relations between situational and individual-level factors, and how they shape the resulting time horizons. Since the interpretation of the coefficients in interaction models is problematic, I visualize the main results using marginal effects plots (Brambor, Clark and Golder, 2006).

First, I run two interaction models that assess the conditional relations between the situational factor *Trigger* and two individual-level factors: age and combat experience (the measure for risk aversion). In the first model, I interact the trigger indicator with leaders' age. The resulting coefficients, both constitutive and the interaction terms are significant. The model also includes the binary economic conditions variable (significant and negative, as expected), as well as military and combat experience (also significant and in the expected direction).

Figure 5.5 displays the marginal effects of both models. In panel A, I plot the conditional effect of different triggering events on leaders in two quantities of interest of the age variable: the 25^{th} and 75^{th} percentiles. For younger leaders (age 45) the effect is positive when the trigger event changes from non-violent to violent act, and the resulting time horizons is about 11% longer. A larger gap is evident for older leaders (age 65) as a change in the trigger event from non-violent to violent shortens their time horizons by more than 17%. Overall, these results support the proposition that more aggressive trigger events (a measure of issue salience) varies the resulting time

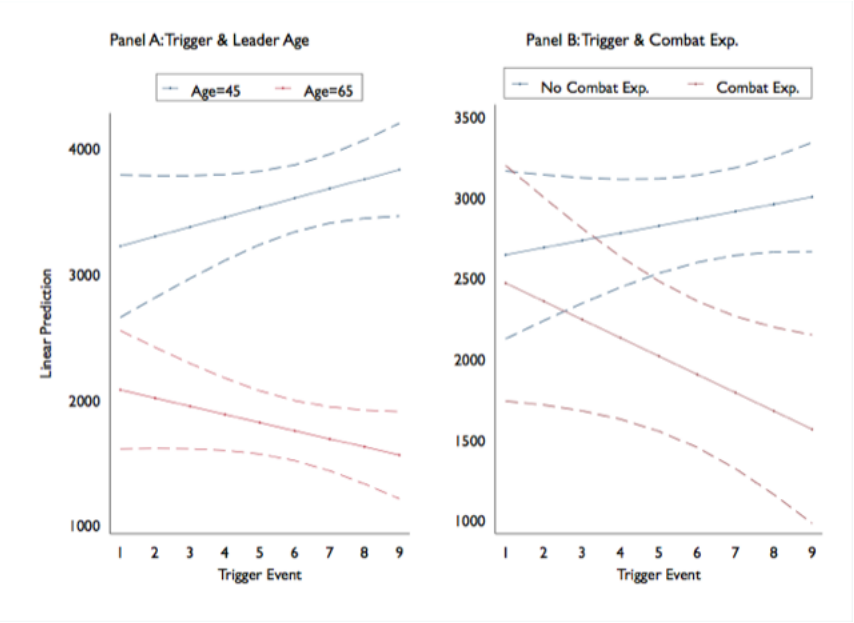

Figure 5.5: Conditional effects: Trigger and individual factors

horizons of politicians in different ages. The second model includes an interaction between the *Trigger* and whether a leader has combat experience (a binary indicator). Panel B of figure 5.5 plots these results. For more violent trigger events, leaders with combat experience have shorter time horizons, compared to those with no combat experience. The change is approximately a 26% decrease in their time horizon when comparing non-violent to a violent trigger event.

To further explore the interplay between situational and individual factors, I run two more models in which I interact the situational factor *Social Unrest* with the after-mentioned age and risk indicators. Similar to the analysis above, I plot the conditional relations using two marginal effects plots in figure 5.6.

Panel A displays the results of interacting the social unrest and age variables. Two important findings are evident. First, for high degree of domestic instability (the 75^{th} percentile, a value of 2500) the difference in the time horizon between young and old leaders is large, almost 60%. Second, the conditional effects between both indicators are clearer when I compare changes in their time horizon. Younger leaders experience a modest, 4.7% decrease in their time horizons as

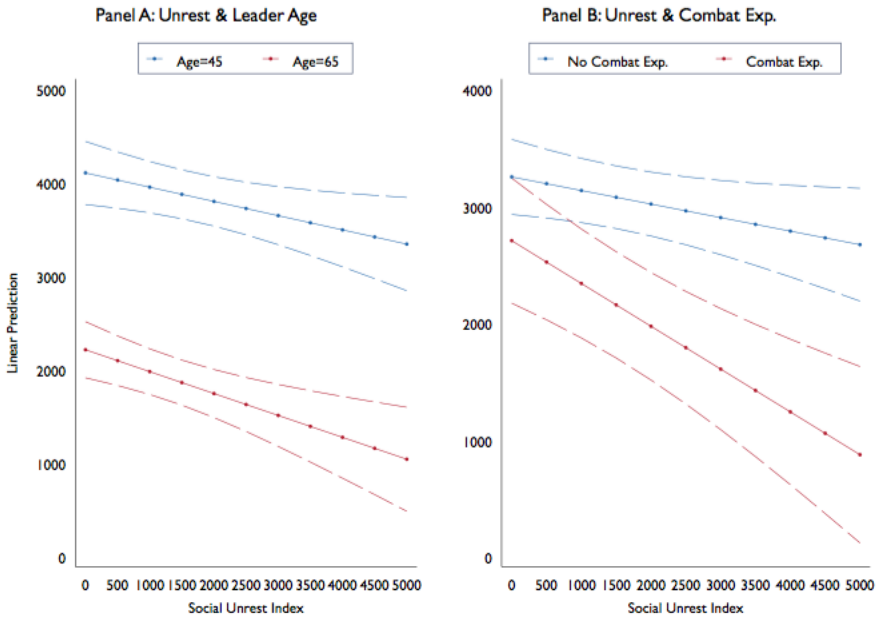

Figure 5.6: Conditional effects: Social unrest and individual factors

unrest intensifies (from the mean value to the 75th percentile). However, for older leaders, this change is substantially larger, about 17% shorter time horizons as domestic instability rises. These results demonstrate the simultaneous effects of both situation and the individual on the temporal perspective of leaders facing a conflict scenario.

Panel B presents the results of the interaction of the social unrest and risk aversion (combat experience) indicators. The results of the model are significant and show that as the degree of social instability rises, the time horizons for leaders with combat experience decrease at a higher rate. When comparing the change in time horizons as domestic unrest intensifies, risk averse leaders (those with combat experience) have time horizons that are almost 17% shorter compared to the mean value of social unrest (the change is about 3.7% for those with no combat experience).

Lastly, I also test the conditional relations between the proximity of elections and leaders' age or risk attitudes, but the results fail to reach statistical significance. The main explanation is similar to the one I offer earlier about the independent effect of the elections variable. Mostly,

electoral institutions are a powerful mechanism that reduces the effect of individual characteristics, especially in democratic regimes.[97]

Macro-level test: Summary

In the second part of this chapter, I conduct a macro-level analysis of the theoretical framework using observational data of political leaders in conflict scenarios. Using the ICB dataset of international conflicts between 1918 to 2015, I evaluate what shapes leaders' time horizons using various factors at the situational and individual levels of analysis.

I find support for the main effects of most relevant factors. Among the situational factors, the domestic environment serves a crucial role in shaping the time horizons of political leaders. Within the costs/constraints category, the most powerful factor is electoral institutions. The analysis demonstrates that closer to elections, the time horizons of leaders are substantially shorter (almost 30% when elections are within six months or less from the crisis' inception). A short-term orientation suggest that leaders are cognizant of the need to 'appease' voters and thus explain previous findings about avoiding from engaging in risky policy actions when elections are near (Chiozza, 2017; Gaubatz, 1991; Marinov, Nomikos and Robbins, 2015; Payne, 2019/20).

I also find support for domestic conditions that affect the survival prospects of leaders, and thus their time horizons. Both a decline in the economic conditions, and an increase in the degree of social unrest are correlated with shorter time horizons. Unlike the elections indicators, these results are not unique to certain regime type. Therefore, leaders facing international conflict and deteriorating domestic conditions have strong incentives for short time horizons and implementing

[97] In addition to the findings in this section, I conduct several robustness checks: (1) Appendix C.1 - I run all models with the executive turnover rate indicator as an alternative measure for time horizons (the dependent variable); (2) Appendix C.2 - I run all models with alternative measures for the situational factors of elections (*Election Days*), economic conditions and social unrest (using measures from the ICB dataset); (3) Appendix C.3 - I conduct a duration analysis based on the logic of time horizons as survival in office (De Mesquita and Siverson, 1995). Overall, most results across all alternative model specifications are consistent with the findings in the main text.

actions to address the security threat in order to divert public (or elite) criticism by 'presenting' immediate outcomes (or display their competence and thus reduce criticism).

Similar to the results of the experiment in the first half of this chapter, issue salience is one factor for which the results are mixed. When the precipitating trigger event is of military type (violent), leaders have much shorter time horizon. Yet, the gravity of threat indicator fails to show consistent effect on the temporal perspectives. These results can be a function of the data itself as the gravity of threat indicator is centered around mid-level types of threats (political or exerting influence) with minimal variation. Another explanation is that, similar to the experiment, the effect of the issue is captured within the domestic constraints factors, and leaders also perceive the risks of these factors within the prism of salient issue.

The analysis of the unconditional effects also show strong and consistent results for several individual level factors. Across most models, leaders' age is a predictor for shorter time horizons, and I show rather large differences in the expected time horizons between young and older politicians facing conflicts. These results correspond with previous findings regarding the effect of age on time horizons (Falk et al., 2018; Horowitz, McDermott and Stam, 2005; Lechler and Sunde, 2019). Using measures from the LEAD dataset, I account for leaders' risk attitudes and show that risk averse individuals (those with combat experience) are more short-term oriented. At the same time, military experience (a measure of risk acceptance) is correlated with longer time horizons. These results fit with the argument derived from *construal level theory* (Liberman and Trope, 1998; Trope and Liberman, 2010) linking risk orientations with respect to the uncertainty of conflict, and time horizons.

In addition to these findings, I also test the conditional relations between situational factors and individual dispositions. Based on an interactionist approach (Herrmann, Tetlock and Visser, 1999; Kertzer, 2016), I propose that the interplay between both sets of factors vary leaders' time horizons in conflict. The analysis relies on interaction models and show that, for the most part, the simultaneous effects of these factors vary the dependent variable of time horizons. I find

that situational factors as issue salience (the trigger event) or domestic constraints (social unrest) enhance the negative effect of age and combat experience, and further shorten time horizons in conflict. At the same time, I fail to find a conditional effect for the situational factor of elections on any of the individual measures. This supports arguments about the strong role of electoral institutions that diminish the effect of variations among individual leaders (Horowitz, McDermott and Stam, 2005), and serve as a prominent factor shaping their view of political survival, and by extension, their time horizons.

While the findings in this analyses support most of my expectations about the relationship between the different factors and leaders' time horizons in conflict, one central criticism is the measures used for the dependent variable of time horizons. I recognize the challenge of relying on the remaining time in office as reflecting leaders' perceptions of (an unknown) expected survival time. Nevertheless, I offer several related comments. First, based on the logic proposed by De Mesquita and Siverson (1995), all models include a control variable that combines the previous tenure time and regime type. This measure accounts for what leaders already 'went through' until the conflict began and thus it is less controversial to suggest that they can estimate how long they are likely to survive based on their tenure to that point. Second, using measures of tenure to account for time horizons is prevalent in studies of international relations. One prominent example is Chiozza and Goemans (2004) who rely on leaders' tenure to create their measure of expected survival index in crisis situations.[98] The study by Chiozza and Goemans (2004) is important for my argument as it links the observed measure of tenure with leaders' perceptions of survival time, which is fundamental for the time horizon concept and my empirical measure.[99] Third, since time horizons are conceptualize in the individual level, I avoid from using crude measures as regime type and instead rely on a measure that better reflects an individual leader's perception of her political

[98] I do not use the survival index measure since it is computed using multiple indicators from the ICB dataset. As my analysis relies on some of these measures as independent variables, I cannot use the survival index measure for leaders' time horizons.

[99] See also Cheibub (1998); Li (2009).

survival. Lastly, in appendix C.1, I detail a robustness test that employs an alternative dependent variable - executive turnover rate (Kertzer, 2016; Li, 2009). For the most part, results using this measure are consistent and show similar effects for the relevant factors.

Time horizons as a dependent variable: Summary

This chapter address a relatively under-explored topic within the literature of international relations - what explains variations in time horizons in conflict situations? I employ two types of empirical tests to evaluate a theoretical framework that integrates situational and individual factors that influence decision-makers' time horizons. Overall, across both the experiment and the observational data analyses, I find evidence that situational and dispositional factors shape time horizons, and that their interactions are critical to explaining variations facing conflict situations.

The findings in this chapter offer important insights regarding the concept of time horizons within the context of international politics. First, I tackle a question that received little conceptual and empirical attention - what factors shape variations in time horizons in conflict situations. The theoretical framework unpacks this concept into several theoretically relevant factors and suggest that variations in time horizons are a function of the interplay between the situation and individual dispositions. The empirical analysis reveal that both categories are crucial in shaping time horizons, lending support for the role of domestic (situational) constraints (Gelpi, 2017) as well as the role of individual actors (Horowitz and Fuhrmann, 2018).

Second, in order to address the challenge of studying a latent concept as time horizons, I employ a multi-method empirical assessment using both experimental methods and observational data. In both analyses, I emphasize the selection of an appropriate measure for the time horizons concept. The experiment leverages decision-makers' preferred policy among two alternatives that highlight the trade-off in temporal implications. In the observational data, I employ a measure that reflects leaders' perception of their expected political survival, considering past events and the security conflict they face. The consistency in findings across both methods show that these

measures are appropriate and are able to capture the complex implications of time horizons in the context of political choices.

Third, the results of the main effects of the various factors establish the baseline for what shape individuals' time horizons. I add to these findings by evaluating the conditional effects of these factors. The results of this analysis explains variations in time horizons based on how factors moderate one another. For example, how situational elements such as costs or domestic constraints enhance the effect of individual disposition as time preferences or age. These results add to a growing literature that places more emphasis on the need to model conditional relations (Chaudoin, Milner and Pang, 2015; Herrmann, Tetlock and Visser, 1999). More recent scholarship adopts these views and assign similar weight to the role of situational and individual factors in shaping behavior in conflict. These studies explain outcomes such as conflict initiation and electoral incentives (Carter and Nordstrom, 2017) or presidents' preferred military strategies (Macdonald and Schneider, 2017). The results in this chapter best fit with research in international politics that employs this approach to study complex latent variables such as audience costs (Davies and Johns, 2013) or resolve (Kertzer, 2016). Using an interactionist view better reflects reality and allows to test for conditional relations between factors in separate levels of analysis, improving the fit between theoretical propositions and how actors behave in reality.

Lastly, the application of an experiment, followed by the observational data analysis offers a more rigorous test of the theory. I account for both micro- and macro-levels of analysis and find consistent support for both sets of theoretically relevant factors. In the experiment, I emphasize an internal validity assessment and show how individual dispositions such as time and risk preferences interact with situational conditions, resulting in different time horizons. The analysis using the ICB observational data offers an external validity test. The findings of similar unconditional and conditional effects in the behavior of political leaders over a long time span (1918-2015) provides additional evidence that time horizons are contingent on the simultaneous effects of the environment as well as the individual decision-maker.

While the findings in this chapter are encouraging, more research is required to expand our understanding of the concept of time horizons and strengthen our methods of measuring it. First, additional replications of this study can provide more robustness to the research design in terms of measuring time horizons in a relevant context. For the experiment, I relied on pre-tests of student samples, and then a national sample in which I recruited participants using Amazon Turk services. The concern is less with respect to the use of student or national sample as recent works provide support for studying these populations when testing decision-making models (Coppock, Leeper and Mullinix, 2018; Lupton, 2019; Snowberg and Yariv, 2021), but rather the focus on the American public. Additional work should replicate the design in other national settings as recent studies in economics show that temporal perspectives can be affected by cultural and national characteristics (Falk et al., 2018; Wang, Rieger and Hens, 2016).

Second, in the observational analysis, I rely on a measure of time horizons that reflects leaders' perception of their (expected) political survival time. Robustness tests of the main results employ another measure, executive turnover rate, which is also common in the literature. In order to improve our empirical tests of complicated concepts such as time horizons, we must develop additional measures that both capture the essence of time horizons but also have a general appeal and can be tested with other data on political behavior.

Finally, while I focus my theory on time horizons in conflict situations, the framework I develop can be adjusted for other political decision contexts. Future research should assess this theoretical framework in other political situations such as bargaining within international institutions, alliance formation or various economic policy choices.

CHAPTER VI

CONCLUSIONS

The civil war in Syria, since its inception in late 2011, has been a dilemma for the Obama administration that struggled to come up with a clear policy to address the human tragedy in Syria. In the summer of 2012, when the president was asked about the events, he set up the infamous 'red line' policy regarding US intervention if the Assad regime used or transferred chemical weapons to secure its survival. Then, on August 21st, 2013, news broke of a catastrophic chemical-weapons attack in Syria. The US intelligence community had a "high confidence assessment" that a Sarin gas attack had killed more than a thousand people in a suburb of Damascus, and that the Assad regime was the culprit.

Despite an initial plan to respond with a military strike, president Obama 'reversed course' just days before the attack and decided to explore other options. First, asking for congressional approval for the intervention. Then, only a few days after calling-off the attack, a diplomatic solution began to form as the Russians pressured the Syrian regime to admit of using chemical weapons, and have all stockpiles of the lethal weapons removed from Syria. In a surprisingly quick fashion, an agreement was signed a few days later and by June 2014, over 1,300 tons of chemical weapons were removed from Syria. Despite facing vast criticism for the decision to reverse the call on military strikes, Obama views this decision favorably and as one of the most important ones in executing his 'long game' view on foreign policy (Chollet, 2016).

Obama's 'long game' view of foreign policy leads to a central question that the Syrian episode raises: how come options such as asking for congressional authorization or a multilateral diplomacy were possible in 2013, while in 2012, they were not even 'on the table'? The framework I propose in this research project offers an answer - the different temporal orientations of the president, his *Time horizons*, has shifted from a short-term view of the crisis in Syria to a long-term one, in which he emphasized the need to address the threat of chemical weapons for the

foreseeable future. The theory I present in this project suggest that decision-makers' time horizons indirectly determine their selection of policies by shaping the choice-set of alternatives. Therefore, in 2012, Obama's focus on short-term outcomes served as an impetus to set the 'red line', essentially warning the Syrians that further use of chemical weapons will be met with a single policy option - an American military strike on Syrian assets. A year later, Obama's temporal orientation shifted back to his preferred one, long-term, which is less restrictive and led him to entertain more policy options to address the crisis that has erupted in full force after the August 2013 attack.

In his long description of the crisis and its eventual conclusion with the Syrians signing the agreement in September 2013, Chollet (2016, p.24) argues that the president was "...willing to live with this perception [that the Syria crisis was not a strategic success] as long as the results serves the country's long-term interests". In addition, Obama himself said that one his main concerns for this crisis was the long-term risks involved with an American involvement in the Syrian civil war (Goldberg, 2016).

If we accept that a change in Obama's time horizons explains the shift from a focus on a military response to a more diverse set of alternatives, how can we explains this shift? Why was Obama less willing to contemplate the long-term implications of his statement in 2012? The theory I offer in this research can answer that as well - a change in several of the situational factors, primarily the upcoming 2012 elections in November, shaped Obama's individual disposition for a long-term view. As a result, he was more focused on immediate outcomes that would support his re-election campaign. Therefore, even though a patient, long-term approach was one of the core tenants of the Obama foreign policy (Chollet, 2016), the situational factor of the approaching elections shifted his time horizons to the short-term. In 2013, after already securing his electoral victory, situational pressures were not powerful enough to change his basic disposition of a long-term view of such issues.

This brief assessment of the Syrian crisis offers some evidence that illustrates the critical role that time horizons play in foreign policy decisions. Throughout this research project, I build

a strong case arguing we must account for leaders' time horizons when examining decisions in international politics. I develop a theory that deals with the concept of time horizons from both angels - as an independent variable that explains choices, as well as a dependent variable with a focus on the question of what shapes variations in this construct.

In the first section of this project, I explore the effects of time horizons by unpacking the decision process to two sequential phases. I argue that the effect of time horizons is most prevalent in the initial phase, the pre-choice screening of alternatives and formation of a choice-set of preferred policy options. In the second phase, decision-makers engage in a more meticulous assessment of the surviving options and select the one which offers the highest net benefits. Therefore, time horizons serve as a *screening mechanism* leading to the rejection of some alternatives and the formation of a reduced 'short-list' of policy options. These options are evaluated in more detail prior to selection. Since decision-makers have different time horizons, the resulting choice-sets of policy options also vary. While short-term oriented individuals assess only options that offer immediate benefits, those who are more future-oriented have a larger choice-set of alternatives and are willing to entertain more diverse set of policy options to address an international conflict.

To test these propositions, I design a two-phase experiment and estimate how variations in individuals' time horizons shape their choices facing a conflict situation. Overall, the results support my expectations as individuals with long time horizons form larger choice-sets and are willing to evaluate multiple policy options. In addition, the type of evaluated alternatives also varies between both temporal orientations. Those with short time horizons are less likely to accept into their choice-set options that do not offer immediate benefits. On the other hand, long-term oriented actors are willing to entertain policies that are less successful in the short-term as long as future outcomes are positive. The experiment also assess the subsequent, selection, phase and findings show that actors are sensitive to the temporal trade-off and do not always prefer the best possible option. Thus, a policy that has very high chances of success and negative outcomes in the

reciprocal time frame may be less appealing than an option that is positive in the reciprocal time frame but has lower chances of success.

The results of the analysis has several implications. First, in the IR literature, time horizons is a common concept that explains behavior in international context. However, these studies do not address the question of *how* individuals' temporal orientations motivate different choices. For example, scholars argue that time horizons are essential for the selection of either a cooperative (Axelrod, 1984; Keohane, 1984) or competitive (Edelstein, 2017; Fearon, 1998; Hundley, 2020; Toft, 2006) strategy in conflict. My theory unpacks the decision process and highlight the preceding phase of choice-set formation in order to assess how these options become viable to be seriously evaluated by decision-makers. In other words, whether strategies of competition or cooperation are 'available for deliberation' is a function of the actors' time horizons. Second, studies of foreign policy substitution (Clark, Nordstrom and Reed, 2008; Lin-Greenberg, 2019; Most and Starr, 1984) explain how political leaders select a policy out of a larger 'menu of options' (Hensel, 2001; Oakes, 2012). In most of these studies, the assumption is that the list of options is fixed. I relax this assumption and show how time horizons contribute to the composition of the choice-set, which consists of options that are similar in terms of their temporal implications. Third, I find evidence for contextual preference reversal (the final analysis in chapter 4), which adds to studies of foreign policy by emphasizing the important role of pre-choice screening and the choice-set (in many cases, an unobserved aspect) within the decision-making process. It also offers more evidence for contextual preference reversal in a complex decision situations such as national security.

While the first section of this project address time horizons as an independent variable, an additional gap in the literature is the question of what explains variations in time horizons? (Edelstein, 2017). This puzzle suggest we need to 'move' the time horizons concept to the 'left-hand side of the equation' and study it as a dependent variable. To answer this question, I develop a theoretical framework that integrates situational and individual level factors and propose that their interplay (i.e. their simultaneous effect) shapes different time horizons in conflict. The main

argument is that situational factors, such as expected costs or political constraints (elections for example), moderate the effect of individual dispositions and vary time horizons facing international conflicts.

I test this proposition with a multi-method approach using an experiment followed by an observational data analysis. The results of both tests reveal how the different factors shape variations in time horizons. Overall, situational factors such as expected conflict costs (measured in human casualties) or political constraints (approaching elections, eruption of social unrest) have a stronger effect on the resulting time horizons. By far, elections are the most powerful situational factor that shapes time horizons. Politicians who focus on securing their political survival substantially shorten their time horizons as elections approach. The strength of this factors is large and it nullifies the effects of individual dispositions, supporting previous arguments about electoral institutions in democracies (Horowitz, Stam and Ellis, 2015; Horowitz, McDermott and Stam, 2005).

While situational factors play a a significant role in shaping conflict time horizons, individual factors have an important influence as well, mostly decision-makers' age and time preferences. In addition, I find that the interplay between these factors generate interesting outcomes. For example, I find that a situational factor as such costs amplifies the dispositional effect of age - older individuals favor immediate outcomes, yet when costs are high, these tendencies are enhanced. At the same time, situational factors may also shift time horizons. For individuals with dispositional short time preferences, I find that high immediate costs decrease the likelihood they will favor a short-term solution to a conflict situation.

These results offer contributions to several literatures. First, while many studies employ time horizons to explain behavior and foreign policy choices, almost no study address the question of what shapes this construct and when will it vary. As I mentioned earlier in this project, there are 'scattered' explanations for why individuals 'adopt' certain time orientations, but the literature lacks a clear theoretical framework that explains the conditions under which decision-makers are more likely to display short or long time horizons. The framework I offer in this project integrates

the relevant factors and generates predictions about when individuals are more likely to be either short- or long-term oriented. Second, one central challenge of studying the time horizons concept is identifying appropriate measures. The analysis in this study employs more direct measures that capture both the perceptual aspect of time horizons as well as the inherent trade-off that such choices involve. I employ a multi-method approach that includes a micro-level analysis with an experiment, as well as macro-level test with cross-national observational data on leaders in conflict. The consistent findings regarding the factors that shape time horizons provide more evidence for my theory as well as the measures used to account for this concept. Third, since I present factors in multiple levels of analysis, I adopt an interactionist approach (Herrmann, Tetlock and Visser, 1999; Kertzer, 2016) and argue that the outcome is contingent upon their interplay, i.e. time horizons are shaped by the simultaneous effects of situational and individual factors. The results of the empirical models provide partial support for *interactions* among the various factors. At the same time, in several of the models, I do not find interactions in the most common form (based on multiplicative terms). Nevertheless, I demonstrate that factors in **both** levels of analysis matter and shape variations in time horizons. Early work in IR suggest that foreign policy choices depend on factors in multiple levels (James and Oneal, 1991; Ostrom and Job, 1986), not necessarily in the functional form of interactions. In addition, as suggested by Kertzer (2016), an interactionist theory can also explain the outcome based on factors that influence the results through two (or more) separate causal paths. My extended empirical analysis offers evidence for both arguments using data about the choices of individuals (with an experiment), and the decisions by political leaders in international conflicts.

In the following sections, I expand on the broader implications of this research by discussing potential extensions based on the theory I proposed, and the various empirical tests.

Methods

This research project involves a multi-method approach that combines several quantitative tools, led by experiments and observational data analyses. I account for the theoretical mechanisms at the micro-level by employing experiments that assess the process of decision-making by disaggregating it into multiple phases. The second experiment (chapter 5) offers a more direct measure of time horizons, and allows to estimate the individual level factors that shape it. Then, I complement the assessment of time horizons by testing the framework with cross-national observational data on political leaders in security conflicts during the 20^{th} century.

The results across both methods are consistent. For the analysis of what shapes variations in time horizons (chapter 5), both the experiment and observational data show the effects of similar situational and individual factors, as well as their interactions. For the choice-set and policy selection in conflict tests (chapter 4), I complement the experimental results with two historical cases. First, the Obama example that I discuss at the beginning of this chapter. Second, in chapter 1, I present an exploratory case analysis of the American response to the crisis in Bosnia (1992-1993).

There are two central implications for these outcomes. First, the relative consistency in results across all methods offer stronger support for my theory on time horizons in conflict. Second, the use of these methods presents both internal and external validity tests of the theory, finding similar results, and reducing concerns about the use of convenient samples for models of elite decision-making (Friedman, Lerner and Zeckhauser, 2017; Hafner-Burton et al., 2017; Kertzer, 2020; Renshon, 2015; Sheffer et al., 2018).

From a methodological standpoint, future research can employ several steps to further assess my theory on time horizons in conflict. First, for both of my experiments, I use American national samples recruited through Amazon MTurk. As argued by other scholars, there is a need to test our theories in a more global context (Davies and Johns, 2013). Therefore, applying my experimental design in other national contexts can further assess questions such as how time horizons shape the decision-making process, and what factors affect this construct. In addition, recent work in

economics suggest that time horizons have a cultural and national aspect (Falk et al., 2018; Wang, Rieger and Hens, 2016). Therefore, cross-national tests of my theoretical framework offer a more comprehensive view of time horizons in the individual level.

Second, my primary test of time horizons among elites is the observational data analysis. The Bosnia crisis case study offers some evidence regarding time horizons as a screening mechanism for the choices of presidents Bush and Clinton. Yet, we can engage in a more rigorous test of the theory by exploring a historical case that illustrate both elements of my theory. The short discussion of Obama and the Syrian 'red-line' policy offer a promising avenue. My discussion relied on mass media reporting and accounts by former administration officials. Future research can leverage official government documents (once they become accessible) and conduct a more in-depth case study of the Obama-Syria episode, thus testing my arguments about how the president's time horizon varied and how it shaped his decision-making process.

The Policy options

My theory on foreign policy selection provides an explanation to why, under certain conditions, some alternatives are 'pushed off the table'. Mostly, I argue that short-term oriented individuals are more likely to ignore policies that fail to provide clear immediate benefits. On the other hand, those with a long time horizons are more open and there is a higher probability that they will entertain multiple policy options. The empirical analysis corroborates these propositions.

Yet, one of the central limitations of the experiment is that the policy options I present to respondents are relatively generic and abstract. In other words, in real conflict situations, decision-makers assess policies such as air strikes or special forces raids, sanctions etc. I avoid from using these types of options for two reasons. First, the focus of my theory is the effects of time horizons. Thus, to enhance the treatment effect I offer relatively similar policy options and focus on the variations of the experimental (time horizon) treatments as influencing the final choice. Second, I opt for using generic policy options in order to reduce the risks of information equivalence

(Dafoe, Zhang and Caughey, 2018) - respondents may have previous conceptions of policies such as military intervention or sanctions, and those can 'contaminate' their assessment, and especially the treatment effect of time horizons.

Recent work on the question of abstract versus specific descriptions in experimental designs suggests that the difference as a whole is not too significant (Brutger et al., 2020). Nevertheless, I am cognizant for this limitation and offer a potential path to remedy this concern and complement my research project.

In order to present individuals with 'real' foreign policy options to choose from, and assess the role of their time horizons, one central question must be addressed - how do individuals define certain policies from a temporal perspective? What factors shape the classification of policy options as either short- or long-term policies? For example, military intervention may be seen as a short-term policy since it provides immediate outcomes. Yet, many historical examples suggest that a military policy is pursued with the intention of providing security and/or stability for the long-run. Similarly, entering into a negotiation process with an adversary is perceived as a long-term policy to resolve conflict. However, the choice to engage in negotiations during a conflict can be viewed as a short-term solution since it provides immediate benefits in terms of the cessation of hostilities.

Future work can rely on a theoretical framework that is similar to the one proposed by Huff and Kertzer (2018), who explore how individuals define terrorism incidents, and assess how situational and dispositional factors shape the temporal classification of foreign policies. Since many factors can determine such choices, the use of a conjoint experimental design offers many benefits (Hainmueller, Hopkins and Yamamoto, 2014). Employing such research design can help classify more clearly different policy alternatives. Then, it can be incorporated into my choice-set research design in order to assess the role of time horizons using 'actual' foreign policy options.

Pre-choice Screening: Alternative explanations

This research highlights the role of time horizons within the decision-making process in conflict. One central argument is that time horizons have an indirect effect and are more powerful in shaping the initial pre-choice screening of policy options, culminating in a reduced choice-set. The findings of the experiment support this proposition. However, is it possible that the choice-set is a function of other mechanisms?

One alternative option is that emotional reactions serve as a screening mechanism, leading decision-makers to reject certain policy options. For instance, an extensive body of work show that anger promotes support for aggressive policy options (Albertson and Gadarian, 2015; Garcia and Geva, 2016; Merolla and Zechmeister, 2009; Wayne, 2018). Therefore, an argument can be made that facing conflict situation, an angry decision-maker is more likely to reject all defensive policies, and focus her evaluation on mostly offensive alternatives such as military strikes.[100]

I offer two comments for this possibility. First, Carstensen (2006) describe a general application of temporal perspectives and link it to emotional states, mostly arguing that short-term orientation is associated with strong emotional reactions. Based on these findings, I argue that emotions and time horizons are closely related and it is possible that emotions are an additional factor that shape our temporal orientations. In my experiment to evaluate which factors shape time horizons (see chapter 5), I also collected data on emotions as anger. A basic regression analysis finds that respondents who reported higher degrees of anger are more likely to support the short-term policy option. Thus, if negative emotion such as anger is associated with a short-term view, it is possible that such an individual will focus on a very specific set of options. Further research is needed with more focus on 'injecting' emotions into a framework such as the one I offer in order to better understand the potential role of this mechanism.

[100] Recent experimental work find that angry individuals are supportive of using drone strikes facing terrorism threats (Merolla and Zechmeister, 2018).

Other than emotions, studies in decision science invoke expertise as an important mechanism that shapes choices. Thus, the argument is that high degree of expertise leads decision-makers to focus on certain information that is directly related to the decision task (Spence and Brucks, 1997). For my purposes, it suggests that experts are more likely to screen more options, have smaller choice-sets and focus on alternatives they know are more likely to work. At the same time, the lack of knowledge for novices should motivate them to seek more information, i.e. evaluate more alternatives. One potential way to link these concepts to temporal orientations is based on construal level theory (Liberman and Trope, 1998; Trope and Liberman, 2010). An expert that focus on less information fits a lower construal that is associated with short-term view. A novice has more of an abstract goal and therefore will be open to entertain more options to accomplish said goal.

At the same time, my empirical analysis show that more knowledge is associated with larger choice-set. The logic is that more informed individuals seek more diverse alternatives to address a situation they know and understand well. These contrasting predictions and findings suggest a need for more research in order to firmly define the relationship between temporal orientations and degrees of expertise and/or knowledge.

Time horizons in other political domains

In this research project, I present a rather comprehensive and detailed theory of time horizons in political decision-making. Nevertheless, for both theoretical frameworks, I define clear scope conditions and restrict the discussion to threats of national security and conflict situations. By enforcing my theory to these limitations, I am able to develop clearer explanations of how time horizons change, and what are the predicted effects on the political decision-making process.

The theory that I present can be adjusted to other political decision-contexts. For example, using time horizons as a screening mechanism for policy steps when facing international trade negotiations, or even for domestic political processes such as health or social policy debates. One policy area that speaks directly to time horizons is environmental and climate policy. However, in

all these policy areas there are additional prominent factors in play (like conflict costs in my case). As a result, additional studies are needed to develop more rigorous theories that explain how these factors interact or operate with time horizons, and how it shapes policy preferences.

Research on the factors that shape variations in time horizons can benefit from applying my integrated framework to other issue-areas. For example, understanding factors such as issue salience or political constraints in the context of international institutions or trade negotiations. In addition, different contexts also suggest that other individual level factors of leaders or political officials may play an important role in shaping time horizons. The joint study of situational factors and individual dispositions can be further developed by focusing on other political contexts, both domestic and international.

Endorse an integrated approach

One central point that previous scholars raised concerns the lack of clarity with respect to the question "what explains variations in time horizons?" (Edelstein, 2017). Other studies address this question and offer a plethora of factors that affect time horizon in multiple contexts, most prominent are electoral pressures in democracies (Gaubatz, 1991; Koch, 2016; Pierson, 2011). At the individual level, years of research in economics and psychology view temporal orientations as based on an endogenous process, and overall suggest a tendency of individuals to be myopic (Frederick, Loewenstein and O'Donoghue, 2003; Zimbardo and Boyd, 1999).

A central missing element in these discussions is a clear framework that can lead to predictions about which time horizons are more likely facing certain conditions. In chapter 3, I address this important question by proposing an integrated framework that accounts for situational factors as well as individual dispositions. The theory I propose relies on an interactionist approach (Herrmann, Tetlock and Visser, 1999; Kertzer, 2016) that views the outcome - in my case, time horizons in conflict scenario, as a function of both the situation and individual. The main risk of such an approach is that we construct a 'garbage-can' model that aggregates all possible factors.

The framework I propose in chapter 3 offers a detailed account of the relevant situational factors, issue salience and expected costs, as well as individual characteristics and dispositions led by age, time and risk preferences. In chapter 5, I conduct a multi-method empirical analysis of the framework using both an experiment and observational data. Both analyses support the main propositions. The relative consistency in the findings across both methods provide further support for my theory. While I discuss multiple factors as shaping time horizons, I focus on those that have theoretical relevance and can be generalized beyond a specific context of a particular international conflict, regime or a leader. The framework, and empirical findings, offer clearer conditions for variations in time horizons, while reducing concerns about explaining time horizons with a 'garbage-can' model. In addition, the results in chapter 5 demonstrate strong effect for individual level factors, both in the experiment (age and time preferences) as well as the observational data (age, combat and military experience). The strength of these factors suggest we need to place more focus on individual leaders when modeling behavior in international politics, and conflict scenarios in particular (Horowitz and Fuhrmann, 2018).

My analysis also supports the interactionist approach directly by estimating interaction models and finding evidence for conditional relations. These findings are important as they demonstrate the limits of constructing models that rely on a single mechanism or studies that attempt to reduce the number of 'moving elements' within a theory. In a social context, there are multiple factors in play, our theories must account for it, and we must work hard to offer rigorous theorizing on the relevant factors in this large supply of potential causal explanations. These findings also present a challenge for policymakers. The main reason is that facing a complex decision scenario, politicians prefer a more succinct explanation for the problem they face, and a straightforward plan to resolve it. If an adversary's (temporal) perception of the conflict, and her associated behavior, are based on multiple factors, it is much harder to devise an appropriate policy in response.

Despite the empirical support for my theory, I recognize that it is possible that other factors can shape time horizons in conflict situations. The main 'suspects' may be other individual factors

such as emotional state, psychological traits or other background related-characteristics (Zimbardo and Boyd, 1999). The main issue with such factors is that they are highly idiosyncratic, making it very complicated to incorporate them into a general model, and test empirically.

With respect to situational factors, I argue that the main factors I discuss - salience and costs, cover most of the potential explanations. For example, past work describe the central role of international institutions with respect to time horizons (Martin, 1992). From my perspective, behavior within international institutions is part of any leader's calculus of expected costs in the relevant situation. As I mentioned above, the framework I offer is relatively flexible and can be adjusted to other contexts of decision. I contend that the linchpin of the theory is, and should remain, the interactions between factors. These conditional relations are the backbone of explaining what shapes the variations in time horizons facing conflict situations. Yet, future research should expand this framework and evaluate its fit with additional contexts of political decisions, identify which modifications are needed, and whether additional factors should be included in the analysis.

The missing myopia in foreign policy

Finally, in this research project, I emphasize the concept of time horizons and how variations in it translate to different choices in foreign policy. Yet, one of the consistent findings in both experiments (as well as most pre-tests) is the lack of public myopia in the context of foreign policy. In other words, when assessing respondents' preferred policies to address national security concerns, across all experimental conditions, the more dominant view was a long-term one. This finding is interesting and contradicts the more common view in studies of time horizons - most individuals are short-term oriented and only specific circumstances motivate them to forgo positive immediate outcomes in order to ensure future benefits.

One possible interpretation of this result is consistent with recent work on the myopic voter (Healy and Lenz, 2014; Hellwig and Marinova, 2015). The central premise of these studies is that when we explore public attitudes in more detail, myopic tendencies are less common and

contingent on factors such as how accurate is the information available to voters. It is possible that by providing respondents with more information about the situation, I led them to engage in more deliberative decision-process that placed greater weight on long-term outcomes. A more extended deliberation before making decisions fits with psychological accounts of 'system 2' reasoning (Kahneman, 2011) - it requires more mental effort and includes paying more attention to details in order to conduct complex computations and mental actions.

Another possibility is that a myopic perspective is less likely when evaluating issues of national security. Research in IR show that conflict related issues are salient for the public (Gibler and Hutchison, 2013; Heffington, Park and Williams, 2019). Yet, when an international conflict emerges, the vast majority of citizens do not face a direct and immediate threat to their lives. Therefore, it is possible that individuals understand the gravity of these issues, realize they do not face direct (personal) risk and as a result, emphasize the need to 'solve' national security concerns, and stay away from quick fixes. The end result in this case is a stronger propensity for long-term orientation when the issue at stake is related to national security.

This is an important point - if the public is indeed willing to 'suffer' short-term costs as governments address these threats with an eye toward the future, it can (or should) change the calculus of politicians facing these national security concerns. More research, using a variety of methodologies and issues in foreign policy, is needed to assess whether these results hold. Then, we must develop frameworks that allow us to understand how political leaders may and should build on these insights when designing foreign policy.

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APPENDIX A

Time horizons and the choice-set experiment

A.1 Experimental Material

In this section, I detail the experimental instrument used for collecting the data for the experiment detailed in chapter 4.

A.1.1: Factorial design

The experimental is based on a 2 (time horizon main) x 2 (reciprocal/other outcomes) x 2 (human casualties) design. In addition, I add two control (baseline) conditions consisting of only the Short/Long-term orientation treatment and no 'cost' or 'other outcomes' treatments.

	Short term Orientation		Long term orientation	
	Other version 1	Other version 2	Other version 1	Other version 2
Costs Low				
Costs High				

Figure A.1: Choice-set experiment: Factorial design

A.1.2: Instructions

All respondents read an instructions page that describes the main objective and expectations.

This experiment explores public opinion regarding government policy in a foreign conflict that is significant to US interests. All of your responses will be anonymous.

You will be presented with a hypothetical scenario about an international conflict involving US

interests. Then, a list of possible policy options will be presented. You will be asked, given all the information provided, to choose whether to accept or reject each alternative for further evaluation by senior decision makers. The objective for you is to create a 'short list' of options that you see as more useful to address the situation.

Following that, you will be asked to answer a few follow-up questions about your selection of alternatives and the experiment as a whole.

While this specific scenario is fictional, similar situations have occurred in the past. Your thoughtful responses will help researchers better understand the complex deliberations concerning decisions such as those involved in these kinds of situations.

A.1.3: Experimental treatments

Respondents are randomly assigned to one of the scenarios below (10 total scenarios).

Baseline conditions scenarios (a total of two)

"Bagram Air base - US military headquarters in Afghanistan has been under constant attacks over the last 6 months (resulting in both casualties and damages). The administration has to address this situation since a high ranking US government official (the vice president) is planning an official visit [*short time horizon condition*: at the end of this month / *long time horizon condition*: early next year (about 8 months from now)]. Military decision makers need to implement a policy that will provide a secure environment for the visit [*short time horizon condition*: as soon as possible / *long time horizon condition*: that is planned about 8 months from now]. Officials emphasize that immediate solution is [*short time horizon condition*: critical and you should be less concerned about future prospects of the situation (i.e. continued insurgency in later time) / *long time horizon condition*: not that critical and thus you should be less concerned with current insurgency attacks. You must be more concerned about future prospects of the situation and the planned visit next year.]

Below are 7 potential policy options to address the situation. For each option, experts estimate its chances of success in the [*short time horizon condition*: short term / *long time horizon condition*: long term]. We ask that you choose which of the options should be accepted for further consideration by senior decision makers and which to reject. Only accept the options that you consider to be worthy for further deliberation."

After the scenario, respondents face the first decision task - screening of policy options. The seven options are described using a table format.

	Chances of success in (Short / Long) term	Choose one option
Policy 1	85%	Accept / Reject
Policy 2	80%	Accept / Reject
Policy 3	75%	Accept / Reject
Policy 4	70%	Accept / Reject
Policy 5	65%	Accept / Reject
Policy 6	60%	Accept / Reject
Policy 7	55%	Accept / Reject

Full conditions scenarios (a total of eight)

"Bagram Air base - US military headquarters in Afghanistan has been under constant attacks over the last 6 months (resulting in both casualties and damages). The administration has to address this situation since a high ranking US government official (the vice president) is planning an official visit [*short time horizon condition*: at the end of this month / *long time horizon condition*: early next year (about 8 months from now)]. Military decision makers need to implement a policy that will provide a secure environment for the visit [*short time horizon condition*: as soon as possible / *long time horizon condition*: that is planned about 8 months from now]. Officials emphasize that immediate solution is [*short time horizon condition*: critical and you should be less concerned about future prospects of the situation (i.e. continued insurgency in later time) / *long time horizon condition*: not that critical and thus you should be less concerned with current insurgency attacks.

You must be more concerned about future prospects of the situation and the planned visit next year.]

Below are 7 potential policy options to address the situation. For each option, experts estimated the chances of success in the [*short time horizon condition*: short term, as well as the projected long term outcomes / *long time horizon condition*: long term, as well as the projected short term outcomes]. Lastly, military officials provided an estimate to the expected number of casualties of these policy options (relatively [*Casualties condition high*: high / *Casualties condition low*: low)]. Based on the scenario and the information below we ask that you choose which of the options should be accepted for further consideration by senior decision makers and which to reject. Only accept the options that you consider to be worthy for further deliberation."

After the scenario, respondents face the first decision task - screening of policy options. The seven options are described using a table format.

	Chances of success in (Short / Long) term	(Long / Short) term outcomes	Expected Casualties	Choose one option
Policy 1	85%	Good / Bad	70-90 / 10-15	Accept / Reject
Policy 2	80%	Bad / Good	70-90 / 10-15	Accept / Reject
Policy 3	75%	Bad / Good	70-90 / 10-15	Accept / Reject
Policy 4	70%	Good / Bad	70-90 / 10-15	Accept / Reject
Policy 5	65%	Bad / Good	70-90 / 10-15	Accept / Reject
Policy 6	60%	Good / Bad	70-90 / 10-15	Accept / Reject
Policy 7	55%	Bad / Good	70-90 / 10-15	Accept / Reject

Selection Phase

Following this stage, in the next page, participants are asked to consider the alternatives they accepted for further evaluation and select their preferred option to address the situation described in the scenario.

1. Below are the list of policies you chose to evaluate further. Which one do you favor the most to address the conflict situation?

Option 1

Option 2

.

Option n

2. Below are the list of policies you chose to evaluate further. For each, we ask you to rate your level of support (1- low support to 7 - high support).

Policy option 1...n:

Low support 1 2 3 4 5 6 7 High support

A.1.4: Embedded Experiment

In the next page, we ask participants to select policy options from different combinations that we provide. We add the scenario in order to ensure participants are still aware of the setting of decision. The scenario can be either ST or LT, depending on the initial treatment participants are assigned into. The wording of ST/LT in the questions below also depends on the initial treatment. In the example below, the ST condition is used.

"Below are different sets of policy options to address the situation in Afghanistan (attached below in case you need a refresher). In each question, we ask you to select your preferred option."

1. Which of the two options below do you prefer? (policy options are described using three elements: the chances of success in the short term, the projected outcomes in the long term, and the expected number of casualties from each policy).

	Success in (Short / Long) term	(Long / Short) outcomes	Expected Casualties
(1)	80%	Bad	10-15
(2)	70%	Good	10-15

2. Now, a new option is introduced. Which of the policy options do you prefer?

	Success in (Short / Long) term	(Long / Short) outcomes	Expected Casualties
(1)	80%	Bad	10-15
(2)	75%	Good	70-90
(3)	70%	Good	10-15

3. Consider a new set of options to address the situation. Which do you prefer?

	Success in (Short / Long) term	(Long / Short) outcomes	Expected Casualties
(1)	80%	Good	70-90
(2)	70%	Bad	70-90

4. Now, a new option is introduced to this set. Which of the policy options do you prefer?

	Success in (Short / Long) term	(Long / Short) outcomes	Expected Casualties
(1)	80%	Good	70-90
(2)	75%	Bad	10-15
(3)	70%	Bad	70-90

A.1.5: General issues questionnaire

1. How Important is the situation described in the text to US national security?

Not Important 1 2 3 4 5 6 7 Very Important

2. What is your assessment of the costs associated with your selected policy to improve the security of US headquarters?

Low Costs 1 2 3 4 5 6 7 High Costs

3. Based on the scenario you read, when is it more critical to address the insurgents' attacks on Bagram air base?

- In the short term (this month)
- In the long run (next year).

4. What is the target of the attack described in the scenario?

- An American military base.
- An American embassy building.

5. In which location did the incident took place?

- Iran.
- Kenya.
- Afghanistan.

A.1.6: Demographic characteristics questionnaire

1. State your gender

- Male.
- Female.

2. State your age:

3. Rank your political orientation on a 1-7 scale (1 being Democrat and 7 is Republican):

Democrat 1 2 3 4 5 6 7 Republican

4. How informed do you consider yourself about US foreign and security policy?

- Not well informed.
- Somewhat informed.
- Well informed.
- Very informed.

5. What is your highest level of education?

- Less than high school.
- High school.
- Some college.
- Bachelor's degree.
- master's degree or higher.

A.2: Power Analysis

When using experiments as a data collection method, one concern is with regard to statistical power. *Power* is the probability of correctly rejecting the null hypothesis when the alternative hypothesis is correct (Cohen, 1977). When computing power, one element that must be part of the computation is participants' sample size (Judd, Westfall and Kenny, 2017). An accepted notion is that increasing the size of the sample improves the power of the test, i.e. identifying the effects we want to estimate. Below, I present findings from a power analysis of the experiment.

My experimental design includes eight experimental and two baseline (control) conditions, for a total of 10 conditions. The sample I recruited for this research was 1100 participants, after removing respondents that failed to complete the necessary items, the final sample consists of 1036 participants.

I employ a one-way ANOVA power analysis which is best fit for comparing multiple groups. For my purposes, the test calculates the necessary sample size in each **group/condition** to obtain power in the conventional levels of 0.8-0.9, as well as accepted effect sizes of 0.1, 0.25, and 0.4 (Cohen, 1977).

The table below presents the results. For the more common effect sizes (0.25 and 0.4), and power of 0.8, the test recommends a sample size of 250-260 ($d = 0.25$) and 105-110 ($d = 0.4$) participants. For a higher power (0.9), recommended sample sizes are bigger, but still well short of my recruited sample.

Table A.1: Power analysis: One-way ANOVA

Power	Effect Size (Cohen's d)	n
0.8	0.1	1573.45
	0.25	258.96
	0.4	106.55
0.9	0.1	1991.38
	0.25	325.82
	0.4	132.63

In addition, figure A.2 presents the expected effect sizes based on different sample sizes for achieving test power of 0.8 and 0.9 (based on one-way ANOVA model). Both plots show that to achieve the conventional effect sizes of 0.2-0.4, the number of respondents **per cell** does not exceed 50. For my sample, the number of participants per cell is 100-110.

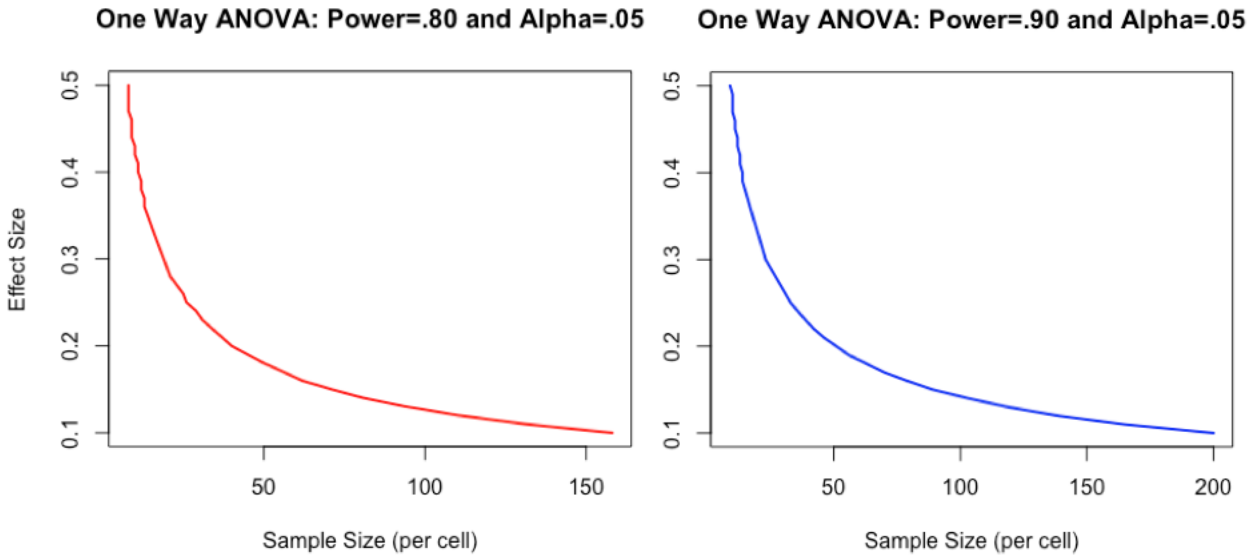

Figure A.2: Power analysis: Sample and effect size

A.3: Sample

I recruit a sample of 1100 participants. The final sample size is 1036 after removing those participants that had multiple non-responses. Table A.2 below present the summary statistics of the recruited sample. Similar to other MTurk samples, most respondents have an undergraduate or graduate degrees. At the same time, the proportion of individuals with these degrees in the general population is lower (around 50% according to 2019 census data),[101] suggesting that my sample is skewed to more highly-educated respondents.

Nevertheless, for the relevant quantities of interest in the study (for instance, the screening phase), I find variation amongst those highly educated individuals, and in the expected direction.

[101] See, 2019 Census

Table A.2: Choice-set experiment: Summary statistics (MTurk sample)

		Statistics:			
Characteristic	Levels	n	Proportion	Mean	Median
Gender	Women	518	50%		
	Men	518	50%		
Age		1036		38	35
Partisanship	Democratic	215	21%		
	2	143	14%		
	3	109	11%		
	4	201	19%		
	5	141	14%		
	6	103	9.9%		
	Republican	124	12%		
	Total	1036		3.69	4
Education	Less than High School	3	0.3%		
	High School	95	9.2%		
	Some College	296	29%		
	Bachelor's Degree	484	47%		
	Master's Degree of Higher	156	15%		
	Total	1034		3.67	4
Foreign Pol. Knowledge	Not Well Informed	118	11%		
	Somewhat Informed	483	47%		
	Well Informed	309	30%		
	Very Informed	126	12%		
	Total	1036		2.42	2

Total Sample Size: 1036

For example, the average choice-set size for respondents with high school education is lower than those with an undergraduate or graduate degrees. Similar results are evident for those with some college education compared to those with higher degrees. Therefore, I recognize that the sample is skewed towards highly educated respondents (as most MTurk samples). Yet, I am still able to find variation among participants, and in the direction I expected based on my theory, further amplifying my argument that knowledge matters.

A.4: Choice-set size (OLS regression models)

In the first empirical analysis, I assess how the experimental conditions affect the size of the choice-set. In the main text, I focus on estimating differences by using ANOVA models. Below, I complement the analysis with two OLS regression models that estimate the effects of the experimental treatments and individual covariates on the size of the choice-set.

Model 1 estimates the experimental conditions only. In model 2, I add individual covariates. Overall, the results are similar to the ANOVA models. For the main time horizon treatment in model 2, the coefficient is on the verge of statistical significance ($p = 0.101$).

Table A.3 also includes Model 3 which estimates, using univariate regression, how time horizons affect the choice-set size in the reduced sample (only baseline conditions). The results of the model are described in the main text and are the basis for the density plots in figure 4.4 in the main text.

Table A.3: Time horizons and choice-set size: OLS regression models

	Choice Set Size		
	Model 1	Model 2	Model 3
Time Horizon	0.154^{*}	0.147	0.341^{*}
	(0.091)	(0.089)	(0.204)
Reciprocal Outcomes	-0.114	0.145	
	(0.103)	(0.036)	
Casualties	-0.814^{***}	-1.021^{***}	
	(0.143)	(0.192)	
Gender		0.034	0.137
		(0.092)	(0.205)
Age		-0.012^{***}	-0.008
		(0.003)	(0.008)
Partisanship		0.105^{***}	0.085^{*}
		(0.022)	(0.049)
Education		0.109^{***}	0.014
		(0.054)	(0.115)
FP Knowledge		0.219^{***}	0.259^{**}
		(0.055)	(0.118)
Constant	3.899^{***}	3.002^{***}	3.186^{***}
	(0.111)	(0.296)	(0.628)
Observations	1036	1034	202
R^2	0.053	0.104	0.035

Notes: *p<0.1; **p<0.05; ***p<0.01
Standard errors in parenthesis

A.5: Choice-set composition (Probit conditional models)

The table below (A.4) details two probit interaction models used to estimate the effect of time horizons on the likelihood of accepting a policy into the choice set. The conditional effects are depicted in the main text in figure 4.5.

Table A.4: Time horizons and choice-set composition: Probit regression models

	Accepting Policy Option	
	Policy 1	Policy 2
Time Horizon	0.123	0.227*
	(0.222)	(0.125)
Reciprocal Outcomes	−1.977***	1.481***
	(0.177)	(0.148)
Casualties	−0.096	−0.186*
	(0.110)	(0.192)
Time Horizon x Reciprocal Outcomes	0.429*	−0.077
	(0.256)	(0.214)
Gender	0.115	−0.050
	(0.115)	(0.103)
Age	0.007*	−0.002
	(0.004)	(0.004)
Partisanship	0.086***	−0.033
	(0.027)	(0.025)
Education	0.044	0.122**
	(0.068)	(0.061)
FP Knowledge	−0.055	−0.021
	(0.071)	(0.063)
Constant	1.059***	−0.306
	(0.373)	(0.312)
Observations	821	821
Pseudo R^2	0.296	0.208

Notes: *p<0.1; **p<0.05; ***p<0.01
Standard errors in parenthesis
Models based on reduced sample - no baseline conditions

A.6: Policy selection (Multinomial regression model)

The table below replicates the analysis of the multinomial regression model of policy selection (table 4.1). Including the choice-set size as a control variable raises concerns of post-estimation bias (Montgomery, Nyhan and Torres, 2018). Recent work devote much attention to this issue and offer different methods to account for this problem (Acharya, Blackwell and Sen, 2016; Klar, Leeper and Robison, 2020; Mummolo, 2016). However, most of these tools are irrelevant for my analysis, mostly since the theory I propose suggests that the choice-set size is affected by the experimental treatments.

Even-though the potential for post-estimation bias is less of a concern for the theory I propose in this project, I address it below. I replicate the model in table 4.1 but omit the choice-set size variable from the analysis. The results are displayed in table A.5 below. Similar to the main text, selecting policy 1 is the reference category. For all three alternatives policies, the results are similar to the main text, suggesting that in this context, we should be less concerned about the effects of post-estimation bias.

Table A.5: Policy selection: Multinomial logit model (Replication)

	Policy Selected		
	Policy 2	Policy 3	Policy 4
Time Horizon	-0.471^{**}	-0.806^{**}	-0.924^{*}
	(0.200)	(0.402)	(0.560)
Reciprocal Outcomes	3.652^{***}	2.493^{***}	1.030^{**}
	(0.214)	(0.381)	(0.524)
Casualties	-0.815^{***}	-0.578	-0.209
	(0.196)	(0.367)	(0.471)
Age	-0.024^{**}	-0.093^{***}	-0.016
	(0.008)	(0.025)	(0.022)
Gender	0.225	-0.392	-0.349
	(0.205)	(0.426)	(0.547)
Partisanship	0.011	0.219^{**}	0.137
	(0.050)	(0.100)	(0.134)
Education	0.233^{*}	0.300	-0.024
	(0.123)	(0.267)	(0.319)
FP knowledge	0.239^{*}	0.634^{**}	0.190
	(0.128)	(0.250)	(0.329)
Constant	-5.1051^{***}	-5.148^{***}	-4.192^{**}
	(0.736)	(1.431)	(1.664)

Notes: N = 1,020; Pseudo R^2 = 0.325; Base category is select Policy 1

*p<0.1; **p<0.05; ***p<0.01; Standard errors in parenthesis

A.7: Contextual preference reversal: Cross-tabulations

To estimate the emergence of contextual preference reversal (Howes et al., 2016; Tsetsos, Usher and Chater, 2010) in the embedded experiment, I conduct an initial analysis that uses cross-tabulations of the preferred policy options between both combinations of choice-sets. I use a χ^2 test to check for differences.

This preliminary analysis finds that the introduction of a new option (as described in either set B or D) into the original set (as described in either set A or C) changes the distribution of preferences for all options. In the table below, I present cross tabulations (frequencies and percentages) of respondents' preferred policies with either two- or three-options choice sets. In both panels, the number of respondents who experience contextual preference reversal is quite substantial (most obvious in set D). These differences are significant based on a χ^2 test.

Table A.6: Embedded experiment: Preference reversal

	Set B			
Set A	Pol. 1	Pol. 2	Pol. 3	**Total**
Pol. 1	73.4% (332)	19.03% (86)	7.5% (34)	452
Pol. 2	5.65% (33)	78.9% (461)	15.4% (90)	584
	Set D			
Set C	Pol. 1	Pol. 2	Pol. 3	**Total**
Pol. 1	47.5% (459)	3.01% (29)	49.3% (477)	965
Pol. 2	29.5% (21)	56.3% (40)	14.08% (10)	71

Notes: Panel 1 (Set A): $\chi^2 = 518.914$, $p = 0.00$
Panel 2 (Set C): $\chi^2 = 304.634$, $p = 0.00$

APPENDIX B

Variations in time horizons: The experimental design

B.1 Experimental Material

In this section, I detail the experimental instrument used for collecting the data for the experiment detailed in chapter 5.

B.1.1: Factorial design

The experimental is based on a 2 (salient high/low) x 2 (costs high/low) x 2 (order version1/version2) design.

	Saliency High		Saliency Low	
	Costs High	Costs Low	Costs High	Costs Low
Order1				
Order 2				

Figure B.1: Time horizons experiment: Factorial design

B.1.2: Instructions

All respondents read an instructions page that describes the main objective and expectations.

This experiment explores public opinion regarding government policy in a foreign conflict that is significant to US interests. All of your responses will be anonymous.
You will be presented with a hypothetical scenario about an international conflict involving US interests. Then, two possible policy alternatives will be presented as a response. Both options will be presented with their respected implications for both the short and long term. Given all the information provided, you will be asked to make a decision regarding the proposed policy actions.

Following your decision, a series of follow-up questions about the scenario and your choice will conclude the experiment.
While this specific scenario is fictional, similar situations have occurred in the past. Your thoughtful responses will help researchers better understand the complex deliberations concerning decisions such as those involved in these kinds of situations.

B.1.3: Experimental treatments

Respondents are randomly assigned to one of the scenarios below (8 total scenarios).

Version 1 (Salient High / Low; Costs High / Low; Order: Bravo first)

"A major [*salience high condition*: US military / *salience low condition*: Afghan army] outpost in north Afghanistan has been under constant attacks over the last 6 months.
Last night, local Taliban forces attacked the base using mortars and heavy fire causing severe damages and multiple American casualties. After almost 8 hours of battle, [*salience high condition*: the Marines / *salience low condition*: the local soldiers (and few US advisors)] were able to push back the enemy.
(*salience high condition*: Since this region is critical for US national security as well as political interests, and in order to secure the anti-terrorism alliance, administration officials stress the need to restore and preserve a regional stability. To accomplish that / *salience low condition*: Local officials wishing to restore stability to the area asked for US assistance. US commanders in the region do not consider it as very significant for the US national security interests. Nevertheless), Pentagon officials proposed 2 military options (code name: Bravo and Delta) to the administration. **Both options have implications for the short term (2-4 months) as well as the long term (2-3 years)**.

Plan Bravo includes the use of military force and offers **immediate positive outcomes**. This plan is likely to remove the immediate threat in the short term (2-4 months). However, long term projections are less certain and violence is likely to resume in the future since the plan will not remove the threat altogether. The pentagon estimates [*Costs high condition*: 90-100 / *Costs low condition*: 10-20] US casualties from the Bravo plan. Yet, future uncertainty about this situation suggests that over the long term, [*salience high condition*: US / *salience low condition*: military] forces may incur even more casualties.

Plan Delta includes the use of military force and offers **positive outcomes in the long term, but no immediate benefits**. The plan will result in enhanced stability and almost complete removal of the threat for at least 2-3 years. However, it is less likely to provide immediate relief for the [*salience high condition*: Marines / *salience low condition*: outpost]. More attacks are expected in the short term. The pentagon estimates [*Costs low condition*: 10-20 / *Costs high condition*: 90-100] US casualties from the Delta plan. While this policy provides few immediate results, it offers the high certainty about curtailing future attacks thus substantially reducing the prospect of more [*salience high condition*: US / *salience low condition*: military] casualties."

Version 2 (Salient High / Low; Costs High / Low; Order: Delta first)

"A major [*salience high condition*: US military / *salience low condition*: Afghan army] outpost in north Afghanistan has been under constant attacks over the last 6 months.

Last night, local Taliban forces attacked the base using mortars and heavy fire causing severe damages and multiple American casualties. After almost 8 hours of battle, [*salience high condition*: the Marines / *salience low condition*: the local soldiers (and few US advisors)] were able to push back the enemy.

(*salience high condition*: Since this region is critical for US national security as well as political interests, and in order to secure the anti-terrorism alliance, administration officials stress the need

to restore and preserve a regional stability. To accomplish that / *salience low condition*: Local officials wishing to restore stability to the area asked for US assistance. US commanders in the region do not consider it as very significant for the US national security interests. Nevertheless), Pentagon officials proposed 2 military options (code name: Bravo and Delta) to the administration. **Both options have implications for the short term (2-4 months) as well as the long term (2-3 years)**.

Plan Delta includes the use of military force and offers **positive outcomes in the long term, but no immediate benefits**. The plan will result in enhanced stability and almost complete removal of the threat for at least 2-3 years. However, it is less likely to provide immediate relief for the [*salience high condition*: Marines / *salience low condition*: outpost]. More attacks are expected in the short term. The pentagon estimates [*Costs low condition*: 10-20 / *Costs high condition*: 90-100] US casualties from the Delta plan. While this policy provides few immediate results, it offers the high certainty about curtailing future attacks thus substantially reducing the prospect of more [*salience high condition*: US / *salience low condition*: military] casualties.

Plan Bravo includes the use of military force and offers **immediate positive outcomes**. This plan is likely to remove the immediate threat in the short term (2-4 months). However, long term projections are less certain and violence is likely to resume in the future since the plan will not remove the threat altogether. The pentagon estimates [*Costs high condition*: 90-100 / *Costs low condition*: 10-20] US casualties from the Bravo plan. Yet, future uncertainty about this situation suggests that over the long term, [*salience high condition*: US / *salience low condition*: military] forces may incur even more casualties."

B.1.4: The choice

After reading one of the eight scenarios, participants are asked to answer a series of questions about their preferred policy and related information about the scenario.

1. Considering all the information presented to you thus far, which policy option do you support?

(1) Policy Bravo.
(2) Policy Delta.

2. Rate your level of support for each policy option (on a 1-7 scale).

(1) Policy Bravo:

Low support 1 2 3 4 5 6 7 High support

(2) Policy Delta:

Low support 1 2 3 4 5 6 7 High support

3. Consider your selected policy option above, which factor was the most important in your decision?

(1) Successful outcomes in the long run.
(2) Low number of casualties.
(3) Successful outcomes in the short term.

4. Considering the scenario you read about, rate how effective is each policy option to address the situation in Afghanistan.

(1) Policy Bravo:

Not Effective 1 2 3 4 5 6 7 Very Effective

(2) Policy Delta:

Not Effective 1 2 3 4 5 6 7 Very Effective

5. Do any of the following describe your personal feeling about the situation described in the text?

(1) Worried:

Not Worried 1 2 3 4 5 6 7 Very Worried

(2) Angry:

Not Angry 1 2 3 4 5 6 7 Very Angry

B.1.5: General Questionnaire and internal validity items

1. How important is the situation described in the text to US national security?

Not too Important 1 2 3 4 5 6 7 Very Important

2. Where did the incident take place?

(1) Afghanistan.

(2) Kenya.

(3) Iraq.

3. What is the target of the attack described in the scenario?

(1) A military base.

(2) An embassy building.

4. Which of the two policy options is better in the Short-term?

(1) Policy Bravo.

(2) Policy Delta.

5. Which of the two policy options is better in the Long-term?

(1) Policy Bravo.

(2) Policy Delta.

6. Evaluate the costs associated with policy Bravo? (from 1-Low to 7-High)

Low 1 2 3 4 5 6 7 High

7. Evaluate the costs associated with policy Delta? (from 1-Low to 7-High)

Low 1 2 3 4 5 6 7 High

8. What result of the situation described (the incident in Afghanistan) do you perceive as more important?

(1) Successful outcome within the immediate future (2-4 months)

(2) Successful outcome in 2-3 years.

B.1.6: Dispositional factors questionnaire

Time Preferenes

1. Suppose you were having tooth pain and told by your dentist that the tooth had to be removed. Tooth extraction may be painful. The procedure can be done at any point starting today and throughout the upcoming 21 days (3 weeks). When will prefer to have the procedure? (values close to 1 mean very soon, values closer to 7 mean you prefer to postpone)

Remove tooth today 1 2 3 4 5 6 7 Remove tooth in 21 days

2. Suppose you were caught for speeding on a local highway. You are required to pay a fine. You can pay it today or postpone the payment (note that postponing payment slightly increases the amount you will be required to pay). When will you prefer to pay the fine?

(1) Pay $50 today.
(2) Pay $65 a month.
(3) Pay $80 in 2 months.

3. Which offer would you prefer?
(1) A reward of $3400 this month.
(2) A reward of $3800 next month.

4. Suppose you were given the choice between two different offers:
(1) A reward of $100 now.
(2) A reward of $X one year from now.

How much would X have to be to make you want to choose option B over option A? (please provide a NUMERICAL answer ONLY)

5. Now, suppose you were given the choice between two different offers:

(1) A reward of $100 now.

(2) A reward of $X ten year from now.

How much would X have to be to make you want to choose option B over option A? (please provide a NUMERICAL answer ONLY)

6. How characteristic or true is this of you? (1=very Uncharacteristic, 2=uncharacteristic, 3=neutral, 4=characteristic, 5=very Characteristic)

(1) Spending what I earn on pleasures today is better than savings for tomorrow's security.

1 2 3 4 5

(2) I do things impulsively and I take decisions at the moment.

1 2 3 4 5

(3) Meeting tomorrow's deadlines and doing other necessary work comes before tonight's play.

1 2 3 4 5

(4) I am able to resist temptations when I know that there is work to be done.

1 2 3 4 5

7. Rate the following:

(1) How much do you tend to procrastinate?

Not Much 1 2 3 4 5 6 7 Very Much

(2) How impulsive are you?

Not Much 1 2 3 4 5 6 7 Very Much

(3) How often do you think about the future?

Not Much 1 2 3 4 5 6 7 Very Much

Risk orientation

1. Consider this choice: you can have a sure reward of $50 or a lottery with X% for reward of $100. How much does X% has to be for you to accept the lottery?

(40%) (55%) (60%) (75%)

2. Consider this choice: you can have a sure reward of $100 or a lottery with X% for reward of $200. How much does X% has to be for you to accept the lottery?

(40%) (55%) (60%) (75%)

3. In general, people often have to take risks when making financial, career, or other life decisions. Overall, how would you place yourself on the following scale?

Extremely comfortable taking risks 1 2 3 4 5 6 7 Extremely uncomfortable taking risks

B.1.7: Demographic characteristics questionnaire

1. State your gender

- Male.
- Female.

2. State your age:

3. What race do you consider yourself to be?

- Black/African American.
- Hispanic/ Latino.
- Asian.
- White/Caucasian.
- Other.

4. Did you serve in the military?

- Yes.
- No.

5. Rank your political orientation on a 1-7 scale (1 being Democrat and 7 is Republican):

Democrat 1 2 3 4 5 6 7 Republican

6. How informed do you consider yourself about US foreign and security policy?

- Not well informed.
- Somewhat informed.
- Well informed.
- Very informed.

7. What is your annual household income?

- Less than $25,000.
- $25,000 - $50,000.
- $50,001 - $75,000.
- $75,001 - $100,000.
- More than $100,000.

8. What is your highest level of education?

- Less than high school.
- High school.
- Some college.
- Bachelor's degree.
- master's degree or higher.

9. Do you have children?

- No.
- Yes.

B.2: Sample

Table B.1 below details the summary statistics of the recruited sample for this experiment.

Table B.1: Time horizons experiment: Summary statistics (MTurk sample)

		Statistics:			
Characteristic	Levels	n	Proportion	Mean	Median
Gender	Women	481	51%		
	Men	464	49%		
Age		945		32	30
Partisanship	Democratic	203	21%		
	2	177	19%		
	3	152	16%		
	4	169	18%		
	5	110	12%		
	6	77	8.1%		
	Republican	57	6%		
	Total	945		3.28	3
Education	Less than High School	6	0.6%		
	High School	78	8.3%		
	Some College	311	33%		
	Bachelor's Degree	382	40%		
	Master's Degree of Higher	168	18%		
	Total	945		3.66	4
Foreign Pol. Knowledge	Not Well Informed	112	12%		
	Somewhat Informed	552	58%		
	Well Informed	217	23%		
	Very Informed	64	6.8%		
	Total	945		2.24	2
Children	No	588	62%		
	Yes	357	38%		
Military Service	No	876	92.6%		
	Yes	69	7.3%		

Total Sample Size: 945

B.3: Internal validity tests

In the main text (chapter 5) I discuss the different tests that I employed in order to check the internal validity of the experimental design. In the section below, I detail the full models for this analyses. First, I assess the importance item by running OLS regression model with the experimental treatments as the independent variables, and a full model which also accounts for the individual covariates. Across both models, the salience treatment is positive and significant suggesting that for those respondents who are in the salient condition, the scenario is perceived as more important. In other words, the manipulation of the salient treatment work as expected.

Table B.2: Issue importance: OLS regression models

	Issue Importance	
	Baseline	Full model
Salience	1.10***	1.08***
	(0.109)	(0.106)
Costs	−0.016	−0.041
	(0.109)	(0.107)
Order	0.199*	0.209*
	(0.109)	(0.107)
Gender		0.553***
		(0.109)
Age		−0.008
		(0.005)
Partisanship		0.148***
		(0.029)
Education		−0.005
		(0.062)
FP Knowledge		0.115
		(0.073)
Constant	4.237***	3.519***
	(0.109)	(0.336)
Observations	945	945
Pseudo R^2	0.097	0.137

Notes: *p<0.1; **p<0.05; ***p<0.01
Standard errors in parenthesis

Then, I discuss the costs treatment. In the table below, I detail the analysis of the costs treatments for both policy options. The main support for the internal validity of the experiment is that for the short-term policy, *Bravo*, the costs coefficient is positive. When the treatment describes high costs for this option, respondents rate the costs of the short-term policy as high. Similarly, for the long-term policy (*Delta*), the effect of the costs treatment is negative as described in the experimental scenarios.

Table B.3: Costs treatment: OLS regression models

	Policy Bravo		*Policy Delta*	
	Baseline	Full Model	Baseline	Full Model
Salience	0.238^{**}	0.244^{**}	0.075	0.074
	(0.101)	(0.101)	(0.090)	(0.090)
Costs	0.771^{***}	0.762^{**}	-0.713^{***}	-0.708^{***}
	(0.101)	(0.101)	(0.090)	(0.090)
Order	-0.305^{***}	0.313^{***}	-0.080	-0.104
	(0.101)	(0.101)	(0.090)	(0.090)
Gender		0.071		0.079
		(0.103)		(0.092)
Age		0.005		0.015^{***}
		(0.005)		(0.004)
Partisanship		0.008		0.014
		(0.028)		(0.025)
Education		0.203^{***}		0.015
		(0.058)		(0.052)
FP Knowledge		0.112		0.042
		(0.069)		(0.061)
Constant	4.092^{***}	2.852^{***}	5.46^{***}	4.726^{***}
	(0.102)	(0.317)	(0.091)	(0.284)
Observations	945	945	945	945
R^2	0.068	0.082	0.06	0.069

Notes: *p<0.1; **p<0.05; ***p<0.01
Standard errors in parenthesis

B.4: Interaction models

The table below (B.4) details the full models that I test for generating the interaction plots in figure 5.4 in the main text.

Table B.4: Time horizons interaction effects: Probit regression models

	Support Long-Term Policy (Delta)		
	(Model 1)	(Model 2)	(Model 3)
Salience	0.010	−0.001	0.012
	(0.096)	(0.097)	(0.096)
Cost	0.863***	1.352***	0.840**
	(0.166)	(0.267)	(0.335)
Order	0.166*	0.159	0.164*
	(0.097)	(0.097)	(0.097)
Risk Aversion	−0.018	−0.021	−0.018
	(0.033)	(0.034)	(0.033)
Present Bias (β)	0.391		0.518*
	(0.350)		(0.278)
LT Discount (δ)	−0.356		−0.351
	(0.460)		(0.461)
Zimbardo ST		−0.034	
		(0.031)	
Zimbardo LT		−0.024	
		(0.028)	
Cost x Present Bias	0.330		
	(0.570)		
Cost x Zimbardo ST		−0.084*	
		(0.049)	
Cost x Age			0.003
			(0.010)
Age	−0.009*	−0.010*	−0.010
	(0.005)	(0.005)	(0.006)
Gender	0.042	0.041	0.043
	(0.099)	(0.098)	(0.099)
Partisanship	−0.068**	−0.061**	−0.070***
	(0.027)	(0.027)	(0.027)
Education	0.068	0.076	0.065
	(0.056)	(0.056)	(0.056)
Constant	0.759*	0.936**	0.773*
	(0.452)	(0.433)	(0.466)
Observations	935	935	935
Log Likelihood	−446.501	−443.599	−446.622

Notes: *p<0.1; **p<0.05; ***p<0.01

APPENDIX C

Variations in time horizons: Observational data

C.1. Robustness tests: Alternative DV

As I describe in the main text, *leader turnover rate* is another common measure for political survival. For this variable, higher values represent growing risk for the leader's political survival. Therefore, higher values of the turnover rate are a measure for shorter time horizons.

In table C.1 below, I use the turnover rate as a dependent variable and re-run all the models for the main effects of the different factors. Models 1 and 2 include the institutional factors of election proximity (binary and number of days indicators). In both models, the only consistent factor is military experience which is negative suggesting that having served in the military (but with no combat experience) should reduce the turnover rate. This is an indication for longer time horizons (as I proposed). In model 2, gravity is positive and significant (albeit only in the 90% percent) which offer weak support for the proposition that greater threat (issue salience) reduce time horizons (as turnover rate increases).

Models 3-5 account for the domestic conditions factors. First, in model 3 I include the binary economic condition indicator which is positive and significant. Similar to the effect of this variable in the main text, facing worse economic conditions, time horizons shorten as the turnover rate increases by more than 15% to over 40%. Models 4 and 5 include two measures for social instability. The indicator in model 4 is the unrest index from the main text, it is positive and significant, albeit very small in magnitude. For model 5, I recode the unrest conditions indicator from the ICB data into a binary one and find that when social conditions deteriorate, leader survival risk increases as the coefficient is positive and significant.

Finally, in model 6, I add a variable that better fits to the category of individual-level factors. Using data from the LEAD dataset (Horowitz, Stam and Ellis, 2015), I add a binary variable (*Children*) that measures whether the leader has children. Work in economics suggest that individuals

who have children display growing propensity to look more into the future. For my purposes, it suggests that a leader who has children will have longer time horizons, comapred to a leader with no children.

The results in model 6 confirm this expectation as the coefficient is negative and significant which indicates that the survival risk for these leaders is decreasing and they have longer time horizons. The model also shows that the economic conditions institutional measure has the expected positive effect (a 15% increase in turnover risk when the economy is in bad condition).[102]

[102] I also run model 6 with both social instability indicators and the results are consistent. When employing the binary elections indicator, the children variable is still negative and significant while the election indicator is not significant and the model is less powerful overall.

Table C.1: Time horizons factors: Alternative DV (Turnover rate)

	Dependent Variable: Turnover Rate					
	(1)	(2)	(3)	(4)	(5)	(6)
Trigger	0.004	0.001	0.001	-0.001	-0.002	0.006
	(0.007)	(0.006)	(0.004)	(0.003)	(0.003)	(0.004)
Gravity of Threat	0.02	0.025*	0.014*	0.016**	0.017**	0.011
	(0.013)	(0.013)	(0.007)	(0.007)	(0.007)	(0.008)
Election Prox.	-0.01					
	(0.054)					
Election Prox. (Days)		0.001				
		(0.001)				
Economic Cond.			0.162***			0.153***
			(0.024)			(0.026)
Social Unrest				0.001***		
				(0.001)		
Social Unrest (ICB)					0.115***	
					(0.022)	
Children						−0.095**
						(0.039)
Leader Age	-0.003	-0.003	-0.001	-0.001	-0.001	-0.001
	(0.002)	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)
Military Exp.	−0.161**	−0.153**	−0.068**	−0.071**	−0.086**	−0.104***
	(0.071)	(0.07)	(0.034)	(0.031)	(0.032)	(0.035)
Combat Exp.	0.054	0.075	0.075**	0.075**	0.075**	0.082**
	(0.075)	(0.073)	(0.036)	(0.033)	(0.034)	(0.037)
Previous Tenure	0.00	0.001*	−0.001***	−0.001***	−0.001***	−0.001***
	(0.0)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Previous Office	0.181***	0.21***	0.174***	0.18***	0.106***	0.109***
	(0.045)	(0.044)	(0.027)	(0.026)	(0.026)	(0.029)
Constant	0.524**	0.43***	0.274***	0.315***	0.287***	0.372***
	(0.145)	(0.15)	(0.07)	(0.064)	(0.065)	(0.082)
Observations	311	288	800	887	881	637
R^2	0.10	0.12	0.17	0.15	0.17	0.15

Notes: $^{*}p < 0.1$;$^{**}p < 0.05$;$^{***}p < 0.01$
Standard errors in parenthesis.
All models are OLS regressions

C.2. Robustness tests: Alternative IVs

I include two alternative measures for the situational factor of issue salience. First *Issue* - this variable identifies the most important initial issue area of the crisis as perceived by the crisis actor. It is reverse coded where low values (1) are military-security, and high value (4) account for cultural-status issue. I expect a negative effect of this variable on time horizons.

Second, I use the 'peace data' (Diehl, Goertz and Gallegos, 2019) on the rivalry and peaceful relations among dyads of states (1900-2015). To account for the focus on conflict type relations among states in a dyad, I reverse coded the values of the *Peace scale* onto a 4-level variable (0=no rivalry; 1=warm peace; 2=negative peace; 3=lesser rivalry; 4=rivalry). High values of this variable indicate higher degree of issue salience, and thus shorter time horizons.

Table C.2 below presents models for the main tests using these measures as well as the alternative measure for time horizons - leader turnover rate (see appendix C.1 above). Across all three models, the issue type indicator is negative and significant. This result suggest that when the issue turns from important (military-security) to less critical (cultural), time horizons are longer (the turnover rate indicator is smaller). When the issue shifts from military to economic, the turnover rate decreases by 14%.

The second variable is rivalry. Higher values represent existing rivalry between two states and thus reflect higher degree of threat (similar to the gravity variable in the main models). Surprisingly, while the rivalry variable is significant in all three models, it is negative which suggest longer time horizons. One potential reason for this finding is that the indicator reflects high degree of threat which can be seen as existential threat to a nation's survival. As a result, it is actually an indication for a long-term view in which the leader wants to address the conflict with an 'eye towards the future' and remove the threat with a long-standing rival.

Table C.2: Time horizons factors: Alternative IVs

	Dependent Variable: Executive Turnover Rate		
	Model 1	Model 2	Model 3
Issue type	-0.074^{***}	-0.038^{***}	-0.036^{***}
	(0.023)	(0.013)	(0.012)
Rivalry	-0.092^{***}	-0.026^{**}	-0.042^{***}
	(0.02)	(0.012)	(0.011)
Election Prox.	-0.008		
	(0.052)		
Economy.		0.157^{***}	
		(0.024)	
Social Unrest			0.001^{***}
			(0.001)
Leader Age	-0.003	-0.001	-0.001
	(0.002)	(0.001)	(0.001)
Military Exp.	-0.121^{*}	-0.06^{*}	-0.057^{*}
	(0.067)	(0.033)	(0.031)
Combat Exp.	0.031	-0.076^{**}	0.071^{**}
	(0.073)	(0.036)	(0.033)
Previous Tenure	0.001	-0.001^{***}	-0.001^{***}
	(0.001)	(0.001)	(0.001)
Previous Office	0.19^{***}	0.173^{***}	0.175^{***}
	(0.043)	(0.027)	(0.025)
Constant	1.012^{***}	0.456^{***}	0.536^{***}
	(0.146)	(0.076)	(0.07)
Observations	310	799	885
Pseudo R^2	0.16	0.18	0.16

Notes: *p<0.1; **p<0.05; ***p<0.01
Standard errors in parenthesis
All models are OLS regressions

C.3. Robustness tests: Duration analysis

The last set of robustness tests involve using duration models. These class of models are concerned with patterns and causes of change, especially understanding the changes in units of analysis across time (Box-Steffensmeier and Jones, 2004, 1997). As such, they fit with my data since I estimate the effects of the various factors on the duration of the dependent variable.

I use a *Weibull* parametric survival models due to the distribution of the dependent variable (see Appendix C.4). In the table below, I present the results of four models which include the various institutional indicators along with the individual variables. The table presents the *Hazard ratio* which describe the rate of failure in the duration of the process studied. They are interpreted relative to a baseline of 1 - ratios larger than 1 indicate that a variable increases the risk of termination (that is, shorter duration of tenure), while a ratio lower than 1 indicates that a variable reduces the risk of termination (i.e. longer duration of tenure).

The first two columns present models for the elections variables. The situational factors (trigger and gravity of threat), and both election indicators have hazard ratios that are larger than 1 indicating growing risk of failure - that is, shorter duration until the end of leader tenure. The main implication of these results is that when the issue at stake is more important, the threat is higher and when elections are close, the risk of survival is higher, and the expected duration of leaders is shorter, i.e. short time horizons.

Similarly, the two right columns in the table display the models which compute the effects of domestic conditions and the duration of survival. In these models, the contextual factors and the economic conditions variable are not significant. The social instability hazard ratio is significant and larger than 1 suggesting that when social unrest is higher, the duration of leaders' tenure decreases. Also, for both models, the age indicator also suggest shorter time horizons for older leaders (as my theory proposes). The findings of the latter models are less powerful but they offer additional support for the role that both situational and individual factors play in shaping variations in leaders' time horizons (measured with the duration of their tenure once the conflict begins).

Finally, despite the fit of these models to the analyses of this chapter, I rely on the more common OLS regressions for the main text. The primary reason for this choice is that interpreting duration models and hazard rates is more complicated than regression coefficients. Since my theory offers a multitude of proposed effects, I prefer to stay with the simpler model specifications for the main text and add the duration analysis for additional support.

Table C.3: Time horizons factors: Duration models

	Domestic Institutions: Elections		*Domestic Conditions*	
	Hazard Ratio	Election 2	Economy	Social Stability
Trigger	1.035*	1.030	1.006	0.999
	(0.02)	(0.021)	(0.012)	(0.011)
Gravity	1.096**	1.102**	0.984	0.963
	(0.048)	(0.051)	(0.024)	(0.022)
Election Prox.	1.418**			
	(0.226)			
Election Prox. (Days)		1.001***		
		(0.001)		
Economy			1.087	
			(0.083)	
Social Unrest				1.001***
				(0.001)
Leader Age	0.988*	0.989	1.025***	1.027***
	(0.006)	(0.007)	(0.003)	(0.003)
Military Exp.	1.065	1.060	0.830*	0.879
	(0.222)	(0.237)	(0.088)	(0.088)
Combat Exp.	0.954	1.006	1.121	1.098
	(0.211)	(0.231)	(0.121)	(0.019)
Previous Tenure	0.999	0.999	0.999***	0.999***
	(0.001)	(0.001)	(0.001)	(0.001)
Previous Office	1.461***	1.395***	1.235**	1.302***
	(0.183)	(0.186)	(0.101)	(0.101)
Constant	0.001***	0.001***	0.001***	0.001***
	(0.001)	(0.001)	(0.001)	(0.001)
Observations	310	281	795	882
χ^2	21.82***	21.33***	139.9***	176.9***

Notes: *p<0.1; **p<0.05; ***p<0.01
Standard errors in parenthesis

C.4: DV Distribution

The figure below depicts the distribution of the main dependent variable - the number of days from crisis start to end of tenure. The distribution of this variable fits with a Weibull model specification.

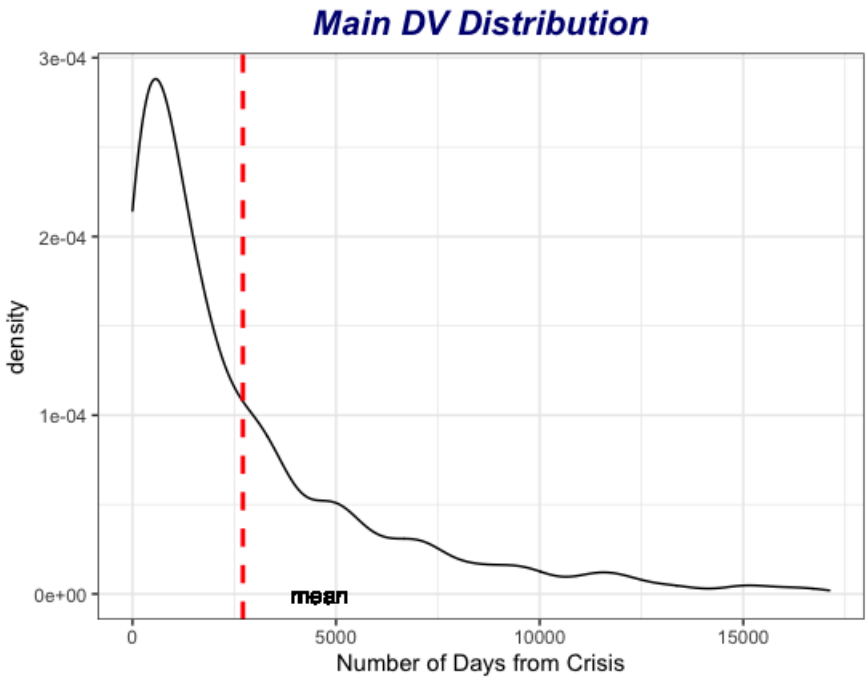

Figure C.1: Dependent variable (ICB data): Number of days