**Research plan**

**BSF proposal: Decision-Making in Intergroup Violence: The Value of Life, Money, and Time**

**1. A brief description of the subject and the scientific and technological background**

Violent intergroup conflict necessitates making decisions that involve potential trade-offs between different values such as defending one’s own group vs protecting non-combatants in accordance with International Humanitarian Law (IHL), short-term vs. long-term risks, and capitulation vs. provoking reprisals and destroying interest in peace. Moreover, leaders and citizenry in democratic nations must make such decisions under uncertainty, for example the unknown odds of tactical success or failure, the unknown whereabouts, armaments, and number of foes, and the unknown potential involvement of other actors. The proposed studies will explore decision-making dynamics by examining how individuals prioritize human lives versus material benefits, as well as immediate versus long-term outcomes, under varying conditions of intergroup conflict. It incorporates prospect theory (Kahneman & Tversky, 1979) and examines intergroup perspectives, considering how social identities and group affiliations influence these decisions, with a focus on individual differences. This approach will provide valuable insights into the complexities of real-world decision-making, offering practical implications for addressing military, political, and humanitarian challenges in conflict zones.

Our study is grounded in intergroup relations theories, particularly the well-documented phenomenon of intergroup bias, where individuals consistently show a preference for their ingroup over outgroups. This bias influences emotions, attitudes, behaviors, and decision making, across various contexts and social categories (Grigoryan et al., 2022; Pratto & Glasford, 2008). Recent studies have demonstrated that individuals’ interpretations of actions in intergroup conflict situations are significantly shaped by their social identities and the perceived beneficiaries of these actions (Roccas et al., 2022). In the context of intergroup relations, especially in military scenarios, decision-making often involves moral dilemmas, where the need to minimize harm to civilians must be balanced against the imperative of mission success, leading to conflicting ethical considerations (Kimhi, 2014). These dilemmas are further complicated by the prolonged nature of conflicts, where immediate decisions must be made under intense pressure and have far-reaching consequences.

By addressing these intergroup contexts, our research seeks to deepen the understanding of how broader social and psychological factors drive decision-making in complex, real-world situations. This approach allows us to address three critical areas:1) **Human lives versus material benefits in intergroup conflict**: Investigate how people balance the value of lives against material benefits in immediate conflict situations, drawing on the asymmetry in risk-behavior highlighted by prospect theory where losses are perceived more intensely than equivalent gains. 2) **Time and Decision Making**: Analyze decisions involving current versus future decisions to understand how short-term versus long-term considerations affect preferences, potentially altering the classic gain-loss dynamics described by prospect theory. 3) **Individual Differences**: Explore how personal differences, such as values, perceptions of stochastic conflict and SDO, influence these decision-making processes.

The recent conflict between the Israeli Defense Forces (IDF),Hamas in the Gaza Strip, along with Hezbollah in Lebanon, erupted in October 2023, underscores the complexity of decision-making in times of intense and prolonged conflict. The current war, which started with a Hamas attack resulting in the deaths of over a thousand Israeli civilians and the kidnapping of more than 200, has continued for 11 months, with tens of thousands of casualties in Gaza, deaths in Lebanon and ongoing rocket fire targeting Israeli settlements. This prolonged conflict has required ongoing and difficult decision-making processes, not only in public communication but also at the highest levels of government, where decisions must balance immediate and long-term consequences, with adherence to IHL. Our proposal seeks to explore these decision-making processes, particularly how time pressure and the need to weigh short-term versus long-term outcomes influence critical choices during conflict. By examining these processes, we aim to gain insights into how such critical decisions are made under the extreme pressures of conflict, with the broader goal of understanding how these dynamics influence intergroup relations and the prioritization of human lives versus material benefits.

We will now elaborate on each of the abovementioned dimensions.

**Human Lives versus Material Benefits in Intergroup Conflict**

Prospect theory, introduced by Kahneman and Tversky (1979), provides a framework for understanding how individuals evaluate potential gains and losses relative to a subjective reference point. One key aspect of this theory is loss aversion, where individuals typically experience losses more intensely than equivalent gains. This psychological bias suggests that the discomfort from losing €5 is more significant than the pleasure from gaining €5 and the asymmetry continues at a less intense rate the farther gains or losses are from the reference point. This aspect of human behavior influences risk preferences, making individuals more risk-averse when facing potential gains and more risk-seeking when confronted with potential losses.

Another key aspect in prospect theory is decision framing. According to Kahneman and Tversky (1981), the framing of decisions affects individual choices in risky situations. For example, the way outcomes are presented (the same outcome described as losses or gains) significantly impacts decision-making: participants tend to prefer uncertain outcomes when framed as losses rather than gains, illustrating the profound impact of loss/gain framing on human cognition (Tversky & Kahneman, 2023). Furthermore, prospect theory's S-shaped value function reveals that the psychological value of gains decreases as numbers grow, with initial losses or gains being more impactful (Kahneman & Tversky, 1981).

Prospect theory's implications are broad (Ruggeri et al., 2020), influencing various fields and leading to further studies that explore its application beyond economic decisions, including monetary decisions (Fennema & Wakker, 1997), health coverage (Johnson et al., 2013), other people's lives (Fagley & Miller, 1997), public policies and political candidates (Quattrone & Tversky, 1988) and Stock Market Anomalies (Barberis et al., 2021). Our research aims to delve into decision-making that weighs human lives against material benefits under various conditions, examining how the principles of prospect theory apply to these comparisons in intergroup conflicts.

Integrating prospect theory with intergroup bias research, we develop a framework for understanding why people might prioritize ingroup interests over those of others, especially in high-stress conflict situations. Loss aversion, for example, suggests that people are more driven to avoid losses than to pursue equivalent gains, leading them to prioritize ingroup protection even if it means harming outgroups. During military conflicts, this may result in support for aggressive actions against outgroups to prevent perceived losses to the ingroup, illustrating how loss aversion intensifies group favoritism. Moreover, if an attack is framed as a loss to national security, harsher military responses may be favored, consistent with findings that threat perceptions amplify group biases (Miller et al., 2010). In prolonged conflicts, protecting the ingroup’s lives, resources, or territory often becomes a priority, reflecting how group needs tend to outweigh those of outgroups. Examining decisions regarding individuals' lives, various studies have explored how individuals and groups assess risk in different contexts. Notably, Wang's research (1996) investigated the distinctions between life-death scenarios and monetary decisions, revealing that individuals' risk preferences varied categorically in life-death situations based on group size but changed more linearly in monetary scenarios according to expected value. This indicates that individuals show stronger responses to potential losses, and these responses differ significantly depending on whether the stakes involve lives or material benefits. Kemel and Paraschiv (2018) also measured decisions involving human lives and monetary outcomes separately, finding that differences in risk attitudes were more pronounced when human lives were at stake, with greater loss aversion observed compared to monetary outcomes. Pratto and Glasford (2008) further revealed that individuals prioritize ingroup lives over outgroup lives in situations involving material benefits like economic security or access to healthcare.

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Their study primarily focused on how individuals valued ingroup and outgroup lives in both competitive and non-competitive contexts. They showed notable disparities in how U.S. participants valued the lives of conational combatants versus enemy civilians, in violation of IHL. Americans valued Iraqi and American lives equally when there was no direct competition, but preferred American lives when the groups were in competition. This ethnocentric valuation was pronounced even with large numbers of lives at stake, highlighting that enemy civilian lives were considered less valuable than those of conational combatants.

Building on Pratto and Glasford (2008), we aim to examine trade-offs between monetary outcomes and human lives, focusing on distinctions between enemy combatants and non-combatants. While Pratto and Glasford used lives versus material benefits as a "taboo" trade-off, we extend this by including populations directly affected by conflict, such as those living in Israel. Our study explores the perceived value of enemy non-combatant lives relative to material outcomes, examining how proximity to conflict and social identity shape these assessments. We also investigate how social identity, affiliation, and individual differences influence decision-making, integrating prospect theory with intergroup bias insights. This approach provides contextually relevant insights into life-versus-material decisions in high-stress conflicts, revealing how preferences are shaped by both potential outcomes and the identities of involved groups. Furthermore, prospect theory's S-shaped value function suggests that losing lives is more distressing than saving them is rewarding (Tversky & Kahneman, 1981). In line with Pratto and Glasford (2008) we use this model as a normative benchmark to compare the valuation of ingroup versus outgroup lives.

Hence, we hypothesize that: H1: (a) Individuals are likely to prioritize the lives of ingroup members (civilians and soldiers) over monetary gains, especially for ingroup members or neutral parties (e.g., World Central Kitchen - WCK). (b) In contrast, individuals may assign lower value to lives associated with outgroups, particularly if perceived as enemies (e.g., Lebanese and Gaza citizens), relative to monetary gains for the ingroup. (c) Additionally, individuals are likely to prioritize monetary gains (for their ingroup) over the lives of perceived enemy combatants (e.g., Hezbollah fighters). (d) according to prospect theory, the asymmetric valuation hypothesis suggests that losing lives is more distressing than the appeal of saving lives, leading to a stronger preference for certainty in the gain (saving life)-frame condition compared to the loss-frame condition**.** (e) The psychological value associated with saving lives will diminish as the number of lives increases, particularly for ingroup members, meaning initial lives saved or lost are perceived as more impactful. This diminishing sensitivity may align with the valuation of ingroup lives more than outgroup lives.

To examine this hypothesis, we use Decision Dilemmas (Appendix A) referring to lives, monetary decisions and diverse possible outcomes of war, such as level of certainty about safety for the country, the cost or benefits of other international relationships, etc. , or perceived as enemy Participants will be exposed to scenarios differentiating between (1) ingroup members (civilians and soldiers), (2) neutral third-party bystanders (e.g., World Central Kitchen - WCK). (3) outgroup non-combatants (e.g., Lebanese civilians), and (4) enemy combatants (e.g., Hezbollah fighters). This manipulation will allow us to systematically examine how identity shapes decision-making.

The experiment will expose all participants to varying levels of loss and gain (saving) of lives, with whether the lives in question are combatants or civilians manipulated as a between-participants factor. We will involve highly comparable groups, such as Hezbollah combatants versus Lebanese civilians, to capture distinctions in how individuals prioritize these groups in intergroup conflict scenarios.

By including participants from Israeli, American, and Turkish backgrounds, we aim to explore varying cultural perspectives on group-centered valuation of lives. Specifically, Israelis are chosen as the primary ingroup directly impacted by these dynamics, Americans represent Israeli conationals, and Turks represent Palestinian conationals. This selection enables us to assess whether group-centered prioritization patterns are consistent or vary based on historical, political, and cultural contexts. Our approach enhances the generalizability of the findings, identifying both universal and culturally specific patterns in life-versus-material decision-making.

**Humanizing the Outgroup in Intergroup Conflicts**

Understanding the trade-offs between human lives and material benefits in conflict situations requires not only an analysis of abstract decision-making processes but also a consideration of how participants perceive the human elements involved. Research based on cultural distance theories (e.g., Harrison & Peacock, 2009) showed differences in perceptions of various minority groups (e.g., Moftizadeh et al., 2021; Vecchione et al., 2012) based on their origins (Ford, 2011). When a group is culturally distant from us, we tend to devalue it and discriminate against it (Kessler et al., 2010; Mummendey & Wenzel, 1999). Hence, we may judge outgroup members in dehumanized ways, seeing them as “less than human”, "different from" or “inferior” to the ingroup (Costello & Hodson, 2010; Haslam, 2006). In contrast, when we adopt humanization attitudes and perceive individuals humanely (Netzer & Mangano-Rowe, 2010), we are more likely to see outgroups in a favorable light (Borinca et al., 2021). To address this, our study will incorporate strategies aimed at humanizing the outgroup, thereby potentially shifting the focus from material benefits to the value of human lives.

We will integrate personal narratives into our experimental designs to illustrate the human impact of conflict. Participants will be exposed to narratives describing the personal hardships and aspirations of outgroup members, such as stories of children and families affected by the conflict. Additionally, statistical data highlighting the disproportionate effects of conflict on vulnerable populations will be used to frame some of the decision-making scenarios.

By presenting participants with personal and statistical information about the outgroup, we aim to evoke empathy and provide a more concrete sense of the human costs involved in conflict. This method will allow us to test whether humanizing the outgroup influences participants' decisions to prioritize human lives over material benefits. We hypothesize (H1f) that exposure to humanizing content will lead to a greater willingness to make sacrifices for peace and a reduced tendency to prioritize material gains over the welfare of others.

**Temporal Dynamics and Decision-Making Under Uncertainty in Intergroup Conflicts**

Dealing with decision-making under uncertainty and risk typically assumes that outcomes are immediate. However, in real-world scenarios—especially in situations involving intergroup relations and intractable conflicts—there is often a significant delay between the decision point and when the outcomes materialize. We aim to examine what influences people's decisions when possible results are framed in terms of immediate versus future consequences.

Decision-making under prospect theory involves two key steps: "representation" and "valuation:" First, individuals mentally represent the risks they face, evaluating potential gains and losses; then, they assess these representations to determine their level of appeal (Barberis et al., 2016). Research has explored whether intertemporal preferences remain consistent when future outcomes are certain versus uncertain. Studies have examined whether biases like present bias (a preference for smaller, immediate gains over larger, delayed gains for oneself) are more pronounced when future outcomes are uncertain (Gerber & Rohde, 2010). A key insight from these studies (e.g., Andreoni & Sprenger, 2012) is that people discount certain and uncertain future outcomes differently, suggesting that risk preferences and time preferences are fundamentally different, with a direct preference for certainty influencing decision-making processes.

Similarly, Construal Level Theory (CLT; Trope & Liberman, 2010) also addresses the temporal dimension. According to CLT, abstract or conceptual actions are perceived as further away in time compared to concrete actions. People view non-tangible or non-immediate actions as happening further in the future, likely because abstract actions involve complex planning and consequences associated with longer timeframes. Temporal closeness of an imagined meeting with a target person increases perceived familiarity and similarity, while temporal distance increases social distance (Stephan et al., 2011). Findings show that an abstract construal level increases risk-taking by focusing thoughts on the desirability of outcomes, while concrete thinking reduces risk-taking by highlighting the feasibility of actions. For example, choosing the safe strategy is more common with concrete thinking, whereas an abstract mindset increases the likelihood of choosing the risky strategy when reasoning about one’s own outcomes (Lermer et al., 2015).

In the same line of reasoning, according to Temporal Discounting theories (Critchfield & Kollins, 2001; Van den Bos & McClure, 2013), in hyperbolic discounting, the value of future rewards diminishes rapidly at first but then levels off. This means people heavily discount distant future rewards, but the rate of discounting decreases as the reward time approaches. Consequently, individuals may choose smaller, immediate rewards over larger, delayed rewards, even if the delayed rewards are more valuable overall. According to all these theories, the future, being more abstract and less immediately rewarding, is perceived as less familiar and less similar to the present, leading people to prefer immediate rewards over delayed ones. However, considering prospect theory, framing the present as a gain or loss may impact decisions differently. For example, Kemel and Paraschiv (2023) investigate how risk attitudes vary between decisions with immediate versus delayed consequences. Using an experimental design, they found that individuals exhibit higher risk tolerance when consequences are delayed. This increased risk tolerance is primarily driven by elevated probability weighting, indicating decision-makers become more optimistic about their chances of success when outcomes are realized in the future.

In a study integrating CLT with prospect theory, Trautmann and van de Kuilen (2012) suggest that the psychophysical effects modeled by prospect theory (such as diminishing sensitivity to outcomes and probability weighting) dominate over the psychological distance effects suggested by CLT in risky decision-making. Their experiments indicate that people’s decisions about the future are more strongly influenced by the risk attitudes predicted by prospect theory rather than by the abstract or concrete thinking proposed by CLT[[1]](#footnote-1).

Based on the literature above, we suggest two lines of reasoning. The first, integrating temporal dynamics with intergroup biases, explains why individuals might prioritize immediate gains for their ingroup, even at the expense of long-term solutions that could benefit both sides. Temporal discounting—the tendency to favor immediate rewards over delayed benefits— can play a crucial role in decision-making pronounced in high-stress conflict situations, where immediate threats to the ingroup intensify the desire for quick solutions. For instance, in the face of an imminent threat, individuals may be more likely to support actions that yield immediate safety for their ingroup, even if these actions may lead to greater instability or conflict in the long term. This can result in a preference for short-term ceasefires or aggressive military responses that offer immediate relief but do not address the root causes of the conflict, ultimately leading to recurring cycles of violence. The influence of construal level theory further clarifies this dynamic by suggesting that immediate outcomes are perceived more concretely and carry greater emotional weight, while long-term outcomes are seen as abstract and less certain. Consequently, people find it easier to rally behind actions that provide tangible, short-term benefits for their ingroup, rather than investing in the more uncertain, long-term strategies required for lasting peace. This temporal bias reinforces ingroup favoritism by making the immediate needs and security of the ingroup appear more pressing than the potential long-term benefits of pursuing peace or addressing the outgroup's concerns.

In negotiations for ceasefires, there is often a choice between accepting a temporary halt to hostilities which may not address underlying issues (immediate gain), and pursuing long-term peace agreements that require more time but could potentially lead to lasting stability. Prospect Theory adds to this reasoning by positing that the way decision-making scenarios are framed—as gains or losses—significantly affects individuals' choices in intergroup conflicts, particularly under conditions of stress. People are generally risk-averse when potential outcomes are framed as gains and become risk-seeking when the same outcomes are presented as losses. For example, during intense conflicts, if the immediate cessation of hostilities is framed as preventing loss (i.e., saving lives immediately), decision-makers might prioritize quick fixes like temporary ceasefires over comprehensive, long-term peace negotiations that are framed as potential gains. This inclination is driven by a psychological bias to avoid immediate loss at all costs, which often overshadows the rational evaluation of long-term benefits. This perspective enriches our understanding of why conflicting parties often revert to cycles of violence instead of progressing towards peace.

Specifically, we hypothesize that:

H2a: According to CLT, the future is inherently more abstract due to the psychological distance, leading to less familiarity and perceived similarity with the present. This abstraction makes future events feel less immediate and less rewarding compared to present events, leading to a preference for present gains. Additionally, this abstraction leads individuals to discount future losses compared to immediate losses, prioritizing strategies that avoid immediate loss even if they entail a long-term risk of loss to both their own group and others. This tendency may contribute to decision-making patterns in violent conflicts, where immediate loss-avoidance often drives choices that have detrimental long-term consequences.

Our second line of reasoning is also grounded in Prospect Theory, but suggests a different outcome. Prospect theory emphasizes the significant influence of framing outcomes on decision-making, particularly when scenarios are framed in terms of avoiding losses. Such framing prompts individuals to become more open to considering future options that might involve risks but could prevent immediate losses. This behavior is particularly relevant in intergroup conflicts, where the urgent need to avoid immediate losses, such as casualties or severe economic impacts, can make longer-term, uncertain peace initiatives more appealing. By understanding this dynamic, we can better design negotiation strategies and conflict resolutions that leverage this cognitive bias towards loss aversion, encouraging conflicting parties to engage in comprehensive solutions that, while uncertain, offer the potential to prevent immediate detrimental outcomes. This approach could prove pivotal in breaking cycles of violence and initiating sustained peace processes. Hence, we suggest the following competing hypothesis:H2b: Derived from Prospect Theory, this hypothesis suggests that the framing of outcomes as gains or losses significantly influences decision-making. People tend to be risk-averse when considering gains and risk-seeking when considering losses. When considering future outcomes, if the present is framed in terms of potential gains, people might prefer the present due to risk aversion. **However, if the present is framed in terms of avoiding losses, individuals might be more willing to consider future options to avoid immediate losses.**

We will examine ingroup, outgroup and intergroup competition situations, differentiating between two types of outcomes in each scenario.

Our experiments will be structured to build up these comparisons systematically, beginning with simpler scenarios and gradually introducing more complex intergroup dynamics. For example, the first experiment will present the participants (Israelis/Americans/Turkish) with two distinct options to resolve the ongoing conflict with Hamas, each with different implications for risk and temporal outcome. The first option proposes an immediate ceasefire accompanied by the release of all hostages. This choice offers a quick resolution and moderate short-term security benefits, though it carries risks and may not fully address the deeper, underlying issues of the conflict, potentially limiting its long-term impact. The second option entails enduring some level of unrest in the short term with the goal of reaching a comprehensive peace agreement with Palestinians in Gaza within ten years. This approach carries higher initial risks and involves uncertainty, but if successful, it promises substantial long-term improvements in security and stability. Participants will be asked to evaluate and choose between these options based on their perceived risk, potential outcomes, and their preferences for immediate versus long-term conflict resolution benefits.

In the second scenario, focusing on the outgroup, participants will evaluate two options for addressing governance in Gaza. The first option, offers an immediate ceasefire that allows for reconstruction and some improvements under moderate Palestinian Authority leadership, with lower risk but potential long-term stability issues. The second option, involves short-term turbulence but aims to establish a stable government in ten years, promising significant long-term improvements if successful. Participants will choose between immediate moderate improvements or substantial long-term gains, assessing the risks and potential outcomes associated with each option.

In the third scenario, focusing intergroup competition, participants will assess two options aimed at resolving conflict. The first option, proposes a quick ceasefire that includes releasing all hostages, offering immediate peace with low risk but potentially limited long-term stability. The second option, suggests enduring short-term challenges with the goal of achieving a stable Gaza in ten years, potentially enhancing regional stability significantly if successful, despite higher initial risks. Participants will decide between securing immediate, unstable peace or investing in a riskier option that could yield greater long-term benefits for the region.

**Individual Differences**

While Prospect Theory provides a robust framework for understanding how people evaluate potential gains and losses, it is crucial to consider individual differences that shape these decision-making processes. Since people's preferences, values, and perceptions significantly influence their decisions, by examining these individual differences, we can gain a deeper understanding of the variability in decision-making behaviors under uncertainty and their impact on attitudes toward intergroup relations. This study will focus on three key individual differences: social values, perceptions of stochastic conflict, and social dominance orientation (SDO), all of which are relevant to intergroup relations and decision-making.We will also examine demographic variables, including political stance and the type of army service (regular and reserve combat infantry soldiers), which have been found to be influential in decision-making processes (Kimchi, 2014; Kimchi et al., 2019).

**Values**

Values are broad, abstract and trans-situational motivational goals that differ among individuals (Roccas & Sagiv, 2017). Basic human values, as conceptualized by Schwartz (1992, 2012), encompass ten main motivations that guide behavior. These values can be divided into four main categories: self-enhancement, self-transcendence, openness to change, and conservation. Self-enhancement, focused on achievement and power, contrasts with self-transcendence, which prioritizes universalism and benevolence. Openness to change, emphasizing stimulation and self-direction, opposes conservation values like tradition, security, and conformity. These values are driven by different motivations. Those who prioritize self-transcendence are concerned with the well-being of others, while those focused on self-enhancement seek personal success and dominance. Openness to change is valued by individuals who prioritize autonomy, independence, and excitement. In contrast, those who emphasize conservation value safety, tradition, and the preservation of order, resisting change and prioritizing stability (Schwartz, 2012). The value theory has been validated in abundant studies across various countries (e.g., Davidov et al., 2008). The theory proposes that values are arranged in a semicircle structure, illustrating their relationships. Values positioned opposite each other in the circle may conflict when pursued simultaneously, while those with similar motivations are placed closer together, making them more compatible. These values influence a wide range of attitudes and behaviors (Sagiv & Roccas, 2021).

Only few studies have explored the relationship between values and economic preferences. Scharfbillig et al. (2024) found that individuals who prioritize conservation values tend to be more risk-averse, favoring stability and the status quo. Conversely, those who value openness to change are more inclined toward risk-seeking behavior, emphasizing autonomy and excitement. In our study, we aim to explore the relationship between values and various decision-making processes. Specifically, we will examine how values influence decisions involving monetary versus life outcomes, as well as decisions about immediate versus future consequences. We hypothesize (H3) that individuals who prioritize self-transcendence values are more likely to prioritize life outcomes over monetary gains.Furthermore, past studies (e.g., Eyal et al., 2009) have shown that higher correspondence between values and behavior is observed when behaviors are construed at a higher, more abstract level, and when they are planned for the distant future, compared to when the same behavior is viewed at a lower, more concrete level or planned for the near future.Hence, we suggest atemporal influence on value-driven behavior: (H4) Values will have a stronger influence on decisions and behavioral intentions when the behavior is planned for the distant future compared to the near future. For instance, individuals who prioritize self-transcendence values will be more likely to commit to altruistic actions when these actions are set in the distant future rather than the near future. Furthermore, individuals who prioritize conservation values may demonstrate stronger adherence to safety-related behaviors (e.g., investing in long-term security measures) when these behaviors are planned for the distant future. Referring to openness to change values, these values might be related to spontaneous or risk-taking behaviors which are located in the near future.

**Perceptions of Stochastic Conflict**

Stochastic conflicts, which are defined by their inherent unpredictability and complexity, significantly influence how individuals assess risks and make decisions under uncertainty. People's perceptions of the likelihood and potential consequences of such conflicts can heavily shape their decision-making processes (Schweizer, 2021). Miettinen et al. (2020) found that conflicts often escalate when individuals perceive situations as unfair or when they believe they are at a disadvantage compared to others. Their study indicates that when outcomes are seen as more uncertain or risky, individuals are more likely to escalate conflicts, motivated by the possibility of addressing or reducing perceived inequalities. This tendency to escalate under uncertainty is especially strong when individuals believe that such actions could help reduce the inequality or bring about a more balanced situation, even at a personal cost. These findings suggest that in stochastic conflicts, people's judgments about fault or responsibility are influenced not only by the unpredictability of the conflict itself but also by their perceptions of fairness and inequality. By exploring these perceptions, we can gain a deeper understanding of how individuals assign blame and responsibility in complex and uncertain conflict scenarios.

Furthermore, as highlighted by Li et al. (2018), the context in which individuals make decisions regarding fairness can significantly modify their preferences. Specifically, the tendency to resist advantageous inequity—where an individual receives more benefits or resources than others, creating an unequal distribution in their favor—known as advantageous inequity aversion, can diminish or even disappear when individuals do not have control over the distribution of resources. This suggests that in stochastic conflict scenarios, perceptions of fault and responsibility may also be influenced by whether individuals feel they have agency or control in the situation. By examining these nuanced differences in decision-making, our research can uncover how perceptions of fairness and responsibility contribute to decision-making in conflicts.

To examine these questions, we developed a measure, to measure stochastic perception of conflicts (Appendix C). This questionnaire aims to gauge the level of nuanced understanding individuals have about conflicts, emphasizing the importance of history and multiple perspectives in shaping current events. We suggest that when people hold a complex perception of chain of events, they will tend to have a complex understanding of the conflict's roots and dynamics, they may be better equipped to create nuanced policies that address underlying issues rather than just symptoms. This can lead to solutions that might address the needs and objections of all parties involved. Moreover, a complex perception encourages individuals to engage in more meaningful dialogues, recognizing that each party has legitimate concerns and historical narratives that must be acknowledged. This can foster a more respectful and productive negotiation environment, where solutions are sought through compromise and mutual understanding. Furthermore, having a complex understanding of a conflict, can lead to greater support for long-term solutions over quick fixes. Hence, we anticipate (H5) that scores on a stochastic conflict scale would align with life outcomes over monetary gains in decision-making, as individuals who perceive higher levels of unpredictability and complexity in conflicts may prioritize the preservation of life, viewing it as a more crucial and stable outcome compared to monetary gains, which can be seen as less certain and more unpredictable.

We also anticipate (H6) that individuals with higher scores on a stochastic conflict scale will be more likely to prioritize immediate outcomes over future outcomes in decision-making. This tendency arises from the increased uncertainty and unpredictability associated with stochastic conflicts, which may lead individuals to favor immediate, concrete gains over delayed, uncertain rewards.

Specifically, in the Israeli-Palestinian conflict, different interpretations of history can lead to varied understandings of the present and future scenarios. For instance, those viewing Israel primarily as a Jewish state might support strong military actions against Hamas to ensure security and envision a predominantly Jewish future for the region. Conversely, critics of the Zionist movement might advocate for an immediate cessation of hostilities at all costs, possibly viewing alternative futures for Jewish populations either within or outside of Israel. Additionally, those who attribute the ongoing conflict to Israeli occupation might favor a ceasefire and support a two-state solution as a pathway to peace. Each perspective not only shapes immediate policy responses but also influences long-term strategies for the region.

**Social Dominance Orientation (SDO)**

SDO refers to an individual's preference for hierarchy and dominance in social settings. Those with high SDO are more likely to endorse beliefs that justify inequality and may exhibit distinct decision-making patterns, particularly in competitive or conflict scenarios (Pratto et al., 1994). Exploring the influence of SDO on risk-taking and decision-making can reveal how power dynamics and social hierarchies impact individuals' choices. For instance, Pratto et al. (2008) showed that individuals with higher levels of SDO tend to value the lives of in-group members more than out-group members, especially under conditions of intergroup competition. They are likely to exhibit stronger preferences for policies that favor their own group over others, thereby maintaining and reinforcing existing social hierarchies (Bahamondes et al., 2022). Additionally, SDO is positively correlated with stigmatization across a range of marginalized groups, including those who are homeless (Smith & Stathi, 2022). This can lead to biased decision-making processes where the needs and lives of out-group members are undervalued or ignored, they may prioritize benefits to their own group, even at significant costs to others. This can affect the fairness and effectiveness of policies, especially in multicultural or multi-ethnic societies. They might exacerbate intergroup conflicts by increasing support for aggressive strategies against perceived out-groups. Conversely, it can decrease support for cooperative or integrative approaches that require compromise and mutual respect. In contexts like international relations, disaster response, and refugee support, high SDO might influence leaders and policymakers to discriminate against out-groups, leading to uneven distribution of aid or support. Hence, we hypothesize (H7) that in contexts such as international relations, individuals with higher SDO will be more likely to support policies that result in unequal distribution of resources, favoring their own group over others. It is important to consider the relationship between Schwartz values and SDO, as research has shown that high SDO is positively correlated with self-enhancement values (e.g., power, achievement) and low SDO with self-transcendence values (e.g., benevolence, universalism; e.g., Feather & McKee, 2008; Levin et al., 2015). The sub-dimensions of SDO (Ho et al., 2015)—SDO-Dominance (SDO-D) and SDO-Egalitarianism (SDO-E)—offer more detailed insights into the relationship between SDO and Schwartz values. According to Passini (2020), SDO-D is positively linked with self-enhancement values (e.g., power) and negatively associated with self-transcendence values (e.g., universalism-concern). In contrast, while SDO-E also correlates with self-enhancement, it has a more varied relationship, showing some connection with self-direction action. These nuances suggest that individuals with higher SDO-D are more likely to support policies favoring their own group, while the influence of SDO-E may be more context-dependent. This differentiation allows us to explore how SDO dimensions, alongside Schwartz values, shape intergroup decision-making. This association suggests that value orientations might serve as a more distal influence on decision-making, shaping SDO levels, which in turn act as a more proximal determinant of preferences for policies that favor one's own group over others. By examining both Schwartz values and SDO, our study aims to uncover whether values indirectly influence intergroup decision-making through SDO, providing a more comprehensive understanding of the psychological drivers behind enemy-harming behaviors.

To test hypotheses 3-7, we will model the slope of participants' decision outcomes and correlate these slopes with individual difference measures (SDO, Schwartz values and perceptions of stochastic conflict). This approach will allow us to examine how individual differences in values and attitudes predict decision-making patterns, providing a nuanced understanding of how personal predispositions influence preferences for life versus monetary gains in intergroup conflict scenarios

2. **Objectives and significance of the research;**

This research program includes several objectives. First, it aims to examine the balancing of human lives and material benefits in intergroup conflicts. We will utilize prospect theory to understand asymmetries in risk behavior, highlighting how losses are often perceived more intensely than equivalent gains. This objective addresses a critical gap in understanding the cognitive biases that influence intergroup decision-making. By applying prospect theory in a new context— monetary versus lives in intergroup conflict—this research will expand our theoretical knowledge of how individuals process complex choices under stress and competition.

Second, we aim to explore the influence of temporal dynamics on decision-making in intergroup conflicts. We will analyze how decision-making preferences shift when considering current versus future decisions, focusing on how temporal framing can alter perceived gains and losses. This involves investigating if short-term considerations overshadow long-term consequences. This endeavor will enhance our understanding of temporal influences on decision-making which can lead to better strategies for conflict resolution and peacebuilding. It also has implications for how policies are crafted and communicated to manage public reactions in crisis situations.

Third, we aim to examine the role of individual differences in intergroup decision-making processes. We will identify how personal characteristics such as values, perception of stochastic conflict, and social dominance orientation affect decision-making in intergroup contexts. This objective seeks to link individual psychological profiles with broader social behaviors in conflict settings. By connecting individual psychological differences with decision-making outcomes in intergroup conflicts, this research could inform targeted interventions designed to reduce conflict and promote social cohesion. Understanding these links is also crucial for developing more nuanced models of human behavior in social psychology.

**3. Comprehensive description of the methodology and plan of operation, including the respective roles of the Israeli and American principal investigators**

**Study 1: Monetary vs. Life Decisions** This study aims to explore how participants from different cultural backgrounds (Israelis, Americans and Turkish) make decisions when faced with trade-offs between monetary outcomes and human lives.

In our study, we adopted a design similar to that used by Pratto et al. (2008), employing a 2 (between subject design: Lebanon combatant status, categorizing participants as either combatant or noncombatant) x2 (within subject-design: loss– gain Contrast) x4 (within subject-design: lives at stake: 20, 2,000, 10,000 or 100,000 lives) configuration to dissect the multiple factors influencing decision-making in intergroup conflicts. Participants will be asked to express their policy preferences on a scale from 1 (strongly prefer Policy B) to 6 (strongly prefer Policy C). This structured approach allows for a nuanced analysis of how different factors interact to shape preferences in high-stakes decision-making contexts. For example: "Policy B would result in booming economic growth in Israel. Policy C would result in 100,000 Palestinian civilian lives saved."

To determine number of participants, we conducted a power analysis using G\*Power to determine the required sample size. The analysis was based on a 2x2x2x4 mixed ANOVA. We set the effect size to a conservative f = 0.10. The alpha error probability was maintained at the standard 0.05, and the power was targeted at 0.80 to ensure a robust ability to detect effects. The resulting power analysis indicated that a total sample size of 220 participants would be required.

This study will be conducted three times, each with a different participant group: Israelis, Americans, and Turkish. In each of these studies we will also collect individual differences measures, including: Schwartz value questionnaire (the short and broad version of the value questionnaire; Sekerdej & Roccas, 2016), SDO questionnaire (Ho et al., 2015) and perceptions of stochastic conflict (a measure developed for the current study, e.g.: "xxxx").

Finally, we will introduce two additional experimental conditions aimed at varying levels of outgroup humanization. One condition will involve providing personal stories about the victims' lives, which is designed to increase humanization. Conversely, the other condition will involve elements that may reduce humanization, such as presenting victims in a more abstract or statistical manner without personal details. These modifications are intended to enhance the depth of the scenarios. As a result, this approach will extend the existing 2x2x4 experimental framework to include these two new conditions, effectively expanding our design to a 2x2x2x4 format. Thus, each scenario will be run under both the standard conditions and these two modified humanization conditions.

**Study 2: Temporal vs. Future Decisions.** This study examines how the same groups refer to temporal vs. future decisions, referring to ingroup, outgroup and intercultural competition. All individual differences (as described in Study 1) will be measured.

**Experimental Design**: using a 3 (ingroup, outgroup, competition scenarios) \* 3 (Israelis, Americans, and Turkish participants) we will examine how different groups make decisions that involve immediate versus future outcomes, highlighting how temporal framing affects their choices. Participants will face scenarios that contrast immediate gains or losses with outcomes that will occur in the future**.** Each scenario will include manipulations of temporal distance to test the influence of immediate versus delayed consequences on decision-making. For example: Ingroup Condition: High-Probability regarding Long-Term Outcome: Scenario A: An immediate ceasefire will be declared, which will include the release of all hostages. [This option involves lower risk and is likely to result in moderate short-term security, but the long-term impact may be limited, as the underlying issues are not fully resolved.]High-Outcome Prospect: Scenario B: Despite potential unrest in the upcoming years, a peaceful agreement with Palestinians in Gaza will be reached in ten years, leading to significant long-term stability. [This option carries higher risk due to the unrest and uncertainty in the short term, but if successful, it promises a substantial improvement in security and stability.]

**Roles of Principal Investigators:** Both Israeli and American PrincipalInvestigators will focus on developing culturally relevant scenarios, overseeing data collection, and ensuring that all materials are sensitive to the socio-political context.

4. Risk analysis and alternative paths that will be followed if the suggested research plan fails (only in those fields in which it is relevant);

5. An account of available U.S. and Israeli resources, including all personnel and equipment relevant to the research

**Appendix A: Decision Dilemmas – monetary vs. life**

In a changing world, governments must make new policies. Making new policies confronts us with making difficult decisions because we can’t always accomplish everything we desire, nor can we always avoid negative consequences. Sometimes decision-makers have to choose between two policies, both of which will have distressing outcomes. At other times, decision-makers have to choose between two policies, both of which have positive outcomes. For each question below, the outcomes of two policies (labeled B and C) are described. For each question, imagine you were forced to choose which of the two policies listed would be carried out. Which policy would you prefer? For each pair of policies, rate how strongly you would prefer one policy over the other by writing in a number from the scale. If you strongly prefer B rather than C, write a 1. If you strongly prefer C rather than B write a 6. Or write some other number between 1 and 6 to indicate your preference.

Strongly prefer policy B 1 2 3 4 5 6 Strongly prefer policy C

**Example**

Policy B has the result x.

Policy C has the result y.

Preference rating: \_\_\_\_\_\_\_\_

1. Policy B would result in the halving of Israeli gas prices.

Policy C would result in 10,000 Palestinian civilians saved.

Preference rating: \_\_\_\_\_\_

1. Policy B would result in the destruction of 3 hospitals vital to healthcare in Gaza City.

Policy C would result in 20 Israeli civilians’ lives being lost.

Preference rating: \_\_\_\_\_\_

3. Policy B would result in Palestine’s economy growing substantially.

Policy C would result in 20 Israeli civilians’ lives being saved.

Preference rating: \_\_\_\_\_\_

4. Policy B would result in 10,000 Israelis losing their jobs.

Policy C would result in 20 Palestinian civilians losing their lives.

Preference rating: \_\_\_\_\_\_

5. Policy B would result in booming economic growth in Israel.

Policy C would result in 100,000 Palestinian civilian lives saved.

Preference rating: \_\_\_\_\_\_

6. Policy B would result in 30% of Palestinian civilians losing shelter.

Policy C would result in 20 Israeli civilians’ lives lost.

Preference rating: \_\_\_\_\_\_

7. Policy B would result in a substantial increase in the number of Palestinian civilians who have access to adequate health care.

Policy C would result in 20 Israeli civilians’ lives being saved.

Preference rating: \_\_\_\_\_\_

8. Policy B would result in an increase in Israeli grocery prices of 50 percent.

Policy C would result in 10,000 Palestinian civilians losing their lives.

Preference rating: \_\_\_\_\_\_

9. Policy B would result in 10,000 new jobs created in Israel.

Policy C would result in 2,000 Palestinian civilian lives saved.

Preference rating: \_\_\_\_\_\_

10. Policy B would result in Palestine’s economy being crippled.

Policy C would result in 20 Israeli civilians’ lives being lost.

Preference rating: \_\_\_\_\_\_

11. Policy B would result in most Palestinian people being provided with shelter.

Policy C would result in 20 Israeli civilians’ lives being saved.

Preference rating: \_\_\_\_\_\_

12. Policy B would result in a deep economic recession in Israel.

Policy C would result in 10,000 Palestinian civilians losing their lives.

Preference rating: \_\_\_\_\_\_

13. Policy B would result in a decrease of 50 percent of Israeli grocery prices.

Policy C would result in 20 Palestinian civilian lives being saved.

Preference rating: \_\_\_\_\_\_

14. Policy B would result in 500,000 Palestinian civilians suffering from malnutrition.

Policy C would result in 20 Israeli civilian's live being lost.

Preference rating: \_\_\_\_\_\_

15. Policy B would result in adequate food being supplied to an additional

500,000 Palestinian civilians.

Policy C would result in 20 Israeli civilians’ lives saved.

Preference rating: \_\_\_\_\_\_

16. Policy B would result in the doubling of Israeli gas prices.

Policy C would result in 2,000 Palestinian civilians losing their lives.

Preference rating: \_\_\_\_\_\_

**Appendix B: Future versus present – experimental scenarios** (I did some refinements based on our previous talk)

**Introduction:**

Currently, we're facing an ongoing conflict with Hamas. Let's imagine that the Israeli government has proposed two alternative programs to address the situation. Below are the estimated consequences of each program, and your task is to evaluate these options and make a decision based on the potential outcomes.

**Scenario Structure:**

Participants are asked to imagine they are making a critical decision about the conflict. Each scenario presents two options: one with immediate consequences and another with long-term future consequences. This setup naturally incorporates both the temporal aspect and the risk assessment as described by Prospect Theory.

**Ingroup Condition:**

1. **High-Probability regarding Long-Term Outcome (Option 1- "the good present"):**

**Scenario A:** An immediate ceasefire will be declared, which will include the release of all hostages. [This option involves lower risk and is likely to result in moderate short-term security, but the long-term impact may be limited, as the underlying issues are not fully resolved.]

1. **High-Outcome Prospect (Option 2 – "the good future"):**

**Scenario B:** Despite potential unrest in the upcoming years, a peaceful agreement with Palestinians in Gaza will be reached in ten years, leading to significant long-term stability. [This option carries higher risk due to the unrest and uncertainty in the short term, but if successful, it promises a substantial improvement in security and stability.]

**Outgroup Condition:**

1. **High-Probability Long-Term Outcome (Option 1 – "good present"):**

**Scenario A:** A ceasefire will be declared now, allowing for reconstruction in Gaza and improvement in living conditions, with moderate figures from the Palestinian Authority taking control of the Strip. [This scenario involves lower risk and is likely to result in moderate improvements for the immediate future, though the long-term stability may be compromised. (immediate gain, low-risk).]

1. **High-Outcome Prospect (Option 2 – "good future"):**

**Scenario B:** Although the upcoming years may be turbulent, Gaza will have a stable government in ten years, fostering long-term peace and development. [This option carries higher risk due to potential short-term instability, but if successful, it promises significant long-term gains in governance and quality of life. (future gain, high-risk)]

**Intergroup Competition Condition:**

1. **High-Probability Long-Term Outcome (Option 1):**

**Scenario A:** An immediate ceasefire will be declared, which will include the release of all hostages. [This scenario involves lower risk and is likely to provide immediate peace, though the long-term threat remains, limiting overall stability. (immediate gain for Israel, low-risk)]

1. **High-Outcome Prospect (Option 2):**

**Scenario B:** Despite challenges, in ten years, Gaza will achieve stability and a good future, reducing long-term regional tension. [This option involves higher risk due to the potential challenges in the short term, but if successful, it promises a significant improvement in regional stability. (future gain for everyone, high-risk).]

**Appendix C**

**Possible stochastic conflict questions: (we can change these questions to address the Israeli – Palestinian context, or leave it in this abstract level.)**

1. **To what extent do you agree that conflicts often have deep historical roots that are frequently overlooked in public discourse?**
   * Strongly disagree
   * Disagree
   * Neutral
   * Agree
   * Strongly agree
2. **How likely are you to consider historical injustices when evaluating the causes of modern conflicts?**
   * Very unlikely
   * Unlikely
   * Neutral
   * Likely
   * Very likely
3. **Do you think blaming one side in a conflict oversimplifies the nature of the conflict?**
   * Strongly disagree
   * Disagree
   * Neutral
   * Agree
   * Strongly agree
4. **How much do you agree with the statement: "Both sides in a conflict are often victims of historical circumstances"?**
   * Strongly disagree
   * Disagree
   * Neutral
   * Agree
   * Strongly agree
5. **To what extent do you believe that understanding a conflict requires acknowledging multiple perspectives, not just those of the main actors?**
   * Strongly disagree
   * Disagree
   * Neutral
   * Agree
   * Strongly agree
6. **How often do you think media representations fail to capture the complexity of conflicts?**
   * Very rarely
   * Rarely
   * Sometimes
   * Often
   * Very often
7. **Do you agree that the reasons behind conflicts are often more complex than what is presented by leaders and governments?**
   * Strongly disagree
   * Disagree
   * Neutral
   * Agree
   * Strongly agree
8. **How much do you agree with the statement: "Every conflict has an undercurrent of unresolved historical grievances"?**
   * Strongly disagree
   * Disagree
   * Neutral
   * Agree
   * Strongly agree

**Scoring Interpretation:**

* **High scores (Agree or Strongly agree)** indicate a complex perception of conflicts, recognizing historical depth and multiple factors.
* **Low scores (Disagree or Strongly disagree)** suggest a more simplified view that may overlook historical and stochastic elements in conflicts.

1. 1In one of the experiments, participants were asked to consider investment decisions involving high-outcome and high-probability prospects, with the outcomes framed either for immediate decision-making or as advice for a friend in a different city (a temporal and social distance manipulation). The experiment showed that participants were generally risk-averse for high-probability prospects and more risk-seeking for high-outcome prospects. Interestingly, this pattern held true regardless of whether the decisions were made in the immediate context or with a temporal delay, suggesting that the predictions of Prospect Theory dominated the psychological distance effects proposed by CLT. Specifically, even when considering decisions that were socially and temporally distant, participants' risk attitudes were more strongly influenced by the diminishing sensitivity and probability weighting described by Prospect Theory, rather than by the abstract or concrete thinking suggested by CLT . [↑](#footnote-ref-1)