

## ABSTRACT

Title of Document: The Effect of Psychological Distance on Willingness to Engage in Ideologically Based Violence

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Research on the cognitive and decision-making processes of individuals who choose to engage in ideologically based violence is vital. Our research examines how abstract and concrete construal mindsets affect likelihood to engage in ideologically based violence. Construal Level Theory (CLT) states that an abstract mindset (high-level construal), as opposed to a concrete mindset (low-level construal), is associated with a greater likelihood of engaging in goal-oriented, value-motivated behaviors. Assuming that ideologically based violence is goal-oriented, we hypothesized that high-level construal should result in an increased likelihood of engaging in ideologically based violence. In the pilot study we developed and tested 24 vignettes covering controversial topics and assessed them on features such as relatability, emotional impact, and capacity to elicit a violent reaction. The ten most impactful vignettes were selected for use in the primary investigations. The two primary investigations examined the effect of high- and low-level construal manipulations on self-reported likelihood of engaging in ideologically based violence. Self-reported willingness was measured through an ideological violence assessment. Data trends implied that participants were engaged in the study, as they reported a higher willingness to engage in ideologically based violence when they had a higher passion for the vignette's social issue topic. Our results did not indicate a significant relationship between construal manipulations and level of passion for a topic.

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CONSTRUAL'S EFFECT ON IDEOLOGICALLY BASED VIOLENCE

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## **Chapter 1: Introduction**

Over the past 15 years incidents of violent extremism have increased worldwide, and there has been a sharp increase in the number of attacks and deaths since 2012 (National Consortium for the Study of Terrorism and Responses to Terrorism, 2015). Between 2012 and 2013 the number of worldwide attacks increased by 41 percent to about 10,000 and the number of deaths increased by 61 percent reaching nearly 18,000 (Global Terrorism Index, 2014). In 2014, terrorist attacks occurred in 95 countries, and fatalities increased by 81 percent from the prior year to about 33,000. The number of attacks causing more than 10 fatalities increased from 3.2 percent in 2013 to 4.4 percent in 2014. More than 5,000 attacks were against private citizens and property in 2014 (National Consortium for the Study of Terrorism and Responses to Terrorism, 2015).

### **Defining Terrorism**

Terrorism, at its core, is a behavioral phenomenon and political mechanism. It is most often the work of fanatical ideologists who believe they must resort to violence to generate change (Schouten, 2010; Laqueur, 2001). However, the definition of terrorism is ambiguous and constantly evolving. The definition can be so broad that some studies that focus on terrorism make no attempt to define it, and U.S. government agencies disagree on exact definitions (Schouten, 2010). For the purpose of this research we define terrorism as: the use of violence or the threat of violence conducted by sub-national groups or individuals with the intent to inflict a lasting psychological impact on a broader audience with ideological motivations, premeditated actions, and actions against non-combatants.

To address the ambiguity of defining terrorism, we will focus more broadly on violent extremism to clarify the meanings of our results. In Klein and Kruglanski's (2013) Goal Systemic Analysis of Extremism, they clarify distinctions in the way extremism is defined. One definition is "a deviation from the norm or the majority," while another definition is "zeal or conviction" (Klein & Kruglanski, 2013, 422). In this research, we consider extremism to be the latter—zeal or conviction—in order to examine the frame of mind in which people are more likely to participate in violent extremism, regardless of whether their ideology deviates from the majority. For this reason, we will refer to violence stemming from extremism as “ideologically based violence” throughout this thesis.

### **Large-Scale Effects of Terrorism**

Terrorism affects a broader audience, not just those killed or injured in attacks (Waxman, 2011). It impacts both the developed and the developing worlds (Beall, 2006) and puts tension on increasingly complex and fragile diplomatic relationships (Lind and Howell, 2010). Media coverage and political discussions of terrorism can propagate fear and increase anxiety, keeping society on a heightened state of alert (Rothe & Muzzatti, 2004; Slone, 2000). After the attacks on September 11, 2001, 52 percent of Americans indicated that they had difficulty keeping focus during everyday tasks (Huddy et al., 2002).

Widespread acts of terrorism in a region can cause society to ostracize those who share a common characteristic, such as race or religion, with the terrorist group (Waxman, 2011). This stereotyping causes these individuals' objectives or beliefs to lose legitimacy and increases targeting and social tension (Waxman, 2011; Bar-Tal, 2004).

There are also tolls on the economy of terrorism-stricken nations, with tourism dropping steeply following attacks (Frey, 2004). Prolonged acts of terrorism can negatively impact nations' GDP (Waxman, 2011).

### **Direction of Violent Extremism Literature**

The increase in extremist fanatical behavior has made it difficult to track terrorists and their plots (U.S. Director of National Intelligence, 2006). Therefore to address this threat to international security, researchers are studying why and how individuals become terrorists, or radicalize, and how to prevent or reverse radicalization. Some research has been conducted on the psychology of individuals choosing to engage in group-based and lone wolf violent extremism (Schouten, 2010; Leistedt, 2013; Mastors, 2015). However, research exploring cognitive and decision-making processes of extremists is limited.

## Chapter 2: Literature Review

### Psychology of Radicalization

Behavioral scientists have come to better understand ideologically based violence by investigating terrorism as a behavioral phenomenon (Schouten, 2010). This psychological research is important for predicting terrorist behavior, watching risk factors for violence and radicalization, and deradicalization (Schouten, 2010). Though many studies are dedicated to uncovering radicalization risk factors using personality traits, researchers have not found direct links between terrorists and specific sets of personality traits (Kruglanski & Fishman, 2006).

A 1981 study postulated that the two most common profiles of participants in terrorist organizations are extreme introverts and people with paranoid tendencies (Jager, Schmidtchen & Sullwold, 1981). The study hypothesized that introverts joined terrorist groups because they were unable to demonstrate empathy and were enthralled by the idea of becoming revolutionaries. Those with paranoid tendencies joined terrorist groups because they were suspicious of others and resorted to violence when agitated (Jager, Schmidtchen & Suellwold, 1981).

However, recent terrorism research shows significantly less confidence in these early findings and reaffirms that there is no common profile or common quantifiable trait terrorists consistently share. Terrorists likely share common thought processes or similar goals rather than common traits and are highly influenced by social environments and leaders (DeAngelis, 2009; Kruglanski et al., 2014).

**A psychological model for radicalization.** Psychological analysis and terrorism research have begun to explore decision-making patterns and the choice to radicalize.

Kruglanski and his fellow researchers (2014) crafted a model for radicalization by breaking down the choice to participate in ideologically based violence into three components:

- “(1) The motivational component (the quest for personal significance) that defines a goal to which one may be committed.
- (2) The ideological component that in addition identifies the means of violence as appropriate for this goal's pursuit.
- (3) The social process of networking and group dynamics through which the individual comes to share in the violence-justifying ideology” (Kruglanski et al., 2014, p. 74).

With this model we can see how an individual's rational choice to engage in violence is instigated by a motivation, is informed by a rational identification of violence as the best option, and is shaped by a social environment. The following theories will inform Kruglanski's radicalization model by explaining the motivation for radicalization, choosing violence, the social environment, and group identity.

**(1) Motivation for radicalization.** Here, it is important to note that not every violent actor is a radicalized individual. Some individuals are forced into extremism through coercion, however, being forced to commit violence is not true radicalization. Rational actors may be motivated to radicalize for a variety of reasons including political and economic ideologies, greed, safety, and revenge (Littman & Paluck, 2015). The overarching motivation for radicalization is a want for significance (Dugas & Kruglanski, 2014). “The quest for significance is conceptualized as a fundamental desire to achieve a sense of respect, or more colloquially, to ‘matter’ and ‘be someone’” (Dugas &



Kruglanski, 2014, p. 424). The quest for significance is a common human motivation, but it only leads to radicalization under certain conditions: the presence of a rational choice and a proper social environment (Dugas & Kruglanski, 2014). We focus on the presence of a rational choice and the dichotomous nature of committing violence versus not engaging in violent behaviors.

**(2) *Choosing violence.*** The vast majority of extremists are rational actors and would be considered by most of the world to be mentally competent individuals (Atran, 2003). Even suicide bombers, who are deemed insane or evil by the general population, usually do not exhibit psychopathology and are often middle class, educated individuals who made a conscious choice to commit violence on behalf of a terrorist organization (Atran, 2003). Some individuals are coerced into committing violence or suffer from mental illness, but these individuals fall out of the scope of this study.

*Rationality.* Rational Choice Theory assumes people are rational actors who consider all possible courses of action before choosing one. People, therefore, seek the course of action with the most utility, or perceived benefit (Lovett, 2006; March, 1994). Rational Choice Theory proposes that a rational actor will always choose the best option or perceived best option. Because the actor is rational, they would make the same choice in future situations given the same information and options from which to choose (Lovett, 2006). However, not all actors have accurate information or fully understand the outcomes of their actions, making Rational Choice Theory unrealistic (Kruglanski & Oreheck, 2009). Rather, Rational Choice Theory can inform understanding of rationality by purporting that people choose actions that will benefit them more (Kruglanski & Oreheck, 2009).

Alternatively, the concept of Bounded Rationality implies that human rationality is restricted by limited human cognitive ability (Simon, 1991; Gigerenzer & Goldstein, 1996; Kruglanski & Orecheck, 2009). Humans do not always have the capacity to call to mind all of the most important information needed to make a rational choice or judgment, leading them to possibly make less than rational decisions (Kruglanski & Orecheck, 2009). Given the same situation with more computational resources, someone might make a different decision. Rationality, therefore, is a relative concept (Kruglanski & Orecheck, 2009).

Kruglanski and Orecheck (2009) have proposed that judgments and choices are locally rational in their Relativity Theory of Rationality. At any given time, an actor will choose the option best perceived to serve their end goal. However, because rationality is restricted by accessible information, a rational judgment or choice could be judged irrational by a different actor or the same actor at a different time. The researchers emphasize that one person's rational choice could look like insanity to someone else (Kruglanski & Orecheck, 2009). For example: "A suicidal attack by a Jihadist terrorist may seem irrational to some observers in the sense that a person is violating the presumed basic human motivation for survival, yet it makes sense from the perpetrator's standpoint whereby it is a means to ends loftier than physical survival such as entrance into paradise and the eternal prestige of martyrdom" (Kruglanski & Orecheck, 2009, pg. 646).

*Splitting.* Theories of rationality partially explain how individuals might rationalize their involvement in terrorism, but it does not demonstrate why, given an identical situation, only some individuals choose a violent path. People who intentionally

commit harm and violence may also share common cognitive tendencies that cannot be explained by environmental influences.

One such tendency is called “splitting” (Mizen, 2003). Splitting is a way of categorizing undesirable stimuli, allowing individuals to rationalize biases to mitigate perceived threats. A person who splits will label groups or ideas as either completely good or completely bad without acknowledgement of the intermediate. This type of bipolar, “good vs. evil” thinking, makes it easier for an individual to legitimize their actions based on concrete justification (Pellegrini, 2010). Terrorist psychological thinking is “without shades of gray” (Post, 2001). This black and white thinking leads to a flawed logic that seems flawless to the terrorist. Ultimately, this leads them to the conclusion that opposing groups are fundamentally evil and must be destroyed (Post, 2001). It's likely that rational choice and black and white thinking are both influenced by mindsets that could cause individuals to focus on the more pragmatic or abstract details of a situation.

**(3) *Social environment and group identity.*** Extremists do not often emerge at random but rather are a product of their social environment (Malthaner & Waldmann, 2014). Such an environment is called a “radical milieu”—an environment in which violence is supported both from an ideological and facilitative standpoint (Malthaner & Waldmann, 2014). Rational choice can serve as a model of ideologically based violence if there is a “motivated offender, an opportunity to commit the crime, and the absence of a 'capable guardian” (Fussey, 2011, p. 87). In violent extremism research, this indicates a need for an instigator of violence, a radical milieu, and a lack of deterrence. The study of collective violence has shown that groups also promote violent behavior by providing a

radical milieu, an increasing indifference and comfort with violence (Littman & Paluck, 2015).

Social Learning Theory in the context of violence implies people are more likely to be aggressive after observing violence (Victoroff, 2005). Originally suggested by Albert Bandura (1977), Social Learning Theory explains how we learn from others via observation, imitation, and modeling. According to this theory, actions and behaviors are most commonly learned by modeling, which requires attention, retention, reproduction, and motivation (Bandura, 1977). These four processes of the Social Learning Theory develop the learned behavior in the individual. The final stage, motivation, can be anything, so long as it is sufficient to maintain the behavior learned. Motivation is usually responsible for facilitating behavioral reproduction, while retention is necessary for attention to result in a learned behavior. In this way, Social Learning Theory serves as a bridge between behavioral and cognitive learning theories and can explain the “why?” of engaging in violent extremism. In turn, it informs the level of future orientation for a violent individual's actions.

Violent groups also provide members with an identity, which serves as a member's underlying motivation to engage in violence, as participating in violence on behalf of the group can serve to strengthen group-based identity. An individual's want for this group-provided identity has been linked further to violent extremist behaviors such as suicide bombing (Littman & Paluck, 2015), an action that inflicts harm upon oneself and others in support of a larger goal. These behavioral phenomena are explained by Identity Theory, which purports that individuals, especially young people, are attracted to terrorist groups because they lack high self-esteem and self-identity, making it easier for them to

find bonding and fulfillment in such organizations (Burke & Stets, 2009). In particular, youths who feel isolated are more likely to be influenced by online recruitment programs; terrorist propaganda often carries a promise of shared identity (Guadagno et al., 2010). Henri Tajfel (1979) originally theorized that groups give a sense of social identity and belonging in the social world. From this point onwards, an individual in their group will become aware of the “in-group” and “out-group,” the in-group including the actor, “us”, the out-group including the opposing or foreign group, “them.”

**Group leadership.** Though these theories address collective violence at an individual level, they do not distinguish between group membership (violent perpetrators) and group leadership (violent instigators) or discuss the influence of these instigators. The psychologies of perpetrators and instigators are not interchangeable. Instead instigators have unique qualities that motivate them to instigate violence and lead others to commit violence on their behalf (Mandel, 2002). Instigators are generally more powerful, have a higher social profile, and are better equipped with wealth and information than their perpetrator counterparts, placing them in a unique position that allows them to rally support for their cause and drive perpetrators to violence (Mandel, 2002). David Mandel's 2002 case study addresses this model by examining the behaviors and instigation of terrorist leader Osama bin Laden. Mandel postulates that bin Laden used religious nationalism to garner support for his terrorist group, al-Qaida. Bin Laden envisioned himself as an instigator of violence and of change, as displayed in the way he calls for radical Islam (Mandel, 2002). His call to action uses both an appeal to identity and an instigation of the “Us vs. Them” or in-group mentality. His rhetoric cites reward and duty to protect the group from U.S.-led aggression as key reasons to respond to his

call to action, thus providing benefits of group identity and exacerbating fear and hatred of the other.

“(W)e issue the following fatwa to all Muslims: The ruling to kill the Americans and their allies—civilians and military—is an individual duty for every Muslim who can do it in any country in which it is possible to do it. [ . . . ] to be rewarded to comply with God’s order to kill the Americans” (Federation of American Scientists, 1998, n.p.).

Here Bin Laden provides an identity and membership to a social collective, the “us”, and institutes a call to action against “them”, the Americans. This is a pattern common to violent instigators (Chirof, 1994). Throughout the 20th century collective violence has often involved a feeling of nationalistic superiority and a sense of ostracization.

Analyzing group normativity and the socialization process provides insight to why individuals engage in violent extremism. Research is needed to determine an individual’s propensity to place a greater emphasis on group-provided short-term rewards such as a sense of belonging and organizational affinity, or a more distant desire to enact social change and promote an ideology. These desires are purported by environmental factors such as a radical milieu stemming from a group identity and ideology. To determine the extent to which individuals are motivated to promote an ideology, this study focuses on the effect of abstract and pragmatic mindsets (influenced by psychological distance) and its application to violent extremism motivation. Before understanding the effect of these mindsets on decisions to engage in ideologically based violence it is imperative to explore the nature of ideologies and decision making.

### **Theories of Morality and Motivation**

Perceptions of morality are influenced by an individual's perception of their situation. The Social Cognitive Theory of Moral Thought and Action considers self-sanctions as the main driving force of morality (Bandura, 1991). Children develop capacity and boundaries for these self-sanctions as they become more capable of abstract moral reasoning. However, after these sanctions are developed there are still processes of "moral disengagement" (Bandura 1991, p. 72), processes that imply individuals can act against particular moral principles in certain mindsets for the sake of a broader moral goals. According to Bandura, this moral disengagement can be used to justify violent actions that would be otherwise morally reprehensible when the violence is in support of a greater "moral imperative." By making combatants believe that they are "fighting ruthless oppressors" and "saving humanity from subjugation to an evil ideology" it is possible to alter someone's moral landscape (Bandura, 1991, p. 73). The broader, more abstract goals of saving humanity are able to eclipse the more specific moral transgressions such as taking a human life. However, Bandura's Social Cognitive Theory of Moral Thought and Action cannot fully explain the thought process that drives individuals to focus on these moral imperatives. Perhaps the nature of the goals being more abstract or broader is a factor that influences the ability of an individual to justify violent action.

Abstract and pragmatic mindsets have been explored through a variety of psychological theories. One of these theories is Regulatory Focus Theory, which states that people have two types of focus, "prevention" and "promotion" focus. An individual in a prevention focus mindset focuses on security needs and meeting their

responsibilities, whereas a promotion focus mindset focuses on self-development and achieving the ideal self (Brockner & Higgins, 2001). A 2003 study observed that in prevention focus and promotion focus scenarios, promotion focus is tied with abstract-style thinking. Prevention focus caused participants to focus on caution and self-protection while pursuing a goal (Pennington & Roese, 2003) and could be tied with more concrete thinking patterns. At distal times (associated with distant future-oriented abstract thinking), there was an excess of promotion focus, whereas at proximal times (associated with immediate, pragmatic thinking), there was greater prevention focus (Pennington & Roese, 2003). This research implies that there is a connection between abstract thinking and an individual's likelihood to consider their decision to participate in different types of actions carefully. However, Regulatory Focus Theory does not give a method to directly manipulate abstract or pragmatic thought.

Another theory that could inform the relationship between abstract thought and concrete thought is Dual-Process Theory. Dual Process focuses on two cognitive systems of reasoning (Evans & Stanovich, 2013). The first system of reasoning uses intuition, tacit information, and focuses on similarities among previously encountered situations (Evans & Stanovich, 2013). The second system is more analytical, deliberate, and rational. Using the second system, the individual collects information deliberately from their environment before making a decision. The first system is used in more routine situations with recognizable issues, whereas the second is used in non-routine situations with ill-defined problems (Evans & Stanovich, 2013).

In Joshua Greene's study on Dual-Process Theory of Moral Reasoning (2012), he claims judgments made for the sake of the greater good are driven by reasoning and a



more utilitarian view on morals. In one of his experiments participants read a passage about a moral taboo, and then read a strong or a weak, more abstract argument. They either immediately responded, or were encouraged to reflect before responding. When participants read the factual “strong argument” and were encouraged to reflect they were more accepting of this moral taboo (Greene, Paxton & Ungar, 2012, p. 163). Greene’s study shows that individuals’ decisions to accept moral taboos can change according to whether they consider a more factual or a broader argument. This research illuminates the way the dual processes could play a role in the relationship of concrete and abstract thought with individual judgments relating to moral values. Even so, while these two cognitive systems of reasoning can inform our hypothesis, it is not a direct way to manipulate an individual’s usage of abstract or concrete frames of mind.

**Immoral behavior and psychological distance.** When specifically considering violence motivated by ideologies, it is important to understand the basis behind these ideologies. Most moral decisions are snap judgments, and people evaluate them without considering situational context (Haidt, 2001; Sunstein, 2005). For example, people will most likely say lying is wrong without considering contextual information that might change their judgment, such as if lying would save a life (Eyal, Liberman & Trope, 2008). This can be partially explained through research by Tetlock, which explores “sacred values,” or values that are implicit to an individual (Tetlock et al., 2000, p. 853). When these values are infringed on people, they react with either “moral outrage” or “moral cleansing” (Tetlock et al., 2000, p. 853). In a “moral outrage” mindset, individuals assume negative thoughts and prescribe negative traits to those who have infringed on their moral value. Through moral cleansing individuals perform an action

that “reaffirms core values” (Tetlock et al., 2000, p. 854). The moral outrage stage is characterized by an individual’s tendency to generalize somebody’s perceived moral transgression to an overall immoral nature. This generalization of traits could be associated with thinking in an abstract frame of mind, broadening the scope of a specific trait to encompass the whole item. This could potentially tie moral outrage and the process of generalization to each other, and could imply that the process of moral outrage and a tendency to generalize (which could be tied with abstract thought) are closely related. This type of thought process is similar to the “good vs. evil” thought patterns found in “splitting,” which is a proposed characteristic thought pattern of those willing to engage in ideologically based violence.

Though society generally values non-violence, as Bandura proposed, it is possible people might discount certain values for the sake of their greater good, such as protecting or promoting an ideology (Bandura, 1991). Also, personal values are proven to be amiable to change or infringement; individuals are more likely to compromise their values when they see the benefits of doing so outweigh the harm (Baron & Leshner, 2000). This implies that neither personal values nor moral judgment are absolute, and therefore are prone to influence by different psychological processes and mindset manipulations (Haidt, 2001).

In another study, temporal distance—the further into the future or past an event takes place—was shown to have an effect on the pragmatic, consequentialist method of decision-making. A consequentialist decision-making process considers the costs and benefits of a choice, whereas the other mode of decision making, “deontology,” considers decisions according to prior held morals or beliefs (Gong, Iliev, & Sachdeva, 2012, p. 1).

In a series of experiments, when “events were described as further in time, subjects made more consequentialist decisions compared to when the same events were described closer in time” (Gong, Iliev, & Sachdeva 2012, p. 8). Changes of spatial distance, increasing spatial distance and decreasing distance from participants, also raised and lowered a participant’s likelihood to make consequentialist decisions (Gong, Iliev, & Sachdeva, 2012). Finally, in Bartels’ 2011 study, social distance induced from perceiving actions as performed by a group or performed as an individual also affected one’s likelihood to arrive at certain decisions due to pragmatic or abstract input. When participants had a “high degree of moral conviction” perceiving larger groups (an increase in social distance) as opposed to individuals (a decrease in social distance), the participants were more likely to promote consequentialist thinking (Bartels, 2011, p. 54). Participants were more willing to compromise on other moral values in order to serve the value which they associated with a high level of moral conviction.

This research on values and moral decision-making informs how abstract and pragmatic thought might affect an individual’s choice to engage in ideologically based violence. Generally, people might be less likely to choose ideologically based violence because they feel beholden to their non-violent values. However, people might be more likely to use violence if they believe violence is okay given the context or because the outcome of the immoral action outweighs the harm. When violence is undertaken in the name of an ideology, the goal is usually abstract and idealistic (Greene, Paxton & Ungar, 2012) and can function as a sacred value (Tetlock et. al., 2000). Additionally, psychological distance, including spatial, temporal and social distance, has been shown to alter an individual to favor consequentialist or value-based decisions. This indicates that

it is possible an abstract mindset could increase an individual's willingness to take action in order to uphold a value they see in their ideology.

### **Construal Level Theory**

Construal Level Theory (CLT)—originally proposed by Trope and Liberman (2010)—proposes that objects can be mentally represented in several ways depending on an individual's state of mind (Liberman & Trope, 2008; Trope & Liberman, 2010; Eyal & Liberman, 2012). CLT states that as psychological distance increases, thoughts become more abstract and distal, while as psychological distance decreases thoughts become more concrete or immediate (Trope & Liberman, 2010). Increasing psychological distance leads to “high-level” construals, which are overarching, representative, and give the general idea of a situation. Decreased psychological distance or “low-level” construals are concrete, direct, and give details about a situation. Trope and Liberman (2010, p. 8) explain this with trees in a forest: “It may seem intuitive that from a distance we see the forest, and as we get closer, we see the trees.” Similarly, someone in a high-level construal will use an abstract thought process, perceiving the big picture (the forest), whereas someone in a low-level construal will use a concrete thought process perceiving its details (the individual trees).

Construal Level Theory can help to explain judgments and decision-making by suggesting these processes are influenced by psychological distance (Eyal & Liberman, 2012). As psychological distance increases, it heightens the impact of broader, high-level elements of a decision, while decreasing focus on situational context (Eyal & Liberman, 2012). CLT suggests that the current experiences of the individual, memories, and predictions or hope for the future are interrelated and influence decision-making. The

mental constructions, or construals, of future oriented ideas are abstract and therefore called "psychologically distant objects" (Trope & Liberman, 2010, p. 1). Kivetz's and Tyler's (2007, p. 195) definition of CLT proposes that "people use more abstract representations, or high-level construals, to represent information about distant than near future events."

Liberman and Trope (1998) also investigated the relationship between psychological distance and desirability judgments. The researchers found that desirability is associated with high-level construal, while feasibility is associated with low-level construal when making a decision. They found that people considered desirability more than feasibility at a higher level of psychological distance (Liberman & Trope, 1998). Researchers later reasoned that, "These findings suggest that psychological distance increases the attractiveness of alternatives that are desirable but difficult to obtain, but decreases the attractiveness of alternatives that are less desirable but easy to obtain" (Eyal & Liberman, 2012, p. 4).

### **Construal Level Theory, Violence, and Moral Judgment**

No research has studied the intersection of violent behavior on behalf of ideologies, however previously discussed literature has mentioned the effect of construal on morals and values. The impact of construal on perception of violence has only been investigated in a few studies. A study performed by Williams and Bargh (2008) used a spatial distance priming method on participants and then measured their responses to a violent passage involving a car crash and a brother begging to be beaten to death. Participants in a low-level construal condition were primed with spatial nearness (creating a low psychological distance) and those in a high-level construal condition were

primed with spatial farness (creating a high psychological distance). Those primed with spatial nearness reported more of a negative emotional effect than those primed with farness (Williams and Bargh, 2008).

A functional MRI brain imaging study found that participants who followed prompts to disengage or engage from a victim—“intentionally increasing and decreasing their social distance to the victim” by thinking of the victim as a doll or conversely imagining the victim as themselves—found that these engagement tasks altered their emotional response (Leiberg, 2012, p. 2466). Those who disengaged had lesser emotional responses evidenced by weaker startle responses (Leiberg, 2012). This implies that those who perceived a greater psychological distance from the victim had less intense emotional responses than those who decreased distance by imagining themselves as the victim.

Matthews conducted a study investigating CLT's efficacy in explaining effects of violent video games (2015). Participants were exposed to low-level construal or high-level construal scenarios in a violent video game. The study findings suggested that participants who were exposed to low-level construal scenarios were more affected by violence in the video game than those in high-level construal scenarios. In addition, participants in the low-level construal scenario reported higher rates of hostility and aggression (Matthews, 2015).

These studies have considered how CLT affects perceptions and responses to violence. However, they did not investigate how CLT can affect someone's decision to inflict harm upon others, nor did they investigate how morality affects these types of decisions. A study by Aguilar, Brussino and Fernández-Dols (2013) considered both

morality and a willingness to sacrifice more lives for the sake of a larger goal. The researchers found that a more abstract mindset promoted by an increased psychological distance caused individuals to take a more consequentialist approach to moral situations. This approach sometimes led to decisions “such as the killing of innocent victims in the service of valued ends” (Aguilar, Brussino and Fernández-Dols, 2013, p. 449). This increased psychological distance was induced by a temporal psychological distance construal manipulation, putting participants in an abstract mindset. In one of the three experiments the moral dilemma participants faced occurred either 48 hours or two years into the future. The two-year condition (psychologically distant condition) led to participants being willing to sacrifice the life of one for many. Another experiment in the study led to similar results; after a priming task caused participants to think abstractly, they were more willing to sacrifice their loved ones for the sake of a greater justice.

A study by Viki (2013) investigated whether a process of dehumanization or humanization affected Christian participants' willingness to torture Muslims. This design was intended to study the effect of dehumanization on an individual's openness to torturing out-group members. The study found that those who were in a low humanity condition (primed to perceive the out-group as less human) were more willing to commit torture than those in a high humanity condition (Viki, 2013). If assuming that inducing mechanistic dehumanization, defined as “the denial of uniquely human attributes,” such as “refinement and moral sensibility” (Viki, 2013, p. 325), is a process that increases social distance from a participant, this is a strong indicator that increased social distance increases willingness to commit torture and perhaps other forms of violence towards an out-group. While this study does not investigate CLT specifically, it does imply that

increasing psychological distance from a group can alter perceptions of groups. When perceptions of that group are changed, it is possible that an individual's values apply to this group differently than they would to a psychologically near group.

Eyal, Liberman and Trope (2008) proposed that values are high-level construals. They supported this by conducting a study in which they presented individuals with morally corrupt scenarios—such as cleaning one's house with a national flag—in the near future or distant future. Individuals were more likely to describe the situation in the distant future with moral constructs (e.g. “desecrating a national symbol”), whereas individuals were more likely to describe the scenario in the near future with action concepts (e.g. “cutting a flag into rags”). The study also found that positive or negative values were judged more harshly or positively in the future, concluding that people rely more heavily on their moral principles when considering actions in the distant future (Eyal, Liberman & Trope, 2008).

This research implies consistent findings on the effect of particular construal mindsets on willingness to pursue goals or to uphold moral ideals. Aguilar's 2013 study found that high-level goals and utilitarian reasoning could outweigh concern for individual life when in an abstract mindset. In this study's case, even the life of a loved one was more likely to be disregarded when a participant was in a high-level construal mindset. Perhaps this type of high-level abstract reasoning is also used when violent actors choose to engage in ideologically based violence. We postulate that some people who choose to participate in ideologically based violence operated in abstract, goal-focused mindsets rather than focusing on the immediate, concrete consequences of violent action. Focusing on overarching objectives and values drives these actors to take



goal-serving actions harmful to themselves and others. CLT can be used to better understand the effect of abstract and concrete reasoning on willingness to engage in ideologically based violence. Our research question is: "How does high-level (abstract) and low-level (concrete) construal affect an individual's likelihood to engage in ideologically based violence?" We hypothesize that high-level construal will increase an individual's likelihood to engage in ideologically based violence, and low-level construal will decrease an individual's likelihood to engage in ideologically based violence.

### **Chapter 3: Methodology**

In order to answer the research question, our team developed a study with three main stages: pilot study, primary investigations, and statistical analysis. The first stage of the research, referred to as the pilot study, involved developing and refining a sample of vignettes that featured controversial political and social issues. The vignettes were used in the second stage, the primary investigations, where we tested our hypothesis. In the second stage, we applied a construal level manipulation—high construal, low construal, or no construal—to participants, then measured the participants' likelihood to engage in ideologically based violence. The second stage was separated into two parts, primary investigation 1 (PI-1) and primary investigation 2 (PI-2). PI-1 used a novel construal level manipulation method, whereas PI-2 aligned more closely to procedures established in the literature. Finally, in the third stage, the team used a multi-part statistical analysis to analyze the impact of construal level manipulations on likelihood to engage in ideologically based violence. The statistical analysis is described in Chapter 4.

#### **Construal Manipulation**

An individual's construal level can be shifted using construal level manipulations (Trope & Liberman, 2000). Through a series of questions these manipulations can alter one's frame of mind. Trope and Liberman (2000, p. 876) have illustrated that high-level construal manipulations are more likely to induce "goal-relevant" thoughts. Since goals generally involve some aspect of the future (a psychologically distant object), they are more likely to be created using abstract thought. On the contrary, events in the present are interpreted using pragmatic thought and require low-level construal.

High- or low-level construal can also be induced by “how” and “why” construal level manipulations. A study conducted by Freitas, Gollwitzer, and Trope (2004) explored abstract and concrete mindsets with regards to goal-relevant situations. They hypothesized that those with an abstract mindset, by being able to consider the purpose of an activity, would focus on the long-term consequences of their actions. In the first half of the experiment, researchers used a flow chart model construal manipulation to gauge whether an individual could construe in the abstract or concrete when a particular situation was presented. In this model, a goal-oriented activity was presented and participants were asked either “how” they would fulfill the goal-oriented activity or “why” they would do the activity. The study showed that those in the abstract mindset (those asked “why”) listed long-term consequences rather than immediate reactions to the activities (Freitas, Gollwitzer, & Trope, 2004).

### **Utility of Vignettes**

Vignettes have been used to investigate how psychological distance affects decision-making and violence. For example, one study investigated the effects of psychological distance on individuals' empathies (Overton, 2010). The study presented people with vignettes and a “probable social distance component,” asking participants to either imagine the scenarios taking place in one week or in year 2020 (Overton, 2010, p. 2). Vignettes were used in this study because they had been used before in past empathy-related research, and were easily manipulated for social distance by placing the scenarios further into the future.

Additionally, Tumasjan's, Spörrle's, and Welpel's (2013) entrepreneurship study used vignettes to put participants in specific entrepreneurship scenarios. This study

investigated the relationship between desirability, feasibility, and temporal distance. Participants read vignettes about entrepreneurial scenarios. The independent variable was the time the event occurred: in the near future (a month later) or in the distant future (a year later). It was found that with “high desirability/low feasibility participants indicated a higher likelihood of exploitation [of entrepreneurship opportunities] in the distant future . . . than in the near future . . . the opposite was true for the low desirability/high feasibility opportunity” (Tumasjan, Welppe, & Spörrle, 2013, p. 875).

A study by Henderson (2009) looked at how psychological distance affected an individual's perception of group members. Unlike the past two studies that focused on changing temporal distance, this research study manipulated physical distance. Participants were presented with either a physically distant or near vignette that described a particular group. The nearness and farness were manipulated by using either Chicago or Scotland as the location. Then participants were asked to respond with their opinions on either the physically distant or near group members. When group members were more physically distant, participants saw them as driven by more common goals.

### **Pilot Study**

The first task of this three-part study was to design and validate a series of vignettes. The pilot study's goal was to ensure the vignettes were effective tools for use in the primary investigations. For the primary investigations to be executed properly, the vignettes needed to be capable of inciting a willingness to engage in ideologically based violence. The vignettes were designed to present ideologically charged situations caused by a political and/or social issue that would make participants feel “cornered.” Vignette effectiveness was determined based on two factors: whether the situation caused

participants to report a willingness to engage in violence and whether the willingness for violence was due to ideological motivation rather than revenge. This second distinction is important because of the different psychological influences associated with revenge and ideological motivation.

**Goals of the pilot study.** Previous studies demonstrate that vignettes can be used to investigate the effect of different types of psychological distance and are useful when researching specific psychological phenomena such as empathy, group membership, and potentially ideological violence. However, none of the existing literature provided multiple uniform vignettes that presented ideologically charged situations based on current political and social issues that could lead to violence. Therefore, this study required a body of original and specialized vignettes. Twenty-four vignettes (Appendix A) were created with the goal of selecting five to ten that would elicit the highest reported willingness to engage in ideologically based violence. These vignettes presented diverse topics related to political and social ideologies to ensure participants were more likely to read a vignette that challenged their beliefs and values. There was no construal manipulation associated with the pilot study; this part of the study was intended to select the vignettes to use with the construal manipulations in the primary investigations.

Each of the vignettes was designed according to four critical criteria. First, each vignette needed to appear realistic. Situations could be volatile, but it was reasoned that an extraordinary story would prevent participants from fully immersing themselves in the situation. Second, the vignette's tone needed to be appropriate for the research question and not create a situation in which the participant is specifically led to commit an act of violence. The vignettes specified that all peaceful options had been exhausted, but it was

important that the situations challenged only the participant's ideologies and did not challenge other types of motivations for violence such as revenge or self-preservation. Third, the purpose of the vignettes—to incite willingness for violent action—should not have been obvious to the reader. Fourth, it was important that the vignettes did not lead participants to satisficing, which might have caused participants to not provide a genuine response. Satisficing is the failure of a subject to fully understand, interpret or report their judgment and instead provide an answer that seems reasonable or socially acceptable (Krosnick, 1991).

An additional aspect of the vignette creation was establishing the point of view. Each vignette presented a story in which the participant was engaged through the use of the word “you,” encouraging participant immersion. The social issue situations introduced in each story corresponded to political and social issues (Appendix B). The story introduced fictitious organizations that strongly aligned with ideological beliefs. The vignettes followed similar storytelling, taking into consideration pace, actors, story length, and impact of events. Their formats were standardized so participants would not be influenced by stylistic differences.

**Research design.** The research design for the pilot study consisted of three stages: participant recruitment, pre-screening, and participation in the study. The Amazon Mechanical Turk platform was used to recruit participants because it provided a large, diverse participant pool necessary to test all 24 vignettes in an expedient manner. Mechanical Turk is a crowd-sourcing web service for work that requires human intelligence. Its users have been found to be as representative of the U.S. population as traditional subject pools (Paolacci, Chandler, & Ipeirotis, 2010). This platform allows for

easy advertising, has a large body of users who participate in surveys, is able to link to surveys hosted by other services, and allows for easy compensation of study participants.

*The screening process.* To ensure the pilot study would have a similar participant sample to the primary investigations, participation requirements were designed to exclude individuals that were not similar to the participant pool at the University of Maryland, College Park (UMCP), which was used for the primary investigations. Therefore the pilot study participants were screened with three questions that mitigated the differences between the Amazon Mechanical Turk users and the participant pool at UMCP. The first demographic question asked the participant's age. If users were not between the ages of 18 to 24, they were excluded from participation. The second demographic question asked the participant's highest level of education. If users had not received a high school education they were excluded from participation. The third question asked about residency. If the participant lived outside of the U.S. they were excluded from participation to lower the potential for large cultural differences between the participants in the pilot study and the primary investigations.

The screening process included a standard online form for participant consent (Appendix C) before directing the participants to this prescreening survey (Appendix D). The consent process included materials informing the participant of the procedure, confidentiality, and compensation for completing the screening process (one cent USD). Amazon Mechanical Turk provided a link to the screening form on Qualtrics, an online survey platform. The screening form included the three demographic questions along with two irrelevant questions meant to keep participants from understanding the participation criteria and also to serve as attention checks. These two questions, "What

day of the week is it?” and “What is today’s date?” were the second and fourth questions respectively. If an individual provided consent to the study, answered the pre-screening survey with qualifying demographic factors, correctly specified the day of the week and date, and had previous experience with completing tasks on the Mechanical Turk platform, they were able to participate in the remainder of the pilot study.

*Vignette testing.* Qualified participants were then invited to complete the next stage in the pilot study. This was done immediately following the pre-screener by providing a link to a second Qualtrics survey. The survey began with an additional consent form (Appendix E). The participant then received a warning message (Appendix F) that reiterated the potential risks of the study since some topics could cause an emotional response. Following the warning, the participants were given a group of four randomly selected vignettes each followed by their corresponding questionnaires. Participants were first asked to read one vignette presented to them on the screen so they could concentrate on the vignette without distractions. The following screen displayed the vignette as well as the associated questionnaire for the participant to answer.

The questionnaire (Appendix G) was designed to test the criteria for vignette selection. It included six questions, each with a Likert scale with seven levels of response. The first two questions asked how impactful and relatable each vignette was. When responding to the first question a participant had seven numbers to choose from. If a participant selected one on the Likert scale it meant they felt the vignette was not impactful. If a participant selected seven on the Likert scale it meant they felt the vignette was highly impactful. In question three participants were asked their opinion on the political and/or social issue presented within the vignette. The Likert scale was changed



for the third question (Appendix G). Participants recorded their response using a seven-level Likert scale beginning with “Highly Against” and ending with “Highly Support.” In the fourth question the participants were asked “How likely are you to resort to violence?” The final two questions asked to what degree their “motivation for this violence” was due to wanting “to make a change” and to what degree their motivation was because they were “seek[ing] revenge” (Appendix G).

Following the vignettes and questionnaires, participants completed a demographic survey (Appendix H). This survey included standard demographic questions such as sex, age, and marital status, in addition to questions about the participants’ political affiliation and involvement in community and civic organizations. These questions were chosen because the vignettes dealt with political and social issues, and a participants’ involvement in these areas could influence their responses. Once the participants completed the demographic survey, they were debriefed (Appendix I). They were informed about the purpose of the study and how their participation aided the data collection process. They were thanked for their participation and given the option to leave comments for the researcher. Participants then received 3 USD for their participation in the complete study.

**Evaluating vignette choice.** Prior to administering the study, an evaluation plan was created that would allow objective analysis of the data to determine the five to ten best-qualified vignettes for the primary investigations. The vignettes had to fulfill certain requirements to qualify for the primary investigations as demonstrated in the Analysis Chart, Figure 3.1.

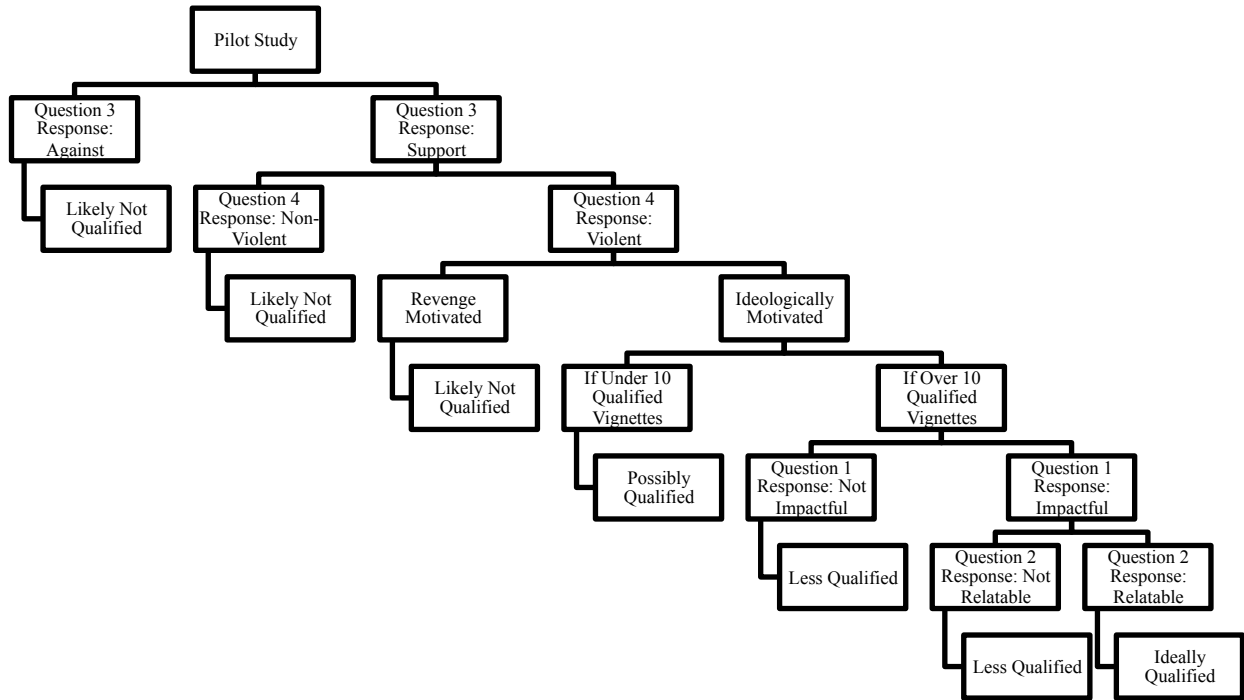


Figure 3.1. Analysis chart describing the process of evaluating the vignettes.

The first priority in analyzing the vignettes was to measure participants’ responses to determine if they supported the ideology presented. If a participant did not show support for the cause, it was expected that they would not partake in any ideologically based action concerning the cause. Therefore, that response was not to be taken into consideration. As such, all vignettes were evaluated based on the responses of participants who supported that vignette’s cause.

After filtering the responses by this condition, the next step was evaluating which vignettes motivated participants to violence. This was based on participants’ responses to the question asking whether they would engage in a violent act. The mean value of the responses for each vignette was used to filter out vignettes that were not likely to inspire violent responses. The final step was to ensure the violent response was ideologically

motivated and not motivated by revenge. If a vignette's mean ideological score was higher than or about the same as its mean revenge score, the vignette qualified for use in the primary investigations.

If this process produced more than ten qualified vignettes, the most appropriate vignettes would be manually selected for use in the primary investigations. If there were enough data points to further filter participant responses, vignettes would have been evaluated based on impact and relatability. Vignettes that did not have high mean values for the impact question would have been filtered out first, and then the vignettes that did not have high mean values for the relatability question also would have been eliminated. Next, the vignettes would have been selected to provide participants in the primary investigations with dichotomous political and/or social issue situations, such as pro-life and pro-choice ideologies. If there were fewer than five qualified vignettes, the vignettes would have been reexamined with the goal of having at least five usable vignettes. If this was not successful, new vignettes would need to be created according to new criteria.

**Results.** One hundred and thirty-nine qualified participants completed the entire study; a total of 1,112 individuals completed the pre-screener. Each participant filled out a questionnaire for four of the 24 vignettes, so each vignette received about 23 responses. Participants, on average, completed the survey in eight minutes. As per the analysis plan, we first sorted the results by filtering out responses from participants who did not support the topic that was featured in a vignette. This question was answered on a scale from one to seven, one being highly against and seven being highly support. We categorized those with scores above four as supporters and those with scores four or below as non-supporters. To analyze the data, we first filtered out supporters from non-supporters. We

then calculated the mean violence score among supporters for each vignette. We took the top 15 violence scores among supporters after which the mean scores dropped below 2.45. These top 15 vignettes are shown in Figure 3.2.

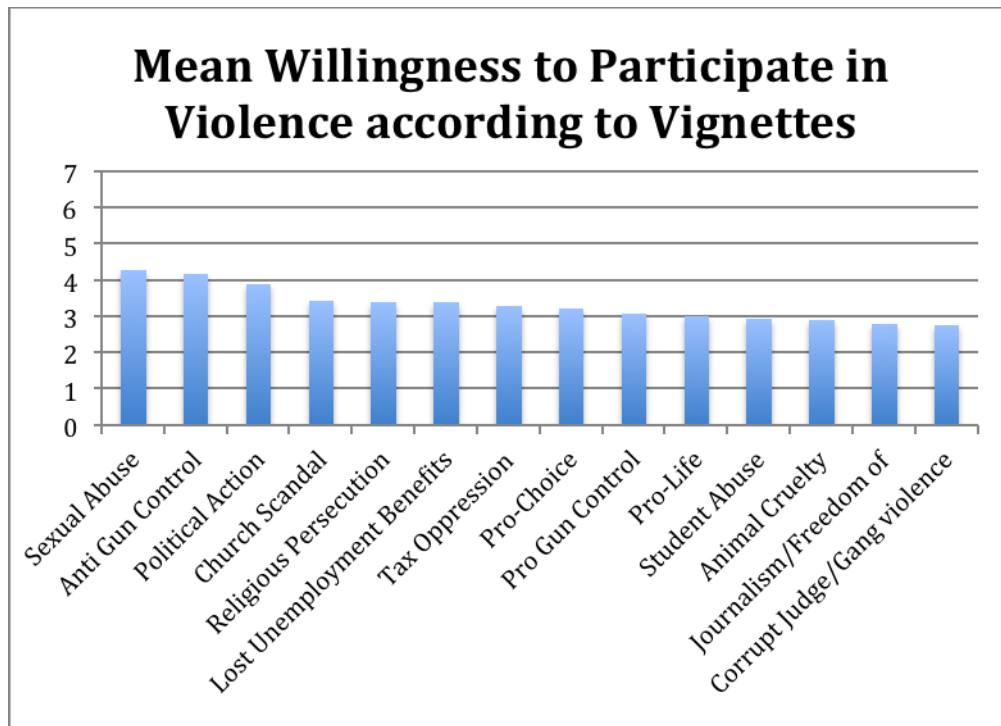


Figure 3.2. Mean willingness to participate in violence graph (Exact values in Appendix J).

Consistent with our evaluation plan, we filtered out vignettes that would cause revenge-based violence. For participants who indicated they would likely resort to violence—those with violence scores equal to or more than four—we calculated the mean revenge and change scores. The revenge score measured to what degree a participant's violence was motivated by their desire to seek revenge. The change score measured to what degree a participant's violence was motivated by their desire to make a change (an ideological motivation).

We could not complete the next step in the evaluation plan, as we did not gather enough data points to draw a reliable conclusion from the impact and relatability responses. We also filtered out the Journalism/Freedom of the Press vignette because of the low number of violence responses. There were only four people who said they would resort to violence for that vignette, while all of the other vignettes in the top ten had at least six people who indicated they would resort to violence.

In evaluating our data, we wanted to ensure the set of vignettes presented a range of topics reflecting different values so most primary investigation participants could be assigned a vignette that aligned strongly with their personal values. To do this, we looked at the range of topics presented in the vignettes with the top 15 violence scores. We analyzed where they fell on a spectrum from conservative to liberal ideologies and whether they presented dichotomous issues. We decided to balance the pro-life, pro-choice and gun control, anti-gun control vignettes first because they had adequate violence and change scores and supported different sides of the issues. All four of these vignettes had violence scores between 3 and 4.2 and change scores above 4.5. In addition, none of their revenge scores exceeded their change scores. Therefore, these vignettes showed high potential to motivate ideologically based violence.

We next chose the tax oppression and political action vignettes as those had mid-range violence scores. Furthermore, their change scores were above 4.5 and exceeded their revenge scores. These topics also represented a good balance of conservative and liberal political ideologies (Pew Research Center, 2014). In the tax oppression vignette, the Republican Party is responsible for the conflict described, while in the political action vignette, a liberal group is responsible. This created a balanced range of vignettes. Next,

we chose the lost unemployment benefits vignette because of its high change score. Then we chose the religious persecution vignette because it diversified our topics and had comparable scores to those vignettes already chosen.

Early on in the analysis we decided to only use one of the following vignettes because they were so similar: Church Scandal, Sexual Abuse, and Student Abuse. We removed Sexual Abuse from further consideration because the revenge score was higher than the change score (6.00 compared to 5.15, respectively). All three vignettes had revenge scores higher than change scores, but this one was the most drastic. Also, this vignette's violence score was much higher than those of others we had chosen. We decided to use the church scandal vignette because it had very high relatability scores and counterbalanced the religious oppression vignette. One described a church causing harm to a community, while the other describes a community causing harm to a church.

Finally, we were left with deciding between Animal Cruelty and Corrupt Judge/Gang Violence. Ultimately, we decided Animal Cruelty was most relevant to modern violent extremism research. Animal rights extremism is the cause of a comparatively large portion of domestic terrorism cases in the U.S. and shows signs of increasing (Chermak et al., 2013). This vignette also had scores comparable to those of other vignettes we had already chosen. The vignettes used for the primary investigations were as follows: Anti-Gun Control, Political Action, Church Scandal, Religious Persecution, Lost Unemployment Benefits, Tax Oppression, Pro-Choice, Pro-Gun Control, Pro-Life, and Animal Cruelty.

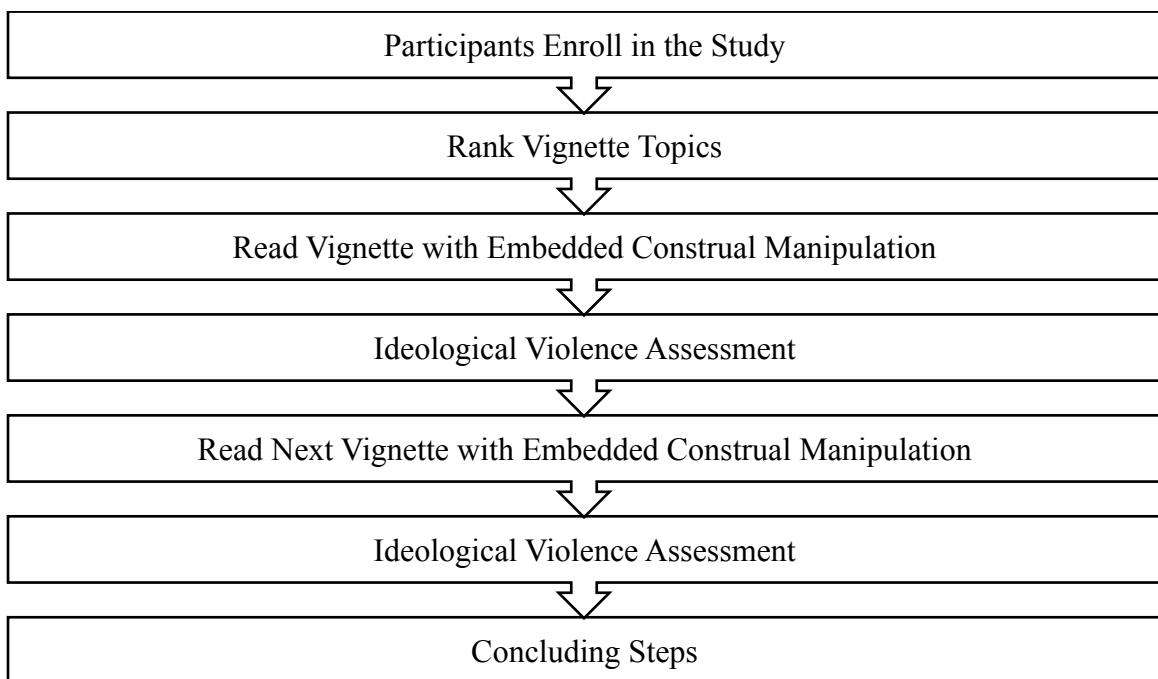
### **Primary Investigations**

The primary investigation phase of the research was designed to study the impact of construal level manipulations on an individual's likelihood to engage in ideologically based violence. To study this potential impact we used the ten vignettes that were validated in the pilot study. For each vignette we created three accompanying construal level manipulations: high construal, low construal, and no construal. The construal level manipulation the participant received was the independent variable. We created an ideological violence assessment (Appendix K) to measure any impact—the dependent variable—caused by the construal level manipulations. Data collected in the primary investigations was evaluated using a multi-part statistical analysis procedure. The statistical analysis is described in Chapter 4.

In PI-1 we used a novel construal level manipulation procedure. In PI-2 we used a construal level manipulation procedure informed by Trope and Liberman (1998).

**Goals of the primary investigations.** In the primary investigations we paired the vignettes with construal level manipulations to measure any impact on an individual's likelihood to engage in ideologically based violence. We used “why” questions for high-level construal manipulations and “how” questions for low-level construal manipulations. In PI-1 we used a novel construal level manipulation method (Appendix L) that incorporated the construal level manipulation directly into the vignette. After performing the statistical analysis on the data collected from PI-1 we decided to conduct an additional iteration of the primary investigation. In PI-2 we used a construal level manipulation method that followed procedures found in literature (Appendix M).

**Research design for PI-1.** The research design for the PI-1 consisted of five stages: participant recruitment, vignette selection, construal manipulation, ideological violence assessment, and concluding steps. Each participant completed the construal manipulation and ideological violence assessment for two different vignettes. The chart below, Figure 3.3, displays the sequence of events for each participant that completed the study.



*Figure 3.3.* Sequence chart illustrating participants' interaction in PI-1.

**Participants.** The SONA system was used to recruit participants in the study. SONA is an online platform used by the Psychology and Communications departments at UMCP to allow college students to earn credit by participating in academic research studies. In PI-1 we recruited 184 students; 183 students enrolled in the study.

The study was listed on the Psychology and Communications SONA systems with the title, "How would you react? Social responses to volatile situations" (Appendix



N). When a participant clicked on our study they were given a link to our survey on Qualtrics. The Qualtrics survey began with a page that featured the title of our survey and a large blue button at the bottom right portion of the webpage. This button was featured on every page of the survey and allowed the participant to continue on to the next part of the survey. After the participant clicked on the button they were given the consent form. The consent form included materials informing the participant of the procedure, confidentiality, contact information for the researchers and the UMCP IRB office, and compensation for completing the study (0.5 hours of academic research credit) (Appendix O).

*Ranking vignettes.* After completing the consent form, participants continued to the vignette topic ranking assessment. This assessment displayed ten topics, which represented the ten social and political issues presented in the vignettes. Participants ranked the topics according to their level of support for the issue. Items ranked with lower numbers were considered to be more important to the participant while items ranked with higher numbers were considered to be less important to the participant. This information was displayed in a table where the rows could be rearranged according to the participant's preferences (Appendix P).

The ranking was used to allow us to provide the participants with their first and fifth most supported vignette topic to read. We hypothesized that the participant must be passionate about the topic if they were to engage in ideologically based violence. Therefore, the most highly supported topic was necessary to allow the participant to elicit the greatest emotional response. The fifth most supported topic was used so that we could compare the results to the first topic. We did not compare the first most supported topic

to the tenth most supported topic due to the fact that we had contrasting topics, such as pro-choice and pro-life. Using the first and tenth most supported topics might have prevented us from being able to compare strongly supported topics and somewhat less strongly supported topics.

After ranking the ten issues, the participants saw a warning message indicating that some of the vignettes in the study might induce unintended psychological or emotional distress (Appendix Q). The message stated that in the event the participant feels any distress, they should exit the study. When a participant exited the study at this stage of the survey, any data collected up to that point was considered incomplete and was discarded from the final analysis. No participants exited the study after reading the warning message.

After viewing the warning message, the participant continued to the next page of the survey that included a question gauging their general attitude towards the vignette topic. This question read, "In general, what is your opinion about [customized phrase for individual vignette topic?]" The participants then answered the question via a visual analog scale where 0 represented "against" and 100 represented "support" the topic (Appendix R). This question was asked before and after the participants read the vignette to determine if the participant's support for the position had changed.

***Construal manipulation.*** After completing the vignette topic ranking assessment, the participant was provided with their first or fifth ranked vignette. Qualtrics randomly assigned the order in which the first and fifth ranked vignette appeared. Also, Qualtrics randomly assigned the participant to one of three construal conditions: high construal, low construal, or no construal. Of the 183 participants, 61 received a high construal

manipulation, 62 received a low construal manipulation, and 60 received no construal manipulation. The vignettes were presented in short sections so that the readers could completely focus on the situation (Appendix L).

*High-level construal.* The participants in the high construal condition were given vignettes to read that had embedded construal manipulations. First, the vignette fragment was displayed. On the next page the same vignette fragment was displayed along with a “Why” question and text-based response field. After responding to the “Why” question the next page displayed the next fragment from the same vignette. This process was repeated until all five vignette fragments had been displayed and the participant had responded to all five of the corresponding “Why” questions associated with the vignette fragment.

The first “Why” question used with the first vignette fragment had a less psychologically distant actor (you), whereas the final question used with the last vignette fragment had a more psychologically distant actor (society). For example, in one of the vignettes the first question was, “Why should you clean up the oil spill?” (Appendix L). As the questions continued, the actor used in each question became more distant. For the same vignette, the last question was, “Why should society clean up the oil spill?” The progression of actors in the high construal manipulation questions were as follows: you, an individual, a family, the government, and society. We hypothesized that using a sequence of increasingly more distant actors would evoke a more abstract mindset in the participant. This manipulation was designed to raise the construal level of the participant. Once the participant read all of the vignette fragments and responded to all of the “Why” questions, they proceeded to the ideological violence assessment.

*Low-level construal.* The participants in the low construal condition were given vignettes to read that also had embedded construal manipulations. First, the vignette fragment was displayed. On the next page the same vignette fragment was displayed along with a “How” question and text-based response field. After responding to the “How” question the next page displayed the next fragment from the same vignette. This process was repeated until all five vignette fragments had been displayed and the participant had responded to all five of the corresponding “How” questions associated with the vignette fragment.

The first “How” question used with the first vignette fragment had a more psychologically distant actor (society), whereas the final question used with the last vignette fragment had a less psychologically distant actor (you). For example, in one of the vignettes the first question was, “How should society clean up the oil spill?” (Appendix L). As the questions continued, the actor used in each question became less psychologically distant. For the same vignette, the last question was “How should you clean up the oil spill?” The progression of actors in the low construal manipulation questions were as follows: society, the government, a family, an individual, and you. We hypothesized that using a sequence of decreasingly distant actors would evoke a more concrete mindset in the participant. This manipulation was designed to lower the construal level of the participant. Once the participant read all of the vignette fragments and responded to all of the “How” questions they proceeded to the ideological violence assessment.

*No construal.* Participants assigned to the no construal condition were not asked to respond to any questions following each vignette fragment. This condition was designed to have no impact on participants' pre-existing construal levels.

***Ideological violence assessment.*** The ideological violence assessment contained questions designed to measure the participant's willingness to engage in ideologically based violence after being exposed to one of the three construal conditions. A total of nineteen questions were displayed in groupings comprised of one, two, three, or four questions. Small question groups were used in order to ensure that the participant was attentive to what was being asked. The vignette used in the preceding construal manipulation procedure was displayed at the top of each grouping of questions to allow participants to reflect on the vignette material. The chart below, Figure 3.4, displays the groupings of questions used in the ideological violence assessment.

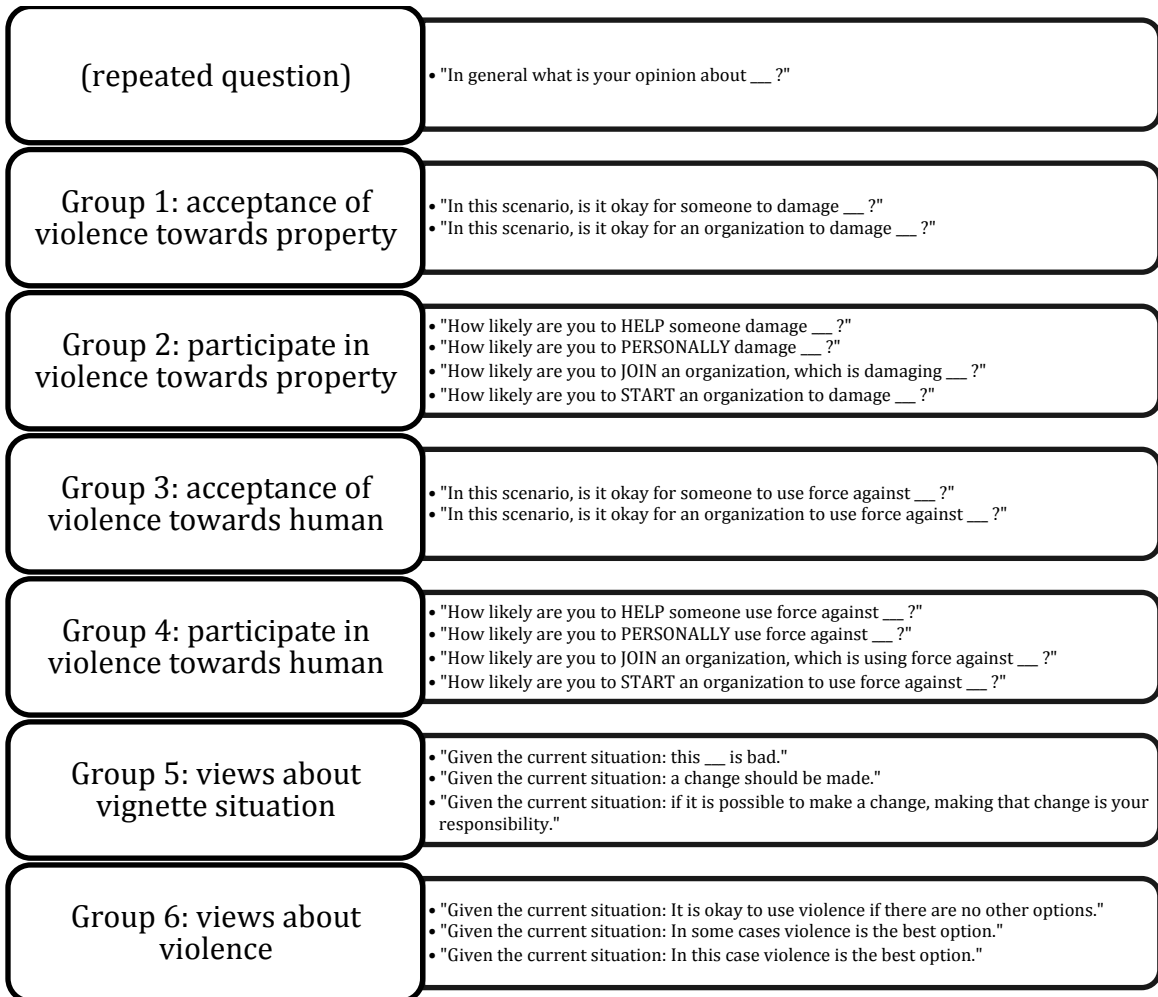


Figure 3.4. Question sequence chart displaying the groups for the questions in the ideological violence assessment.

The first question was the same as the one presented before the vignette and asked the participant about their support for the vignette topic. The purpose of repeating this question was to determine whether the participant had changed their stance on the vignette topic.

The remaining 18 questions were based on the vignette and asked about the participant's willingness to engage in various forms of violence and general attitude towards violence. The questions were placed into six different groups: (1) acceptance of violence towards property as a reasonable action by an individual or other group, (2)

likelihood to participate in violence against property, (3) acceptance of violence towards antagonist, (4) likelihood to participate in violence against antagonist, (5) participants' attitudes towards the vignette situation, (6) and participants' attitudes towards violence in general (Appendix K). The questions were grouped according to the commonality of the type of action that was being considered. Responses to each question were recorded using a visual-analog scale ranging from zero to one hundred. This scale was used to allow participants to have a high degree of flexibility in choosing a number that closely reflected their feelings toward the topic. The flexibility allowed participants to place their response on a monotonic spectrum, as opposed to a typical Likert scale where the selections ranges from against to support with neutral in the center.

The first grouping was comprised of two questions, both of which included a violent response towards property owned by the antagonist in the vignette. Participants were asked if the violent response was "okay" for a person or a group to perform. The violent action was directed towards the antagonist's property; another individual or group performed the violent action. In these questions, the violent response indirectly affected the antagonist and was not performed by the participant.

The second grouping was comprised of four questions and asked the participant about their likelihood to engage in violent acts. These violent acts consisted of damage to property affiliated with the antagonist. The four questions had escalating degrees to which the participant was involved in the violent response: help someone damage property, damage property their self (the participant), join a group to damage property, and start a group to damage property. The violent action was directed towards the

antagonist's property. In these questions the violent response indirectly affected the antagonist and was performed by the participant.

The third grouping was comprised of two questions, both of which included a violent response towards the antagonist in the vignette. Participants were asked if the violent response was "okay" for a person or a group to perform. The violent action was directed towards the antagonist; another individual or group performed the violent action. In these questions the violent response directly affected the antagonist but was not performed by the participant.

The fourth grouping was comprised of four questions and asked the participant about their likelihood to engage in violent acts. These violent acts consisted of using force against the antagonist. The four questions had escalating degrees to which the participant was involved in the violent response: help someone use force against the antagonist, use force against the antagonist their self (the participant), join a group to use force against the antagonist, and start a group to use force against the antagonist. The violent action was directed towards the antagonist. In these questions the violent response directly affected the antagonist and was performed by the participant.

The fifth grouping comprised of three questions and asked the participant about the vignette. The first question asked the participant if the organization in question was "bad." The second question asked whether a change should be made. These questions were asked to gauge the participant's attitude towards the organization. The third question asked the participant if they had a responsibility to create change. This question served to measure the extent to which the participant was motivated to take action.



The sixth grouping comprised of three questions and asked the participants about using violence as a response to the problem in the vignette. The first question asked if violence is acceptable if there are no other options. The second question asked the participant if violence is sometimes the best option. The last question asked if violence is the best option in the scenario.

Upon finishing the ideological violence assessment, the participant then followed the same procedures for the second vignette. The participant received the same experimental condition and completed the ideological violence assessment for the second vignette. When the participants performed the procedure for both vignettes they continued to the concluding portion of our study.

***Concluding steps.*** The conclusion stage of the study consisted of two parts: the demographic questionnaire and debriefing. In the demographic questionnaire, participants were asked to declare their gender, age, marital status, political orientation, and leadership roles held within their community and civic associations (Appendix H).

Next, the participant viewed the debriefing message. This message listed the purpose of the study, confidentiality protections, data removal procedures, the process for obtaining a final report of the study, pertinent contact information, further reading material, and clinical resources for emotional and/or psychological distress (Appendix S). Participants were asked to retain the debrief form for future reference.

Finally, participants were thanked for their participation in the study and were informed that academic research credit would be granted on a rolling basis by the researchers. After this conclusion message, the individual's participation in the study was considered complete. All participants who completed the survey were given 0.5 hours of

academic research credit. Credit was also awarded to students who partially completed the study.

**Research design for PI-2.** The research design for the PI-2 consisted of five stages: participant recruitment, vignette selection, construal manipulation, ideological violence assessment, and concluding steps. Each participant completed the construal manipulation and ideological violence assessment for two different vignettes. The chart below, Figure 3.5, displays the sequence of events for each participant that completed the study.

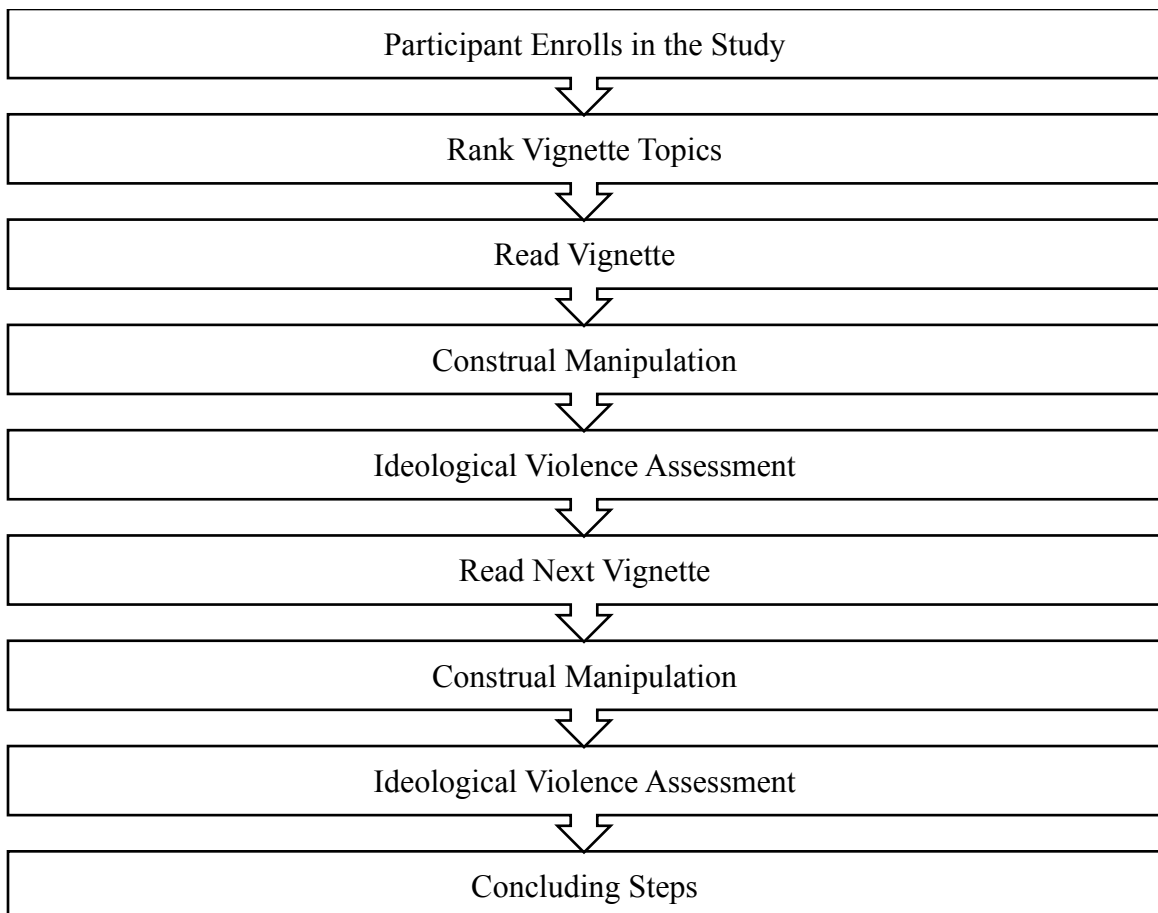


Figure 3.5. Sequence chart illustrating participants' interaction in PI-2.

**Participants.** This procedure was consistent with the procedure used in PI-1. In PI-2 we recruited 227 students; 200 students enrolled in the study. No student who participated in PI-1 was allowed to participate in PI-2.

**Ranking vignettes.** This procedure was consistent with the procedure used in PI-1.

**Construal manipulation.** Next, the participant was provided with their first or fifth ranked vignette to read in its entirety. Qualtrics randomly assigned the order in which the first and fifth ranked vignette appeared. The vignettes were presented in short sections so that the readers could completely focus on the situation (Appendix T). After reading a single vignette, the participant was randomly assigned by Qualtrics to one of three construal conditions: high construal, low construal, or no construal. Of the 200 participants, 69 received a high construal manipulation, 64 received a low construal manipulation, and 67 received no construal manipulation.

**High-level construal.** In the high-level construal condition a prompt instructed the participant to read a phrase about the vignette topic. An example of a phrase that was used is "Protect your right to firearm ownership." In accordance with procedures found in the literature, the statement was located at the bottom of the user's screen (Appendix M). The participant was then asked to respond to the question "Why?" regarding the statement. Upon answering this question, another box was located above the participant's response asking "Why?" again. An alternating pattern of "Why?" and empty text-based response fields were displayed three more times for a total of four "Why?" questions and four response fields. The goal of this design was for the participants to provide

increasingly abstract responses to the question “Why?” This manipulation was designed to raise the construal level of the participant.

*Low-level construal.* In the low-level construal condition a prompt instructed the participant to read a phrase about the vignette topic. An example of a phrase that was used is “Protect your right to firearm ownership.” In accordance with procedures found in the literature, the statement was located at the top of the user’s screen (Appendix M). The participant was then asked to respond to the question “How?” regarding the statement. Upon answering this question, another box was located below the participant’s responses asking “How?” again. An alternating pattern of “How?” and empty text-based response fields were displayed three more times for a total of four “How?” questions and four response fields. The goal of this design was for the participants to provide increasingly more concrete responses to the question “How?” This manipulation was designed to lower the construal level of the participant.

*No construal.* The participants in the no construal condition followed the same procedure used in PI-1. After reading each of the vignette fragments the participants in this condition proceeded directly to the ideological violence assessment.

*Ideological violence assessment.* This procedure was consistent with the procedure used in PI-1.

*Concluding steps.* This procedure was consistent with the procedure used in PI-1.

**Descriptive Statistics for PI-1 and PI-2.** A table of descriptive statistics for PI-1 and PI-2 are shown below in table 3.1.

Table 3.1

*Descriptive Statistics for PI-1 and PI-2*

	<u>PI-1 (n = 183)</u>			<u>PI-2 (n = 200)</u>		
<u>Gender</u>						
Males	57			98		
Females	124			101		
Other	1			0		
Prefer not to answer	1			1		
<u>Political Ideology</u>						
Very Conservative	2			3		
Conservative	31			32		
Moderate	73			88		
Liberal	67			62		
Very Liberal	10			15		
<u>Vignette Topic</u>						
	<u>#1 Rank</u>	<u>#5 Rank</u>	<u>Total</u>	<u>#1 Rank</u>	<u>#5 Rank</u>	<u>Total</u>
Right to own firearms	12	11	23	18	10	28
Protecting American democracy from socialist policies	16	13	29	16	20	36
Opposing corruption in religious institutions	3	33	36	6	33	39
Freedom of religion	41	18	59	47	21	68
Access to welfare	18	27	45	16	29	45
Higher taxes for upper class	10	23	33	14	26	40
The pro-choice movement	39	16	55	42	16	58
Strict gun control laws	13	21	34	13	18	31
The pro-life movement	7	2	9	9	9	18
Ethical treatment of animals	24	19	43	19	18	37

## Chapter 4: Results

Prior to hypothesis testing, we tested the validity of the construal manipulations, the normality assumption, and the grouping of measured variables into distinct factors.

### Check on Construal Manipulation Compliance

To check the effectiveness of the construal manipulations implemented in the primary investigations, four blind raters scored participants' construal manipulation responses. Two raters scored participant responses from PI-1, and two raters scored participant responses from PI-2. Raters followed a scoring scale based on the abstractness or concreteness of the responses (Hampson et al., 1986; Liberman & Trope, 1998; Fujita et al., 2006). Raters analyzed construal manipulation sets—responses to the set of “How?” or “Why?” questions in each construal manipulation—to determine their relation to an action statement that was given to the participant at the beginning of their construal manipulation (Appendix V).

If a rater believed a participant's response fit the criterion, *Y* by *X*, where *X* was the participant's construal response to the action statement *Y*, the rater was asked to mark a score of -1. This indicates the response was subordinate to the prompt (e.g. *Eating less (Y)* by *Buying less food (X)*). If the rater believed a participant's response fit the criterion *X* by *Y*, they were asked to mark a score of +1. This indicates the response was superordinate to the prompt (e.g. *Preventing obesity (X)* by *Eating less (Y)*). If a response fit neither *X* by *Y* nor *Y* by *X*, the raters were asked to score the response with a 0. Once an individual response was scored, raters moved on to the next response in the construal

manipulation set. Once the raters had scored all of the responses in a set, they moved on to the next construal manipulation set.

The scores for individual responses in a construal manipulation set were summed to obtain a construal manipulation compliance score for each construal manipulation. The construal manipulation compliance score indicated the participant's level of construal. The construal manipulation compliance score ranged from -5 to 5 for PI-1 (5 responses analyzed) and -4 to 4 for PI-2 (4 responses analyzed). Construal manipulation compliance scores less than 0 indicated a low level of construal (How?), while construal manipulation compliance scores greater than 0 indicated a high level of construal (Why?).

**PI-1 compliance scoring.** The two raters assigned to PI-1 analyzed participant construal responses in accordance with the aforementioned method. To determine reliability among the raters, the construal manipulation compliance score for each construal manipulation was analyzed for correlation. The scoring was significantly correlated,  $r(246) = .874$ ,  $p < .0001$ , establishing inter-rater reliability. The raters' total scores were then averaged to obtain an aggregate construal manipulation compliance score for each construal manipulation.

This aggregate construal manipulation compliance score was used to analyze the effectiveness of the construal manipulation. We anticipated high-level construal manipulations would result in positive construal manipulation compliance scores, while low-level construal manipulations would result in negative construal manipulation compliance scores. The aggregate construal manipulation compliance scores for the 122 high-level construal manipulations (61 participants receiving two vignettes) were

averaged to determine the effect of this condition on the whole of the participant pool. This yielded an average aggregate construal manipulation compliance score of 3.93. In a similar fashion, the aggregate construal manipulation compliance scores for the 124 low-level construal manipulations (62 participants receiving 2 vignettes) were averaged, and yielded an average aggregate construal manipulation compliance score of -4.24. These average aggregate construal manipulation compliance scores were analyzed using a two-tailed t-test. The means for the high- ( $M=3.93$ ,  $SD=1.73$ ) and low-level ( $M=-4.24$ ,  $SD=1.50$ ) conditions proved to be significantly different,  $t(244) = 39.33$ ,  $p < .0001$ , indicating the PI-1 construal manipulations successfully shifted participants' construal levels.

**PI-2 compliance scoring.** The two raters assigned to PI-2 analyzed participant construal responses in accordance with the aforementioned method. The construal manipulation compliance scores were then analyzed for correlation. The scoring was significantly correlated,  $r(266) = .921$ ,  $p < .0001$ , establishing inter-rater reliability. The raters' scores were averaged to obtain an aggregate construal manipulation compliance score for each construal manipulation.

We anticipated that the high-level construal manipulations would result in positive construal manipulation compliance scores, while the low-level construal manipulations would result in negative construal manipulation compliance scores. The aggregate construal manipulation compliance scores for the 138 high-level construal manipulations (69 participants receiving two vignettes) were averaged to determine the effect of this condition on the whole of the participants. This yielded an average



aggregate construal manipulation compliance score of 3.38. In a similar fashion, the aggregate construal manipulation compliance scores for the 128 low-level construal manipulations (64 participants receiving two vignettes) were averaged, and yielded an average aggregate construal manipulation compliance score of -3.43. These average aggregate construal manipulation compliance scores were analyzed using a two-tailed t-test ( $t = 51.20$ ). The means for the high- ( $M=3.38$ ,  $SD=1.04$ ) and low-level ( $M=-3.43$ ,  $SD=1.12$ ) conditions proved to be significantly different,  $t(264)=51.20$ ,  $p < .0001$ , indicating the PI-2 construal manipulations successfully shifted participants' construal level.

*PI-2 passion level and construal relation.* For both the high- and low-level conditions in PI-2, the participant's number one ranked vignette yielded a statistically significant higher aggregate construal manipulation compliance score than the number five vignettes. The difference between the aggregate construal compliance score for the 69 number one, high-level manipulations ( $M=3.57$ ,  $SD=.78$ ) and 69 number five, high-level manipulations ( $M=3.20$ ,  $SD=1.23$ ) was significant,  $t(136)=2.102$ ,  $p < .05$ . The difference between the aggregate construal compliance score for the 64 number one, low-level manipulations ( $M=-3.63$ ,  $SD=.80$ ) and 64 number five, low-level manipulations ( $M=-3.23$ ,  $SD=1.34$ ) was significant,  $t(122)=-1.989$ ,  $p < .05$ . However, we did not see this result in PI-1; there was no significant difference between the mean aggregate construal manipulation compliance scores for varying passion levels.

### **Factor Analysis**

After we confirmed that the construal manipulations successfully shifted participants' construal level and prior to any analysis of data, three assessed items from the ideological violence assessment were removed:

- “Given the current situation, this is bad”
- “Given the current situation, a change should be made”
- “Given the current situation, if it is possible to make a change, making that change is your responsibility”

These questions were designed to check if participants were adhering to the guidelines of the assessment and did not contribute to the assessment of ideological violence.

In order to determine any underlying relationships between the questions presented in the ideological violence assessment, an exploratory factor analysis (EFA) was conducted using the IBM SPSS software package. An EFA is used to determine any underlying relationships between measured items (Cudeck, 2000). After any underlying relationships were uncovered, these measured items were said to load together. When measured items load together, they possess a sufficient underlying relationship to each other and are considered a single dependent variable. The term “load” will be used further in the paper to refer to the EFA, unless otherwise stated. A sufficient underlying relationship is given by a rescaled factor loading greater than .3 (Cudeck, 2000).

The direct oblimin rotation, with a delta value of 0 (the default value), was used for the EFA. This rotation determines underlying factors for the questions and co-

variances between the questions in the ideological violence assessment. Accounting for co-variances is necessary because of similarities that certain questions share.

**Naming of measured items.** Before describing how the names of each factor were decided, it is first important to explain the abbreviations that were used. The full-length questions that were used in the ideological violence assessment are presented in Appendix K. The questions were made specifically for each individual vignette, meaning that the wording was not identical across all questions. The questions were given abbreviations during the EFA so that all responses from the vignettes could be grouped together. Using the animal cruelty vignette as an example, a question that was asked was “Is it okay for someone to vandalize the homes of gang members responsible for the dogfights?” This question measured the participant’s opinion on how acceptable it was for someone, other than the participant, to damage property. This specific question was structurally similar throughout all the vignettes so it was abbreviated as “ok.someone.damage.” This abbreviation allowed the questions from different vignettes to be grouped into one measured item. Going forward, this structure will be same for the other abbreviations that are presented.

**Naming of factors.** The EFA determined that there were three factors, which were named “Destruction of Property,” “Use of Force,” and “Acceptance of Violence.” The factors for the primary investigations were named based on the commonalities of the measured items that were grouped together. The loadings are presented in Table 4.1 and Table 4.2, with the factor loadings bolded for each new variable. The naming was done in the same fashion for both primary investigations. The first factor was named “Destruction

of Property.” The name was given because the group of measured items that loaded under the same factor quantified the participants’ likelihood to damage property. The abbreviations of the questions that loaded into this factor were “ok.someone.damage,” “ok.organization.damage,” “help.someone.damage,” “personally.damage,” “join.organization.damage,” and “start.organization.damage.” Each measured item in this factor loading had a rescaled loading value greater than .3, thereby showing sufficient underlying relationships to be grouped into one dependent variable, Destruction of Property.

The second factor was named “Acceptance of Violence.” The name was given to a group of measured items that quantified the participants’ acceptance of violence. The abbreviation “gcs” stands for “given current situation.” The questions that loaded into this factor were “gcs.ok.violence,” “gcs.some.cases.violence.best.option,” and “gcs.violence.best.option.”

The third and final factor was named “Use of Force.” The name was given because the group of measured items that loaded under the same factor quantified the participants’ likelihood to use force. The questions that loaded into this factor were “ok.someone.force,” “ok.organization.force,” “help.someone.force,” “personally.use.force,” “join.organization.force,” and “start.organization.force.” These factors became the dependent variables that were used in testing the hypothesis. For both primary investigations these three distinct factors were determined.

Table 4.1.

*PI-1 EFA Results*

<b>Measured Items</b>	<b>Factors</b>		
	Destruction of Property	Acceptance of Violence	Using Force
ok.someone.damaged	<b>0.947</b>	0.011	-0.036
ok.organization.damaged	<b>0.914</b>	0.040	0.021
help.someone.damage	<b>0.875</b>	-0.108	-0.066
personally.damage	<b>0.857</b>	-0.037	0.018
join.organization	<b>0.844</b>	-0.034	0.065
start.organization	<b>0.673</b>	-0.027	0.181
ok.someone.force	-0.089	-0.141	<b>0.884</b>
ok.organization.force	-0.105	-0.060	<b>0.948</b>
help.someone.force	0.028	-0.026	<b>0.875</b>
personally.use.force	0.137	0.019	<b>0.805</b>
join.organization.force	0.026	0.026	<b>0.930</b>
start.organization.force	0.184	0.086	<b>0.705</b>
gcs.ok.violence	0.073	<b>-0.901</b>	0.025
gcs.some.cases.violence.best.optio n	-0.024	<b>-0.989</b>	-0.017
gcs.violence.best.option	0.056	<b>-0.836</b>	0.055

Table 4.2.

*PI-2 EFA Results*

<b>Measured Items</b>	<b>Factors</b>		
	Destruction of Property	Acceptance of Violence	Using Force
ok.someone.damaged	<b>0.933</b>	-0.187	-0.162
ok.organization.damaged	<b>0.924</b>	-0.182	-0.164
help.someone.damage	<b>0.825</b>	-0.018	0.035
personally.damage	<b>0.771</b>	0.072	0.158
join.organization	<b>0.772</b>	0.050	0.172
start.organization	<b>0.657</b>	0.192	0.305
ok.someone.force	0.145	-0.279	<b>0.622</b>
ok.organization.force	0.101	-0.270	<b>0.641</b>
help.someone.force	-0.065	-0.106	<b>0.891</b>
personally.use.force	0.008	-0.038	<b>0.869</b>
join.organization.force	0.018	-0.071	<b>0.853</b>
start.organization.force	0.098	0.078	<b>0.774</b>
gcs.ok.violence	0.057	<b>-0.840</b>	0.137
gcs.some.cases.violence.best.opti on	0.016	<b>-0.903</b>	0.057
gcs.violence.best.option	0.128	<b>-0.716</b>	0.187

**Confirmatory factor analysis.** Following the EFA, a Confirmatory Factor Analysis (CFA) was used to confirm the results from the EFA. The CFA was conducted using the lavaan package in the R-Studio software program. The CFA was used in conjunction with the EFA in order to verify the structure of the factor model established by the EFA. The factor loadings from the EFA were the same factor loadings denoted in the CFA model. The co-variances, unlike in the EFA model, had to be included in the CFA, Figure 4.1.

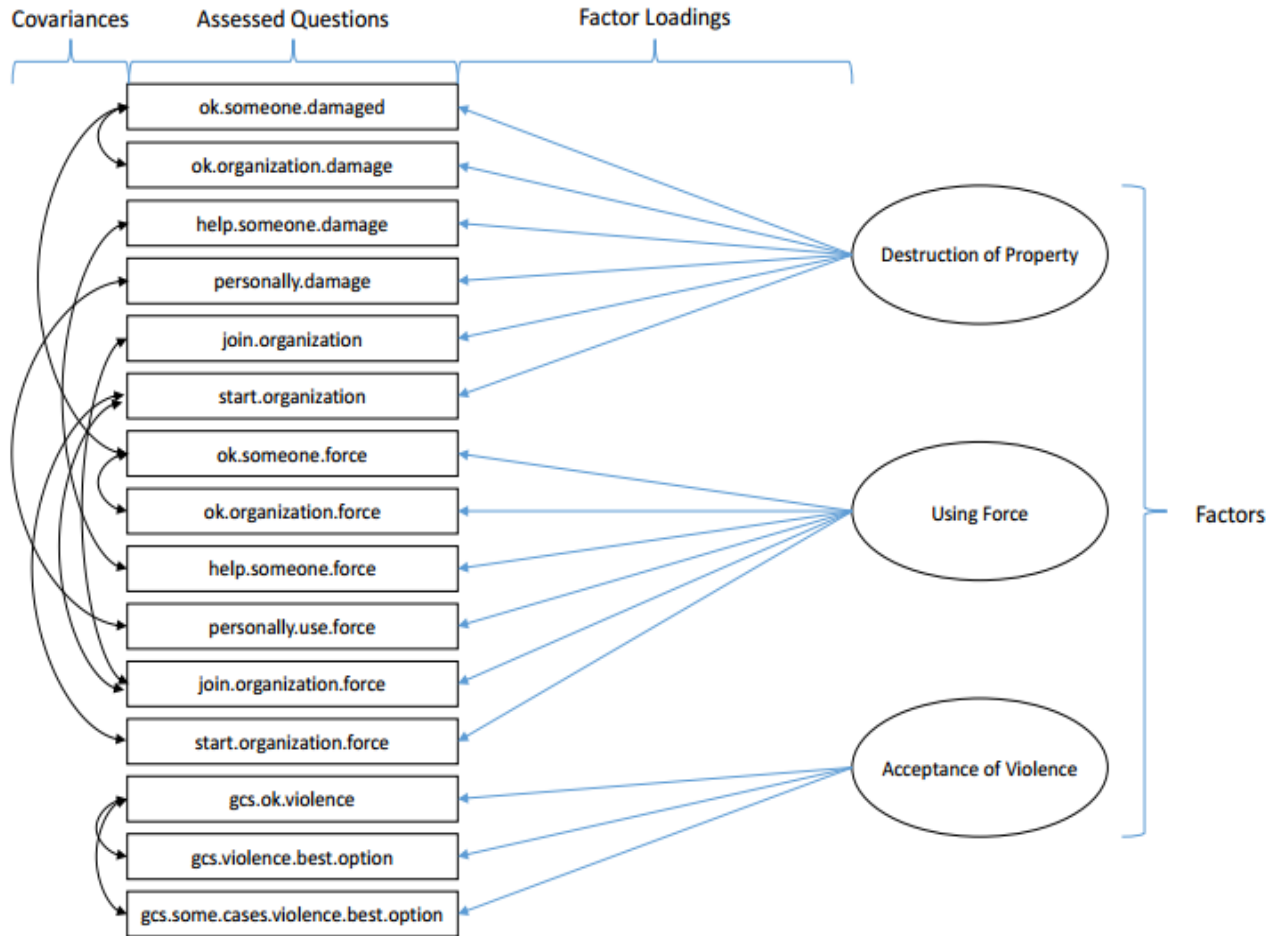


Figure 4.1. Factor diagram of CFA model.

Figure 4.1 shows a pictorial representation of the factor model used in the data analysis. The three factors on the right are shown as underlying constructs influencing participant answers to the assessed questions. The black connecting arrows indicate covariances between two variables. Because some variables had varying degrees of violence, but were similar in terms of what they were measuring (e.g. “Is it okay for someone to use force?” and “Is it okay for someone to damage?”), they were indicated as co-variances within the CFA model. Other structurally similar questions, specifically between the “someone” and “organization” variables (e.g. “Is it okay for someone to use

force?” and “Is it okay for an organization to use force?”) were also co-variances in the model. These co-variances were included because these variables assess similar aspects of violence in this particular study. Additionally, the two variables, “gcs.some.cases.violence.best.option” and “gcs.violence.best.option,” are co-variances with “gcs.violence.ok.” If a participant believes violence is the best option, or the best option in some cases, they must be okay with violence.

In order to verify the factor model, the CFA must produce a Comparative Fit Index (CFI) and Tucker-Lewis Index (TLI) above .9 (a score of 1 indicates a perfect fit) (Worthington & Whittaker, 2006). These fit indices show how well the analyzed model's chi-squared compares to the baseline model's within the CFA analysis. The difference between the CFI and TLI is that each fit index utilizes a different baseline model. In our CFA, the values of the CFI and TLI were .965 and .952 for PI-1 and .936 and .912 for PI-2, respectively (Appendix W). These fit indices confirm that the factor model is valid.

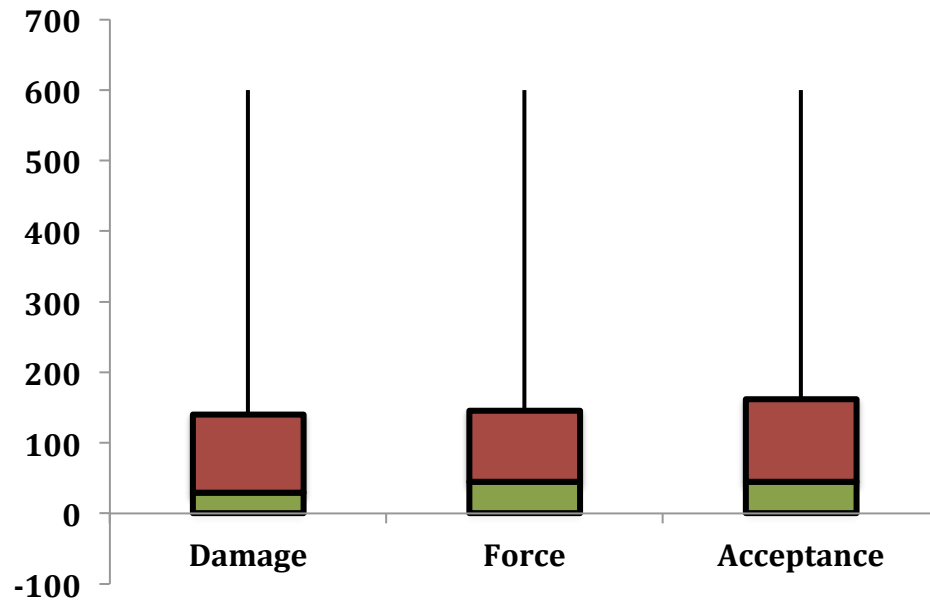
### **Normality**

The EFA and CFA established the underlying factors contributing to the measured variables in the set of data, preparing the data for analysis and hypothesis testing. However, whether the data followed a normal distribution had to be examined. The assumption of normality in a set of data is important for determining the appropriate statistical test for data analysis. Initially, to look at a distribution of the data, box plots were created to come up with a preliminary hypothesis that explains the normality of the data. From the box plots, there were clear outliers.



Due to the presence of outliers, a Shapiro-Wilk (S-W) Test of Normality was used. The S-W test was used instead of the more commonly seen Kolmogorov-Smirnov (K-S) test with Lilliefors Significance Corrections because the S-W test contains more power than the K-S test and is less sensitive to outliers (Ghasemi & Zahediasl, 2012). Here, power refers to a test's ability to properly reject the null hypothesis when it is not correct.

An S-W test was run for the PI-1 data. The test was run separately for each of the dependent variables—Destruction of Property, Use of Force, and Acceptance of Violence. The null hypothesis in the S-W test was that the distribution is normal. If the p-value was less than .05, the null hypothesis was rejected and the distribution was not approximately normal. For Destruction of Property, a review of the S-W test for normality (SW = .747, df = 366, p = .000), skewness (1.392), and Kurtosis (1.746) statistics suggested that normality was not a reasonable assumption. For Use of Force, a review of the S-W test for normality (SW = .769, df = 366, p = .000), skewness (1.392), and Kurtosis (1.116) statistics suggested that normality was not a reasonable assumption. Lastly for Acceptance of Violence, a review of the S-W test for normality (SW = .797, df = 366, p = .000), skewness (1.159), and Kurtosis (0.307) statistics suggested again that normality was not a reasonable assumption. As seen in Figure 4.2, the boxplot suggested a positively skewed distribution for all three factors.

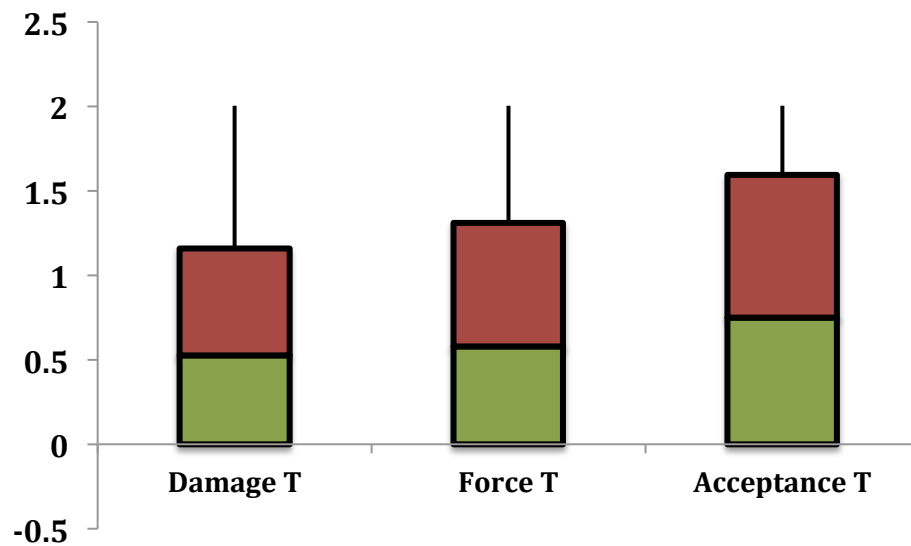


*Figure 4.2.* Distribution of untransformed PI-1 data.

The skewness for each factor ranges from 1.159 to 1.392. Skewness measures the degree of asymmetry of a distribution around its mean. A skewness value greater than 1 is generally indicative of a distribution that greatly deviates from the normal distribution (Bulmar, 1979). The Kurtosis for each factor ranges from 0.307 to 1.746. Kurtosis is the measure of the distribution of the observed data around the mean, with a Kurtosis of 3 indicating normal distribution (Bulmer, 1979). Therefore, a Kurtosis value less than 3 suggests a more uniform distribution, whereas a Kurtosis greater than 3 signifies a distribution concentrated toward the mean (Bulmer, 1979). A uniform distribution is where the distribution appears to be at a consistent value for all measurements. A distribution that is concentrated at the mean is one that has a sharp point near the mean and lower values at other parts of the distribution. In order to reduce the skewness and approach a more normal distribution, a box-cox transformation was implemented.

A box-cox transformation is a method of transforming the data with respect to an exponential power. This means that the data points are raised to the power of  $x$ . As a result, data from a largely skewed distribution obtains reduced skewness and a more normal distribution (Sakia, 1992). A power of 0 transform was used to approach a more normal distribution for our data. The box-cox transformation takes the logarithm of each data point rather than raising each data point to the power of 0 because any number to the power of 0 is equal to 1 (Sakia, 1992). This shifted some of the extreme values to the middle; as a result the outliers were essentially removed.

Once again an S-W test of normality was used with the newly transformed data points. For the Destruction of Property variable, a review of the S-W test for normality (SW = .869, df = 366, p = .000), skewness (0.527), and Kurtosis (-1.102) statistics suggested that normality was not a reasonable assumption. With the Use of Force variable, a review of the S-W test for normality (SW = .869, df = 366, p = .000), skewness (0.427), and Kurtosis (-1.284) statistics suggested that normality was not a reasonable assumption. Lastly, with the Acceptance of Violence variable, a review of the S-W test for normality (SW = .867, df = 366, p = .000), skewness (0.166), and Kurtosis (-1.520) statistics suggested that normality was not a reasonable assumption. However, as seen in Figure 4.3, the boxplot suggested a much less positively skewed distribution for all three factors.

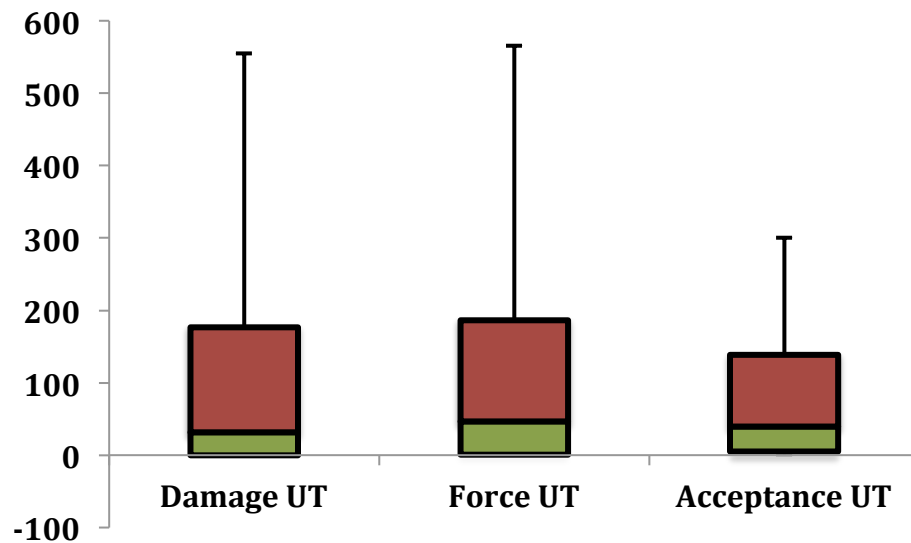


*Figure 4.3.* Distribution of newly transformed PI-1 data.

Although the test showed that the transformed data was still not normal, the Kurtosis ranges from -1.520 to -1.102 rather than 0.307 to 1.746 as in the original test. This means that although the distribution was not normal, the transform nevertheless made the distribution more uniform. The skewness is the indicator that changed the most. The skewness ranges from 0.166 to 0.527 rather than 1.159 to 1.392 as in the original test. This indicates that the skewness is less than 0.6 for all variables. This change is important to note because the skewness is less than 1, meaning the distribution had a positive shift toward a more normal distribution.

For PI-2, a similar trend was observed. In the non-transformed data, the S-W test showed the same results as in PI-1. For the Destruction of Property variable, a review of the S-W test for normality ( $SW = .762$ ,  $df = 400$ ,  $p = .000$ ), skewness (1.437), and Kurtosis (1.107) statistics suggested that normality was not a reasonable assumption.

With the Use of Force variable, a review of the S-W test for normality (SW = .789, df = 400,  $p = .000$ ), skewness (1.262), and Kurtosis (0.537) statistics suggested that normality was not a reasonable assumption. Lastly, with the Acceptance of Violence variable, a review of the S-W test for normality (SW = .835, df = 400,  $p = .000$ ), skewness (1.032), and Kurtosis (-0.040) statistics suggested that normality was not a reasonable assumption. As seen in Figure 4.4, the boxplot suggested a positively skewed distribution for all three factors.



*Figure 4.4.* Distribution of untransformed PI-2 data.

The skewness of the distributions ranges from 1.032 to 1.437. Similarly to PI-1, the skewness shows that the values were all greater than 1, so the distributions were far from normal. The Kurtosis ranges from -0.040 to 1.107. This again shows a uniform distribution that was far from the accepted value of 3.

The same transformation was done for the PI-2 data points. Another S-W test was run on this transformed data and the same trend was seen as in PI-1. For the Destruction of Property variable, a review of the S-W test for normality (SW = .879, df = 400, p = .000), skewness (0.493), and Kurtosis (-1.156) statistics suggested that normality was not a reasonable assumption. With the Use of Force variable, a review of the S-W test for normality (SW = .894, df = 400, p = .000), skewness (0.306), and Kurtosis (-1.319) statistics suggested that normality was not a reasonable assumption. Lastly, with the Acceptance of Violence variable, a review of the S-W test for normality (SW = .911, df = 400, p = .000), skewness (-0.057), and Kurtosis (-1.405) statistics suggested that normality was not a reasonable assumption. As seen in Figure 4.5, the boxplot again suggests a less positively skewed distribution for all three factors.

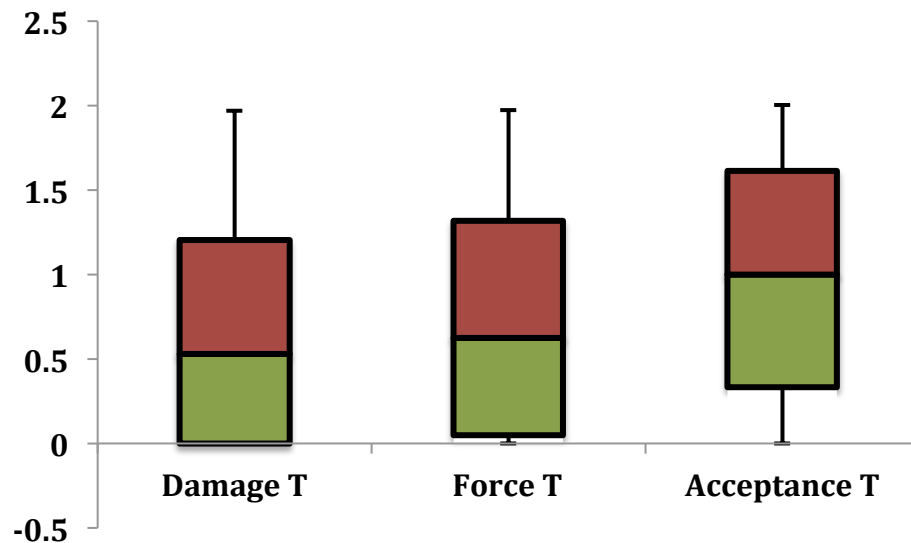


Figure 4.5. Distribution of newly transformed PI-2 data.

The skewness of the distributions ranges from -0.057 to 0.493. Similarly to PI-1, the skewness showed that the values were all less than 0.6, so the distributions were in a more acceptable range to be considered normal. The Kurtosis ranges from -1.156 to -1.405. This showed a more uniform distribution than in the non-transformed data.

Although the results from the S-W test for both primary investigations' transformed data suggested that the distributions were not normal, an assumption of normality was not violated. This is supported by the central limit theorem, which states that means of random samples from any distribution will themselves be normal if the sample is large enough (Altman & Bland, 1995). In the primary investigations we had more than 300 observations for each dependent variable. According to Altman and Bland (1995), it is valid to ignore the assumption of normality when the sample is greater than 40. With this conclusion, the use of a 3x2 repeated measures ANOVA is valid.

### **Hypothesis Testing**

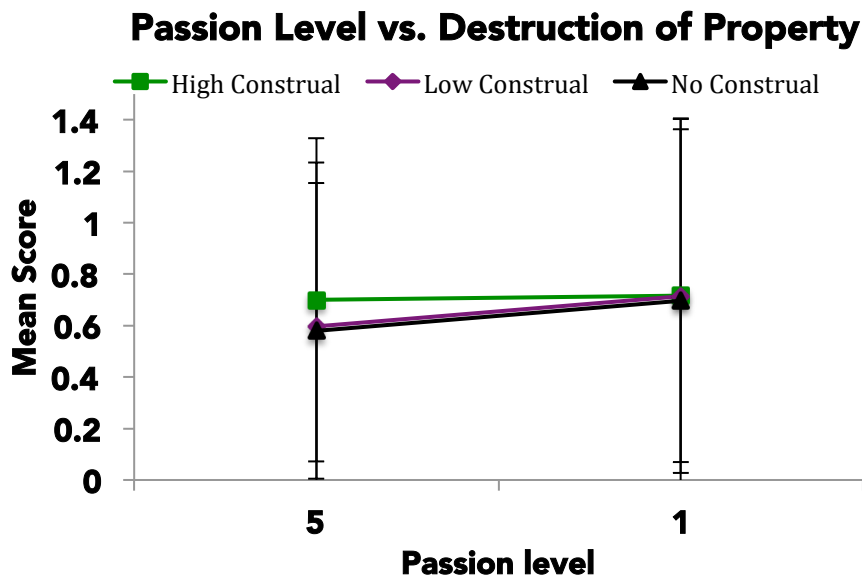
In order to test the statistical significance of the hypothesis, a 3X2 mixed Analysis of Variance (ANOVA) was conducted. The hypothesis of the study is that high-level construal will increase an individual's likelihood to engage in ideologically based violence, and low-level construal will decrease an individual's likelihood to engage in ideologically based violence. Therefore, the relationship between the level of construal and an individual's interest in a topic was tested. A 3X2 mixed ANOVA was necessary for this study because of the presence of both within-group and between-group variables.

The within-subjects variable was an individuals' level of passion, indicated by a value of either 5 or 1. As discussed earlier in this paper, an individual ranked their level of interest for each of the topics highlighted by the vignettes. A passion level of 1 is 'most passionate' whereas a passion level of 5 is 'moderately passionate.' These rankings were used in determining the within-subjects variable. The between-groups variable was the level of construal. Each participant was randomly assigned to a unique condition of the between-groups variable.

The results of the EFA established the dependent variables that would be tested. The EFA established that the individually measured items could be characterized by three distinct relationships—Destruction of Property, Use of Force, and Acceptance of Violence. These relationships were abbreviated Damage, Force, and Acceptance for the ANOVA. In order to quantify the various data points in each factor, an average of the measured variables was taken to determine a single value for each separate factor. Taking this average to determine a single numerical value for each factor allowed for a direct comparison between the factors (DiStefano et al., 2009). Taking an average also allowed for each factor to have the same contribution during interpretation (DiStefano et al., 2009). The 3X2 mixed ANOVA was run separately for PI-1 and PI-2. Within both the PI-1 and PI-2, the ANOVA was run separately for each factor. Therefore, there was a total of six separate 3X2 mixed ANOVAs conducted in testing the hypothesis. During the ANOVA, the analysis for each factor was run separately using IBM SPSS software package.



**PI-1 hypothesis testing.** In PI-1, for the Destruction of Property factor, there was not a significant effect of passion level ( $F(1, 180) = 3.693, p > .05$ ). In other words, passion level did not have a significant effect on a person's likelihood to engage in destruction of property. There was also not a significant effect of construal level on a person's likelihood to engage in destruction of property ( $F(2, 180) = 0.244, p > .05$ ). There was no significant interaction between passion level and construal level ( $F(2, 180) = 0.648, p > .05$ ) (Figure 4.6).

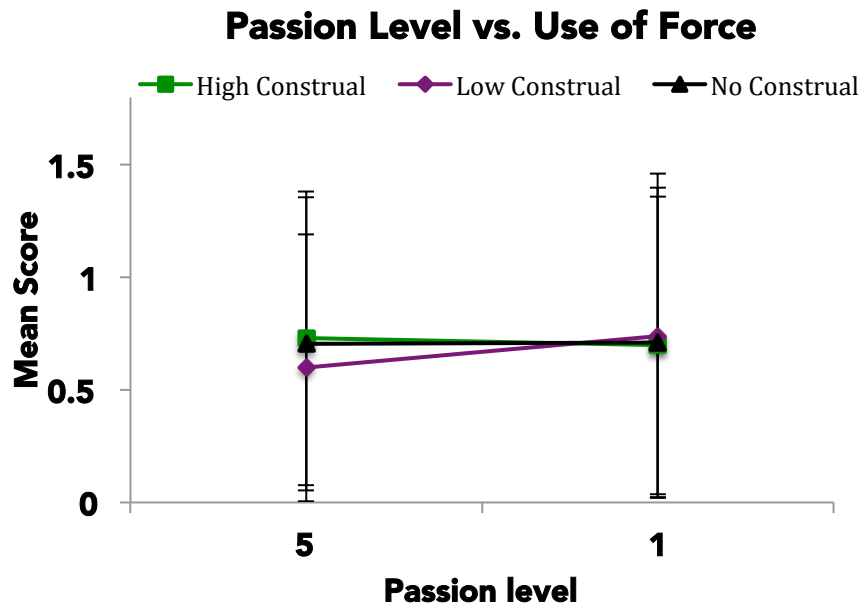


*Figure 4.6.* Mean likelihood for Destruction of Property factor across the three construal conditions. The mean of passion level 1 is higher than the mean of passion level 5 for each construal condition. Error bars represent the standard deviation.

For the Use of Force factor, there was not a significant effect of passion level ( $F(1, 180) = 0.607, p > .05$ ). Passion level did not have a significant effect on a person's likelihood to engage in the use of force. There was not a significant effect of construal

level on a person's likelihood to engage in the use of force ( $F(2, 180) = 0.109, p > .05$ ).

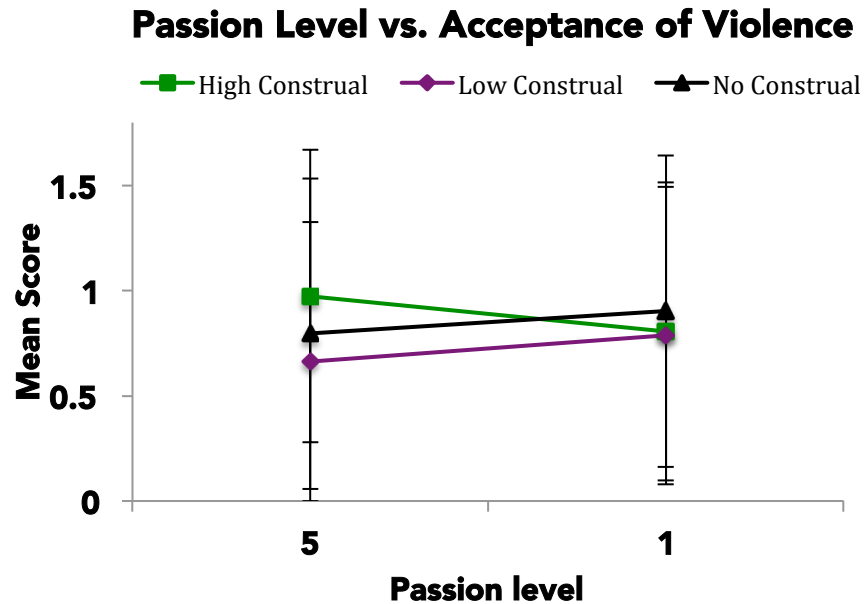
There was no significant interaction between passion level and construal level ( $F(2, 180) = 1.133, p > .05$ ) (Figure 4.7).



*Figure 4.7.* Mean likelihood for Use of Force factor across the three construal conditions.

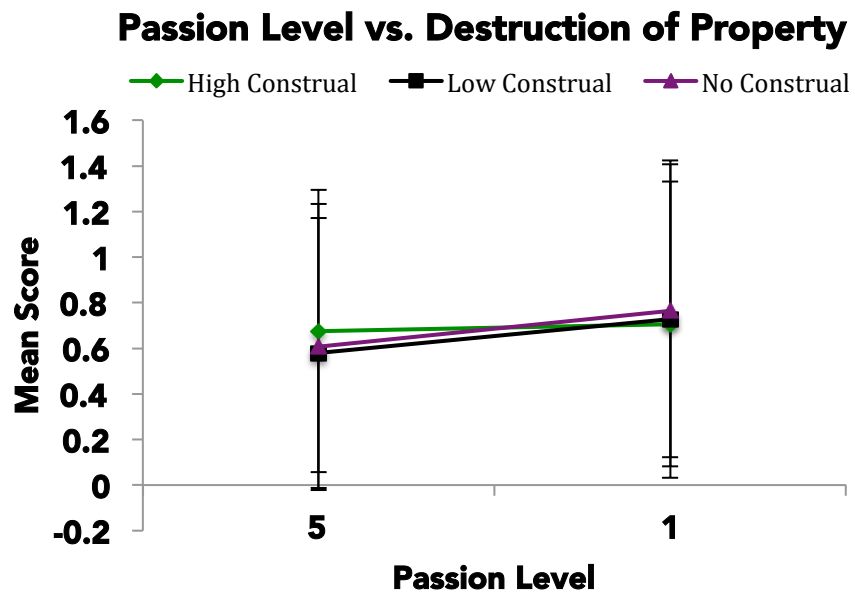
The mean of passion level 1 is higher than the mean of passion level 5 for the low-level and no construal condition and lower for the high-level construal condition. Error bars represent the standard deviation.

For the Acceptance of Violence factor, there was not a significant effect of passion level ( $F(1, 180) = 0.206, p > .05$ ). Passion level did not have a significant effect on a person's likelihood to accept violence. There was not a significant effect of construal level on a person's likelihood to accept violence ( $F(2, 180) = 1.137, p > .05$ ). However, there was a significant interaction between passion level and construal level ( $F(2, 180) = 4.100, p < .05$ ) (Figure 4.8).



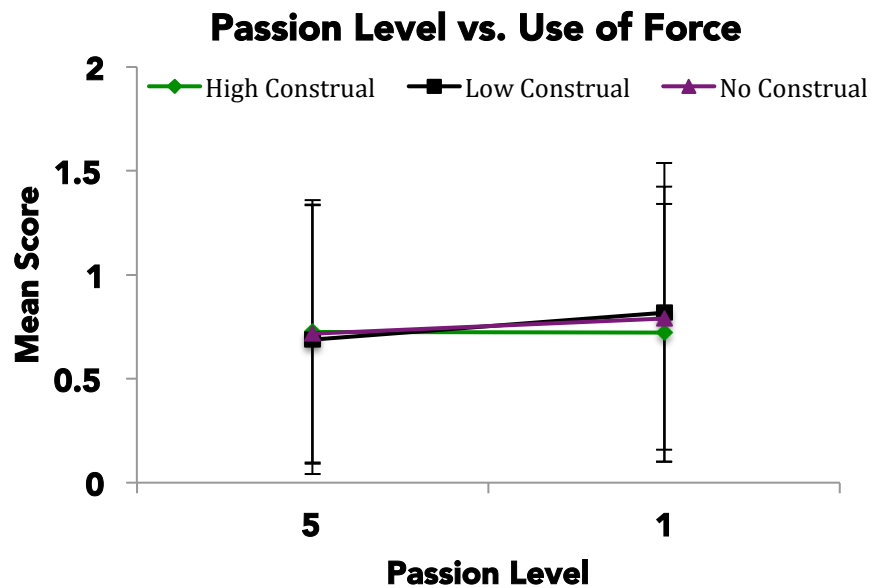
*Figure 4.8.* Mean passion level for Acceptance of Violence factor across the three construal conditions. The mean of passion level 1 is higher than the mean of passion level 5 for the low-level and no construal condition and lower for the high-level construal condition. Error bars represent the standard deviation.

**PI-2 hypothesis testing.** For PI-2, we ran another 3X2 mixed ANOVA for each factor. For the Destruction of Property factor, there was a significant effect of passion level ( $F(1, 197) = 8.736, p < .05$ ). Passion level did affect a person's likelihood to engage in destruction of property. There was not a significant effect of construal level on a person's likelihood to engage in destruction of property ( $F(2, 197) = 0.080, p > .05$ ). There was no significant interaction between passion level and construal level ( $F(2, 197) = 1.166, p > .05$ ) (Figure 4.9).



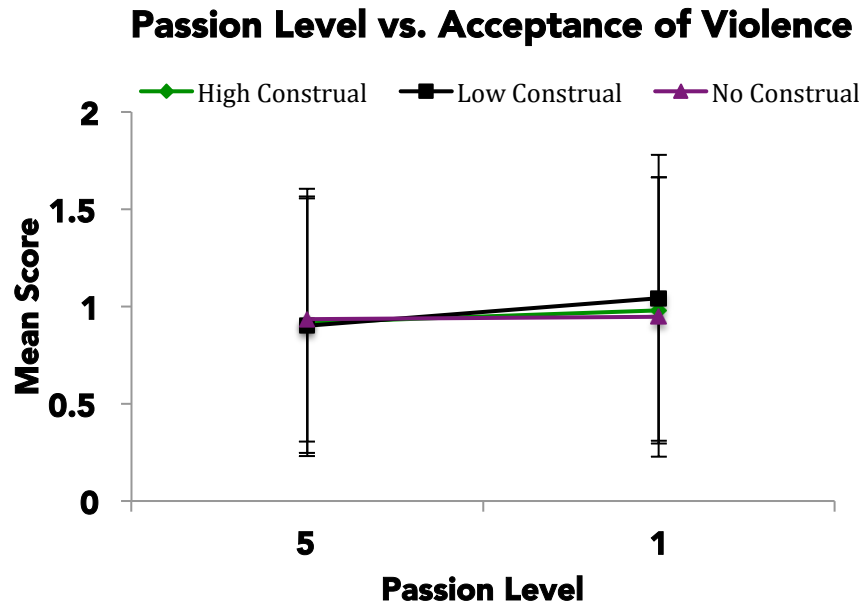
*Figure 4.9.* Mean likelihood for Destruction of Property factor across the three construal conditions. The mean of passion level 1 is higher than the mean of passion level 5 for each construal condition. Error bars represent the standard deviation.

For the Use of Force factor, there was not a significant effect of passion level ( $F(1, 197) = 2.702, p > .05$ ). Passion level did not have a significant effect on a person's likelihood to engage in the use of force. There was not a significant effect of construal level on a person's likelihood to engage in the use of force ( $F(2, 197) = 0.062, p > .05$ ). There was no significant interaction between passion level and construal level ( $F(2, 197) = 0.912, p > .05$ ) (Figure 4.10).



*Figure 4.10.* Mean likelihood for Use of Force factor across the three construal conditions. The mean of passion level 1 is higher than the mean of passion level 5 for the low-level and no construal conditions and slightly lower for the high-level construal condition. Error bars represent the standard deviation.

For the Acceptance of Violence factor, there was not a significant effect of passion level ( $F(1, 197) = 2.514, p > .05$ ). Passion level did not have a significant effect on a person's likelihood to accept violence. There was not a significant effect of construal level on a person's likelihood to accept violence ( $F(2, 197) = 0.050, p > .05$ ). There was no significant interaction between passion level and construal level ( $F(2, 197) = 0.702, p > .05$ ) (Figure 4.11).



*Figure 4.11.* Mean likelihood for Acceptance of Violence factor across the three construal conditions. The mean of passion level 1 is higher than the mean of passion level 5 for each construal condition. Error bars represent the standard deviation.

**Interaction effects.** In addition to measuring the interaction effect between construal condition and passion level, the effect size of the between-groups and within-groups variables for each factor were measured. The effect size represents the size of the difference between two groups. It is calculated by the formula:

$$\frac{[\text{Mean of experimental group} - \text{Mean of control group}]}{\text{Standard deviation}}$$

An effect size value less than 0.1 is considered a small effect size (Cohen, 1988, p. 7).

We see that all of the effect sizes presented in Table 4.3 for each factor and both the between-groups and within-groups are below 0.1. Therefore, all effects were small.

*Table 4.3* Effect sizes of between-groups and within-groups variables for each factor

<b>Study Number and Factor</b>	<b>Between-Groups <math>\eta^2</math></b>	<b>Within-Groups <math>\eta^2</math></b>
Primary I – Damage	0.003	0.020
Primary I – Force	0.001	0.003
Primary I – Acceptance	0.012	0.001
Primary II – Damage	0.001	0.042
Primary II – Force	0.001	0.014
Primary II – Acceptance	0.001	0.013

### Secondary Analyses

A series of secondary analyses was conducted. Primarily, the low- and no-construal conditions were combined and tested to determine the significance of the hypothesis that high construal will lead to a higher likelihood to engage in violent extremism. Analyses were also conducted on participant's demographic information. These analyses were concentrated on the impact of political affiliation and sex of the participant with construal on the likelihood to engage in ideologically based violence. The same factor model loadings from the primary analysis were used.

**Combination of low-level and no construal conditions.** Data trends indicated that high-level construal had an effect distinctly different from the low- and no- construal conditions. To isolate the effect of the high-level construal, the low- and no- conditions were combined and tested against the high-level condition. The low- and no- conditions

were combined with the rationale that the default mindset is a concrete, low-level construal that exhibits bias towards the present (Malkoc et. al, 2010).

To test the statistical significance of this claim, a 2X2 mixed Analysis of Variance (ANOVA) was conducted. A 2X2 mixed ANOVA was necessary for this analysis because of the presence of both within-group and between-group variables. This analysis sought to determine if high-level construal had an effect distinctly different from the low- and no-construal conditions. Therefore, the relationship between the level of construal and an individual's interest in a topic was tested.

The within-subjects variable was an individuals' level of passion indicated by a value of either 5 or 1, as presented in our primary hypothesis testing. The between-groups variable was the level of construal. Each participant was randomly assigned to a unique condition of the between-groups variable.

Also in line with the primary analysis, the results of the EFA established the dependent variables that would be tested. The same factors—Destruction of Property, Use of Force, and Acceptance of Violence—were used and abbreviated Damage, Force, and Acceptance for the ANOVA. An average of the measured variables was again taken to determine a single value for each separate factor, allowed for a direct comparison between the factors (DiStefano et al., 2009), and permitted each factor to have the same contribution during interpretation (DiStefano et al., 2009). The 2X2 mixed ANOVA was run separately for PI-1 and PI-2. Within both the PI-1 and PI-2, the ANOVA was run separately for each factor. Therefore, there was a total of six separate 2X2 mixed



ANOVAs conducted in testing the hypothesis. During the ANOVA, the analysis for each factor was run separately using the IBM SPSS software package.

***PI-1 combination of low-level and no construal conditions.*** In PI-1, for the Destruction of Property factor, there was not a significant effect of passion level ( $F(1, 180) = 2.094, p > .05$ ). In other words, passion level did not have a significant effect on a person's likelihood to engage in destruction of property. There was also not a significant effect of construal level on a person's likelihood to engage in destruction of property ( $F(2, 180) = 0.461, p > .05$ ). There was no significant interaction between passion level and construal level ( $F(2, 180) = 0.365, p > .05$ ).

For the Use of Force factor, there was not a significant effect of passion level ( $F(1, 180) = 0.167, p > .05$ ). Passion level did not have a significant effect on a person's likelihood to engage in the use of force. There was not a significant effect of construal level on a person's likelihood to engage in the use of force ( $F(2, 180) = 0.082, p > .05$ ). There was no significant interaction between passion level and construal level ( $F(2, 180) = 1.035, p > .05$ ).

For the Acceptance of Violence factor, there was not a significant effect of passion level ( $F(1, 180) = 0.276, p > .05$ ). Passion level did not have a significant effect on a person's likelihood to accept violence. There was not a significant effect of construal level on a person's likelihood to accept violence ( $F(2, 180) = 1.097, p > .05$ ). However, there was a significant interaction between passion level and construal level ( $F(2, 180) = 8.225, p < .05$ ).

***PI-2 combination of low-level and no construal conditions.*** For PI-2, we ran another 2X2 mixed ANOVA for each factor. For the Destruction of Property factor, there was a significant effect of passion level ( $F(1, 197) = 5.343, p < .05$ ). Passion level did affect a person's likelihood to engage in destruction of property. There was not a significant effect of construal level on a person's likelihood to engage in destruction of property ( $F(2, 197) = 0.060, p > .05$ ). There was no significant interaction between passion level and construal level ( $F(2, 197) = 2.332, p > .05$ ).

For the Use of Force factor, there was not a significant effect of passion level ( $F(1, 197) = 1.318, p > .05$ ). Passion level did not have a significant effect on a person's likelihood to engage in the use of force. There was not a significant effect of construal level on a person's likelihood to engage in the use of force ( $F(2, 197) = 0.125, p > .05$ ). There was no significant interaction between passion level and construal level ( $F(2, 197) = 1.497, p > .05$ ).

For the Acceptance of Violence factor, there was not a significant effect of passion level ( $F(1, 197) = 2.077, p > .05$ ). Passion level did not have a significant effect on a person's likelihood to accept violence. There was not a significant effect of construal level on a person's likelihood to accept violence ( $F(2, 197) = 0.007, p > .05$ ). There was no significant interaction between passion level and construal level ( $F(2, 197) = 0.018, p > .05$ ).

**Political affiliation.** For this analysis, only the participant's number 1 ranked vignette was used. This was done to capture their strongest ideological leanings, whether conservative or liberal. However, issues arose in the self-reporting of participant's

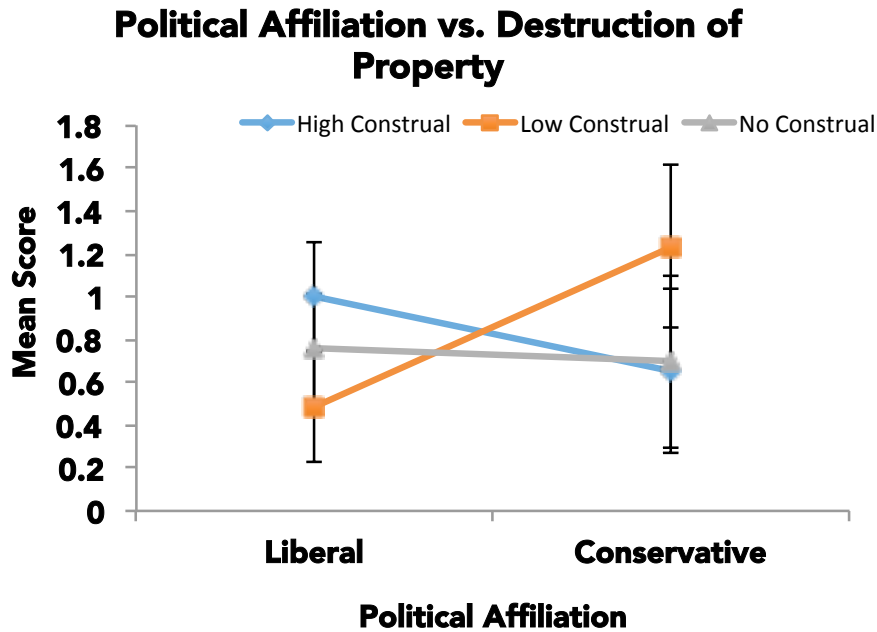
political leanings. Most participants identified as moderate, as expected with only 36% of the general public identifying as steadfast liberal or conservative (Pew Research Center, 2014). Therefore, the vignettes and their political leanings identified by the Pew Research Center (2014) in conjunction with participant's self-reported political leanings were used to separate conservatives and liberals.

For a vignette, the number of participants who self-identified as conservative and the number of participants who self-identified as liberal were totaled. For a vignette to fall into a political classification, more than five participants needed to identify it as their most passionate ideology. Then, it was classified as conservative or liberal if two-thirds of participants who chose it as their most passionate ideology self-identified as conservative or liberal, respectively, in both parts of the primary investigation. The vignettes that ultimately were classified as conservative were Anti-Gun Control, Pro-Life, and Political Action. The liberal vignettes were Access to Welfare, Tax Oppression, Pro-Choice, and Pro-Gun Control. The participant responses corresponding to the remaining three vignettes were not used in this analysis.

To test statistical significance, a 3X2 mixed Analysis of Variance (ANOVA) was conducted. This analysis sought to determine if liberal and conservative ideologies invoked different propensities for violence. Therefore, the relationship between the level of construal and an individual's ideological preference was tested.

***PI-1 political affiliation.*** For the Destruction of Property factor, there was not a significant effect of political affiliation ( $F(1, 109) = 0.674, p > 0.05$ ). In other words, political affiliation did not affect a person's likelihood to engage in ideologically based

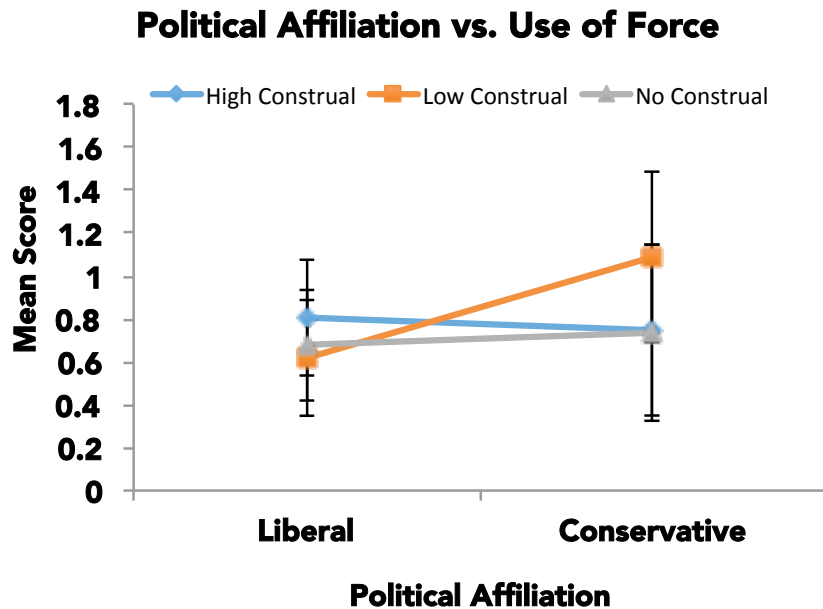
property destruction. There was also not a significant effect of construal level on a person's likelihood to engage in ideologically based property destruction ( $F(2, 109) = 0.336, p > 0.05$ ). Finally, there was a significant interaction between political affiliation and construal level ( $F(2, 109) = 5.933, p < 0.05$ ) (Figure 4.12).



*Figure 4.12.* Mean likelihood for Destruction of Property factor across the three construal conditions for Political Affiliation in PI-1. Error bars represent the standard deviation.

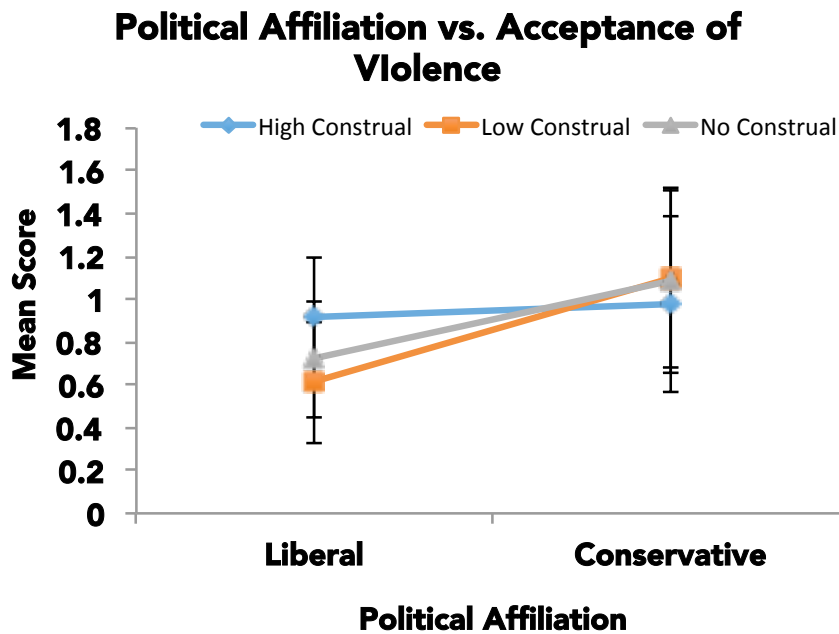
For the Use of Force factor, there was not a significant effect of political affiliation ( $F(1, 109) = 1.243, p > 0.05$ ). In other words, political affiliation did not affect a person's likelihood to engage in ideologically based use of force. There was also not a significant effect of construal level on a person's likelihood to engage in ideologically based use of force ( $F(2, 109) = 0.358, p > 0.05$ ). Finally, there was not a significant

interaction between political affiliation and construal level ( $F(2, 109) = 1.328, p < 0.05$ ) (Figure 4.13).



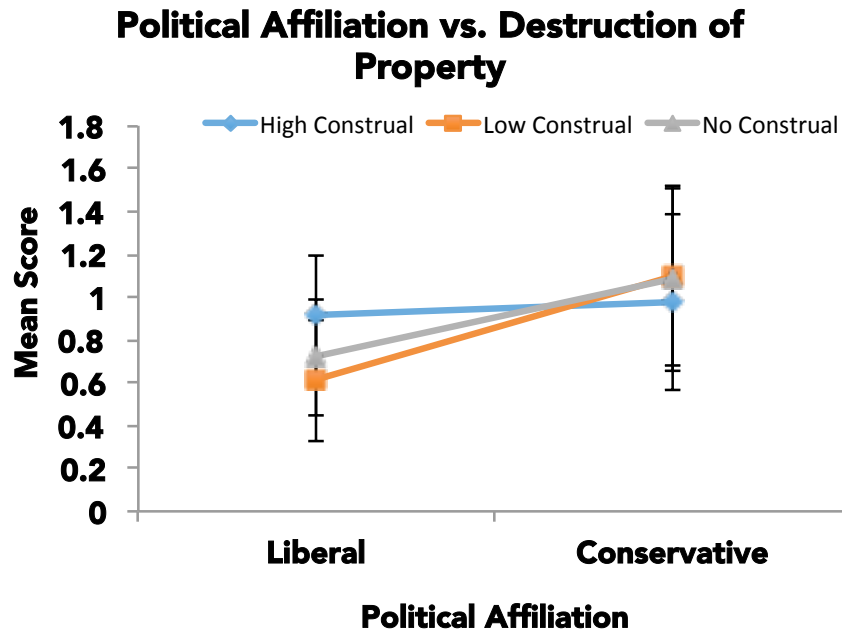
*Figure 4.13.* Mean likelihood for Use of Force factor across the three construal conditions for Political Affiliation in PI-1. Error bars represent the standard deviation.

Lastly, for the Acceptance of Violence factor, there was a significant effect of political affiliation ( $F(1, 109) = 4.294, p < 0.05$ ). In other words, political affiliation did affect a person's likelihood to accept violence. There was not a significant effect of construal level on a person's likelihood to engage in ideologically based property destruction ( $F(2, 109) = 0.138, p > 0.05$ ). Finally, there was not a significant interaction between political affiliation and construal level ( $F(2, 109) = 0.764, p < 0.05$ ) (Figure 4.14).



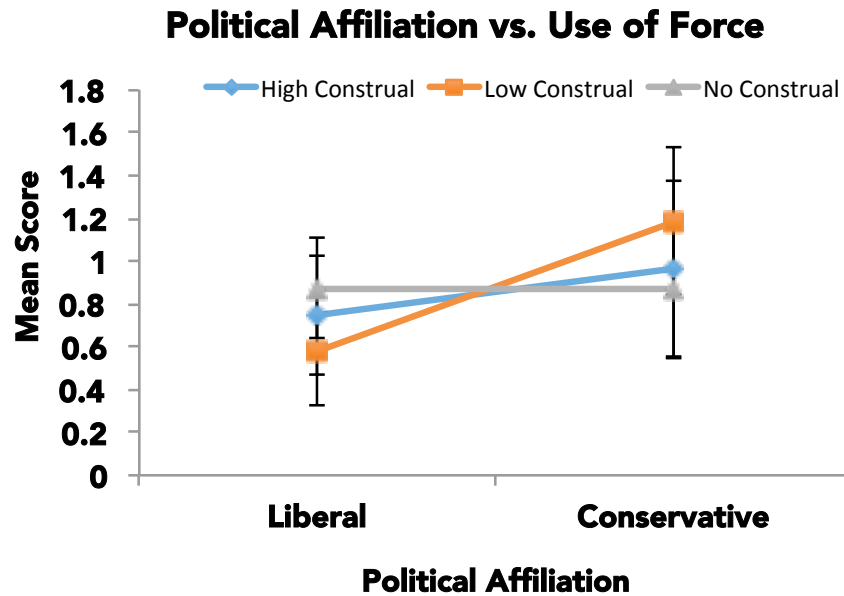
*Figure 4.14.* Mean likelihood for Acceptance of Violence factor across the three construal conditions for Political Affiliation in PI-1. Error bars represent the standard deviation.

***PI-2 political affiliation.*** For the Destruction of Property factor, there was not a significant effect of political affiliation ( $F(1, 122) = 1.096, p > 0.05$ ). In other words, political affiliation did not affect a person's likelihood to engage in ideologically based property destruction. There was not a significant effect of construal level on a person's likelihood to engage in ideologically based property destruction ( $F(2, 122) = 0.104, p > 0.05$ ). Finally, there was a significant interaction between political affiliation and construal level ( $F(2, 122) = 3.085, p < 0.05$ ) (Figure 4.15).



*Figure 4.15.* Mean likelihood for Destruction of Property factor across the three construal conditions for Political Affiliation in PI-2. Error bars represent the standard deviation.

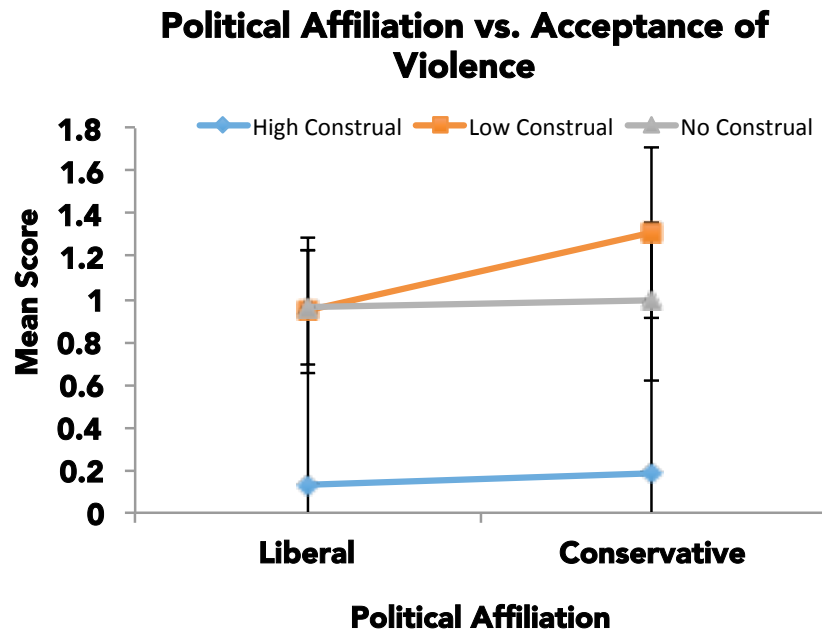
For the Use of Force factor, there was a significant effect of political affiliation ( $F(1, 122) = 5.295, p < 0.05$ ). In other words, political affiliation did affect a person's likelihood to engage in ideologically based use of force. There was also not a significant effect of construal level on a person's likelihood to engage in ideologically based use of force ( $F(2, 122) = 0.018, p > 0.05$ ). Finally, there was not a significant interaction between political affiliation and construal level ( $F(2, 122) = 2.185, p > 0.05$ ) (Figure 4.16).



*Figure 4.16.* Mean likelihood for Use of Force factor across the three construal conditions for Political Affiliation in PI-2. Error bars represent the standard deviation.

Lastly, for the Acceptance of Violence factor, there was not a significant effect of political affiliation ( $F(1, 122) = 0.656, p > 0.05$ ). In other words, political affiliation did not affect a person's likelihood to accept violence. There was also not a significant effect of construal level on a person's likelihood to engage in ideologically based property destruction ( $F(2, 122) = 0.448, p > 0.05$ ). Finally, there was not a significant interaction between political affiliation and construal level ( $F(2, 122) = 0.856, p > 0.05$ ) (Figure 4.17).



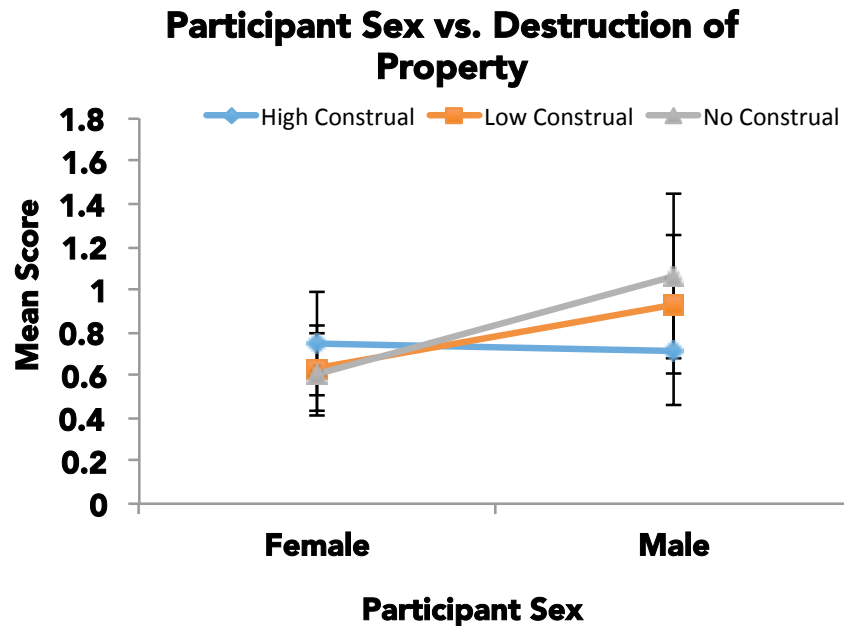


*Figure 4.17.* Mean likelihood for Acceptance of Violence factor across the three construal conditions for Political Affiliation in PI-2. Error bars represent the standard deviation.

**Sex of participant.** For this analysis, only the participant's number 1 ranked vignette was used. A 3X2 mixed Analysis of Variance (ANOVA) was conducted. This analysis sought to determine if males and females evoked different propensities for violence. Therefore, the relationship between the level of construal and an individual's sex was tested.

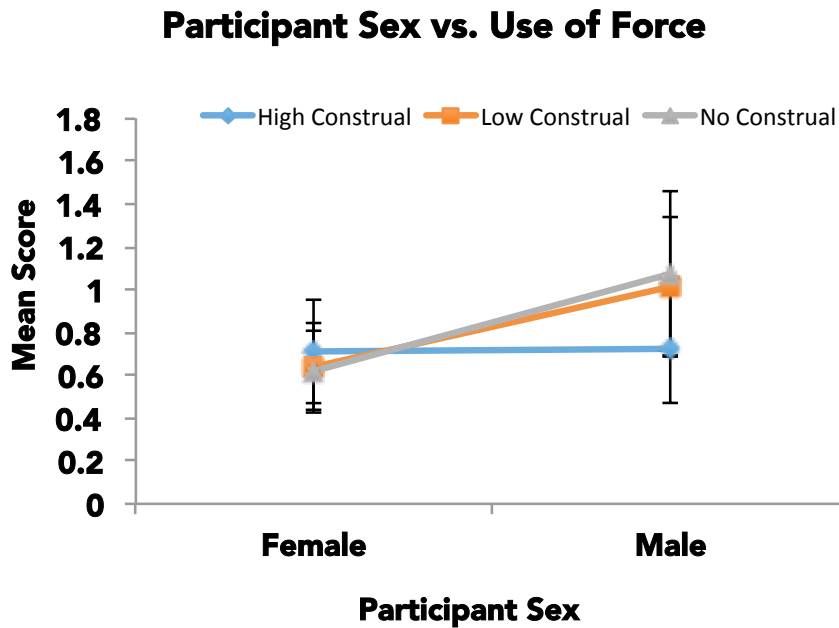
**PI-1 sex of participant.** For the Destruction of Property factor, there was a significant effect of sex ( $F(1, 181) = 4.538, p < 0.05$ ). In other words, sex did affect a person's likelihood to engage in ideologically based property destruction. There was not a significant effect of construal level on a person's likelihood to engage in ideologically

based property destruction ( $F(2, 181) = 0.288, p > 0.05$ ). Finally, there was not a significant interaction between sex and construal level ( $F(2, 181) = 1.698, p < 0.05$ ) (Figure 4.18) .



*Figure 4.18.* Mean likelihood for Destruction of Property factor across the three construal conditions for Sex in PI-1. Error bars represent the standard deviation.

For the Use of Force factor, there was a significant effect of sex ( $F(1, 181) = 6.047, p < 0.05$ ). In other words, sex did affect a person's likelihood to engage in ideologically based use of force. There was not a significant effect of construal level on a person's likelihood to engage in ideologically based use of force ( $F(2, 181) = 0.537, p > 0.05$ ). Finally, there was not a significant interaction between sex and construal level ( $F(2, 181) = 1.523, p < 0.05$ ) (Figure 4.19).



*Figure 4.19.* Mean likelihood for Use of Force factor across the three construal conditions for Sex in PI-1. Error bars represent the standard deviation.

For the Acceptance of Violence factor, there was a significant effect of sex ( $F(1, 181) = 10.787, p < 0.05$ ). In other words, sex did affect a person's likelihood to accept violence. There was not a significant effect of construal level on a person's likelihood to accept violence ( $F(2, 181) = 1.264, p > 0.05$ ). Finally, there was not a significant interaction between sex and construal level ( $F(2, 181) = 1.482, p < 0.05$ ) (Figure 4.20).

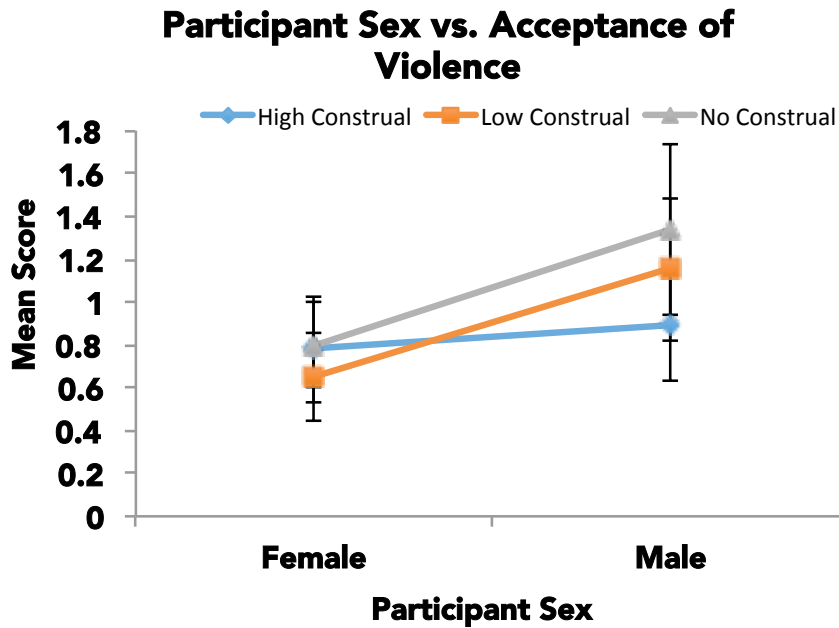
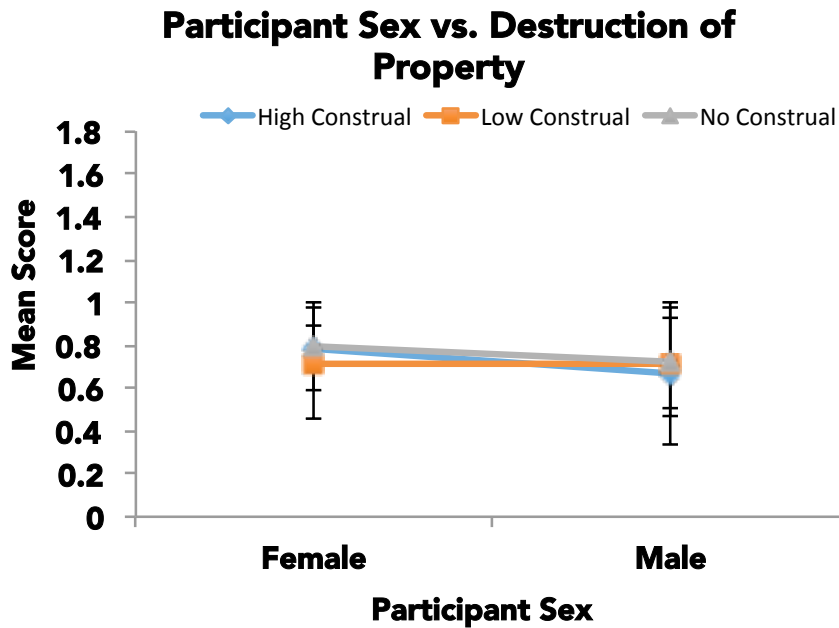


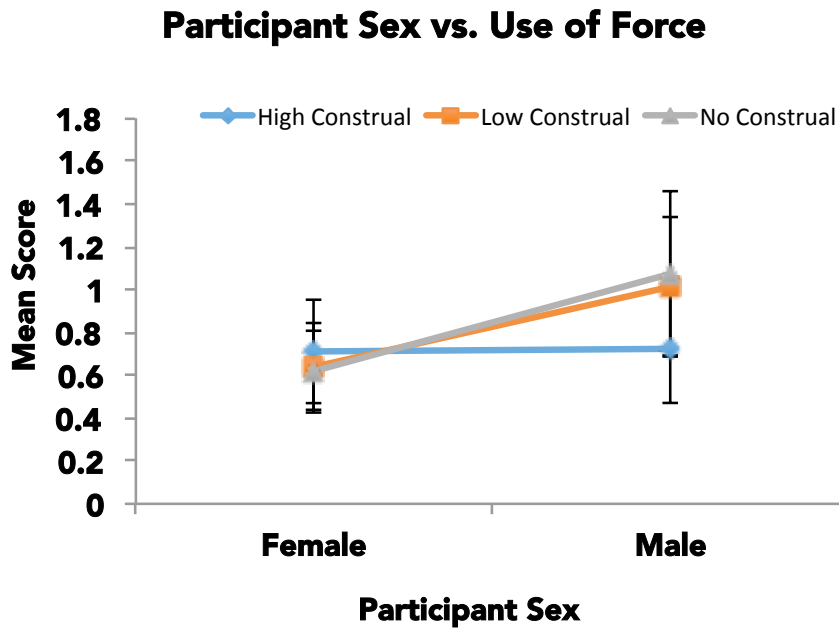
Figure 4.20. Mean likelihood for Acceptance of Violence factor across the three construal conditions for Sex in PI-1. Error bars represent the standard deviation.

**PI-2 sex of participant.** For the Destruction of Property factor, there was not a significant effect of sex ( $F(1, 193) = 0.022, p > 0.05$ ). In other words, sex did not affect a person's likelihood to engage in ideologically based property destruction. There was not a significant effect of construal level on a person's likelihood to engage in ideologically based property destruction ( $F(2, 193) = 0.066, p > 0.05$ ). Finally, there was not a significant interaction between sex and construal level ( $F(2, 181) = 0.339, p > 0.05$ ) (Figure 4.21) .



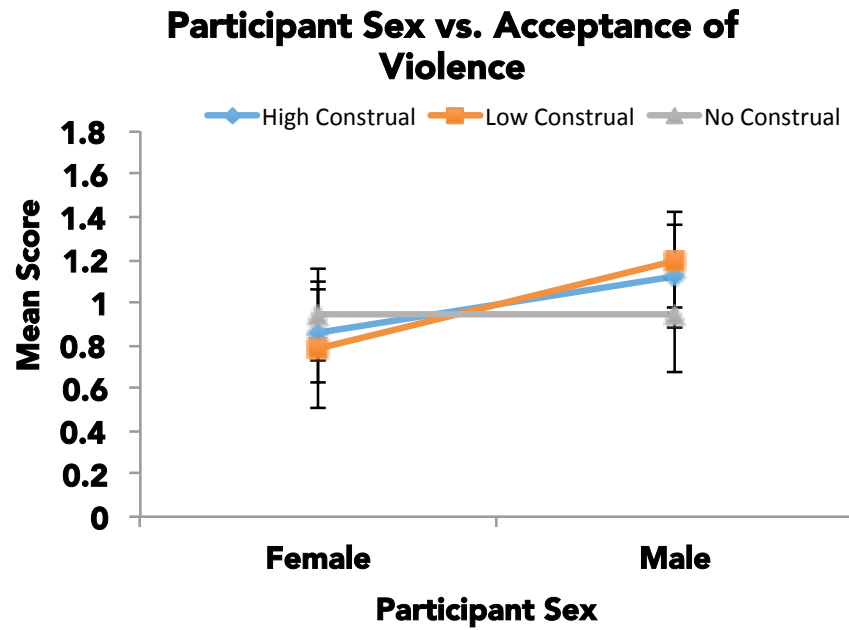
*Figure 4.21.* Mean likelihood for Destruction of Property factor across the three construal conditions for Sex in PI-2. Error bars represent the standard deviation.

For the Use of Force factor, there was not a significant effect of sex ( $F(1, 193) = 0.011, p > 0.05$ ). In other words, sex did not affect a person's likelihood to engage in ideologically based use of force. There was not a significant effect of construal level on a person's likelihood to engage in ideologically based use of force ( $F(2, 193) = 0.176, p > 0.05$ ). Finally, there was not a significant interaction between sex and construal level ( $F(2, 193) = 0.235, p > 0.05$ ) (Figure 4.22).



*Figure 4.22.* Mean likelihood for Use of Force factor across the three construal conditions for Sex in PI-2. Error bars represent the standard deviation.

For the Acceptance of Violence factor, there was a significant effect of sex ( $F(1, 193) = 4.882, p < 0.05$ ). In other words, sex did affect a person's likelihood to accept violence. There was not a significant effect of construal level on a person's likelihood to accept violence ( $F(2, 193) = 0.086, p > 0.05$ ). Finally, there was not a significant interaction between sex and construal level ( $F(2, 193) = 1.389, p > 0.05$ ) (Figure 4.23) .



*Figure 4.23.* Mean likelihood for Acceptance of Violence factor across the three construal conditions for Sex in PI-2. Error bars represent the standard deviation.

## Chapter 5: Discussion

### Interpretation of Results

In this section we will summarize the results of our investigation and interpret what they mean in the context of our study. This section will be broken down into two parts, one for PI-1 and one for PI-2.

**PI-1.** PI-1 used a novel construal manipulation with construal manipulation questions embedded into the vignettes. The results from PI-1 provide some insight into our hypothesis. This section will be split into three subsections, one for each interaction in the ANOVA. These subsections will discuss the interpretation of results with respect to three different effects: passion level, construal level, and the interaction between passion and construal level. This section will also explain our secondary analysis, which explores the effect of political affiliation and sex with respect to construal on the participants' likelihood to engage in ideological violence.

***Passion level.*** We did not find a significant effect for a participant's passion level (1 or 5) for the Destruction of Property, Use of Force, or Acceptance of Violence factors. This implies that there is not enough evidence to conclude that the level of passion an individual feels toward a topic affects an individual's likelihood to engage in ideologically based violence. We anticipated that individuals would be more likely to engage in ideologically based violence for their most passionate topic. However, the results from PI-1 did not support this prediction.



***Construal level.*** We did not find a significant effect for a participant's construal condition (high-level, low-level, or no construal) for the Destruction of Property, Use of Force, or Acceptance of Violence factors. Therefore, there is not enough evidence to conclude that this novel construal manipulation affected an individual's likelihood to engage in ideologically based violence. High-level construal manipulations did not result in a greater or lesser likelihood to engage in ideologically based violence than did low-level construal manipulations. This finding does not provide support for our hypothesis.

***Interaction between passion and construal level.*** We did not find a significant effect for the interaction between a participant's passion level and construal condition for the Destruction of Property or Use of Force factors. We did find a significant effect for the interaction for the Acceptance of Violence factor. This finding does not provide support for our hypothesis, however it does suggest these novel construal manipulations might affect an individual's likelihood to accept violence when an individuals' ideologies are challenged.

**PI-2.** PI-2 used a construal manipulation method more in-line with existing literature. The results from PI-2 provide some insight into our hypothesis. This section will be split into three subsections, one for each interaction in the ANOVA.

***Passion level.*** We did not find a significant effect for a participant's passion level (1 or 5) for the Use of Force or Acceptance of Violence factors. However, we did find a significant effect for passion level for the Destruction of Property factor. We observed a general trend that individuals were more likely to engage in ideologically based violence for their most passionate topic. This differs from the results in PI-1 and implies that

passion level might influence ideologically based violence. However, there is not enough evidence to conclude that the level of passion an individual feels toward a topic affects an individual's likelihood to engage in ideologically based violence.

***Construal level.*** We did not find a significant effect for a participant's construal condition (high-level, low-level, or no construal) for the Destruction of Property, Use of Force, or Acceptance of Violence factors. There is not enough evidence to conclude that these literature-based construal manipulations affect an individual's likelihood to engage in ideologically based violence. That is, high-level construal manipulations did not result in greater or lesser likelihood to engage in ideologically based violence than did low-level construal manipulations. This finding does not provide support for our hypothesis.

***Interaction between passion and construal level.*** We did not find a significant effect for the interaction between a participant's passion level and construal condition for the Destruction of Property, Use of Force, or Acceptance of Violence factors. This finding does not provide support for our hypothesis, and, unlike results from PI-1, it cannot provide any evidence to suggest construal manipulations affect an individual's likelihood to accept violence when an individuals' ideologies are challenged.

**Trends in primary analysis.** Although our study did not exhibit many statistically significant relationships, we did observe clear trends throughout all three factors.

The first trend occurred mainly in PI-2. We observed higher mean violence scores in the high-level and no construal conditions for participants' passion level 1 compared to passion level 5.

The second trend was specific to the high-level construal condition. When we compared the participant responses for passion levels 1 and 5 within each of the three factors, we noticed that the mean violence scores were very similar. In other words, passion level did not appear to affect the mean violence score in the high-level construal condition. On average, the mean score for violence was still higher for passion level 1 than for passion level 5. In some cases the responses intersected, meaning that participant responses for passion levels 1 and 5 had the same mean score for violence. In one case the responses diverged, where the data from passion levels 1 and 5 trended in opposite directions. In this case, passion level 1 had a much higher mean score for violence than passion level 5.

**Secondary analysis.** In addition to the primary analysis conducted to test the hypothesis, we also conducted a secondary analysis. This secondary analysis provides insights for possible moderators of construal and ideological violence.

***Political affiliation.*** We compared ideological violence scores for conservative and liberal vignettes for PI-2 and PI-2.

*PI-1.* We found a significant interaction between construal level and political affiliation for the Destruction of Property Factor, but not for the Use of Force or Acceptance of Violence factors. We found a significant interaction for political affiliation

for the Acceptance of Violence factor. We did not find a significant interaction for political affiliation for the Destruction of Property or the Use of Force factors.

*PI-2.* We found a significant interaction between construal level and political affiliation for the Destruction of Property Factor, but not for the Use of Force or Acceptance of Violence factors. We also found a significant effect for political affiliation for the Use of Force factor. We did not find a significant effect for political affiliation on either the Destruction of Property or the Acceptance of Violence factor.

*Trends in political affiliation.* We saw the same consistent trends among liberal and conservative topics and ideological violence scores in PI-1 and PI-2. Liberal topics elicited higher ideological violence scores in the high-level construal condition versus the low-level construal condition. The opposite was true for conservative topics. Conservative topics elicited higher ideological violence scores in the low-level construal condition versus the high-level construal condition. These findings do not support our hypothesis, however they do suggest that political ideologies act as a moderator for construal.

These findings mirror previous literature regarding political ideology, but are inconsistent with previous literature on the interaction between political ideology and construal. Though several researchers have concluded that differences between liberals and conservatives are meaningful and psychological (Jost et. al, 2007; Graham, Haidt, & Nosek, 2009; Haidt & Graham, 2007), research has not shown a significant interaction between political ideology and construal (Napier & Luguri, 2013). However our findings cannot speak to liberal or conservative individuals, only liberal and conservative

ideologies. Nevertheless, these back previous literature on political ideology and suggest that there could be significant psychological differences between those who adhere to liberals and conservative ideologies.

*Sex of participant.* We compared ideological violence scores between men and women in both PI-1 and PI-2.

*PI-1.* We did not find any significant interactions between construal and sex for any of the factors. However, we found a significant effect of sex for all three factors: Destruction of Property, Use of Force, and Acceptance of Violence. In each case, males indicated they were more likely to destroy property, use force, and accept violence. These findings do not provide support for our hypothesis, but suggest men are more likely to engage in ideologically based violence than women.

*PI-2.* We did not find any significant interactions between construal and sex for any of the factors. Unlike PI-1, we found that sex only had a significant effect on the Acceptance of Violence factor. We observed that males were more likely to accept violence than females. We did not find that sex had a significant effect on either the Destruction of Property, or the Use of Force factors.

*Trends in sex of participant.* The trend involving the sex of participant was mainly observed in PI-1. However, it was observed in the Acceptance of Violence factor in PI-2. This trend was statistically significant: Males were more likely than females to engage in and accept ideologically based violence than women. Our finding was in line with the existing research in the field, which found that males were more likely than females to

commit criminal acts, including acts of violence (Steffensmeir & Allan, 1996). Although this secondary analysis was not directly related to our hypothesis, it is still a noteworthy pattern in our data. This trend might provide insight about potential characteristics of a violent extremist.

Overall, while many of our results did not support our hypothesis, we did note some interesting patterns in the data. In the next section of this chapter, we will discuss potential downfalls of our study and potential reasons why our data did not provide support for our hypothesis.

### **Lack of Support for the Hypothesis**

We did not find statistically significant support for the hypothesis: a high-level construal manipulation will increase an individual's likelihood to engage in ideologically based violence, and a low-level construal manipulation will decrease an individual's likelihood to engage in ideologically based violence. We would have expected to see statistically significant results, even if the opposite was true: a high-level construal manipulation will decrease an individual's likelihood to engage in ideologically based violence, and a low-level construal manipulation will increase an individual's likelihood to engage in ideologically based violence. The lack of significant results to support the hypothesis implies two possibilities:

- Vulnerability in the study paradigm: Construal level does affect an individual's likelihood to engage in ideologically based violence, but a vulnerability in the study paradigm prevented us from observing the expected results.

- Little to no effect exists: Construal level does not affect or has a non-significant effect on willingness to participate in ideologically based violence.

**Vulnerability in the study paradigm.** If construal level does affect an individual’s willingness to engage in ideologically based violence, one or more failures in the study paradigm would explain why we did not observe a significant effect. To produce accurate results, the study design needed to lead participants successfully through four study constructs: construal manipulation, construal shift, change in willingness to engage in violence, and reported willingness to engage in violence. If construal level has a significant effect on willingness to engage in ideologically based violence, there was likely a breakdown between one or more of these constructs. Our evaluation of vulnerabilities in the study paradigm is shown in Figure 5.1.

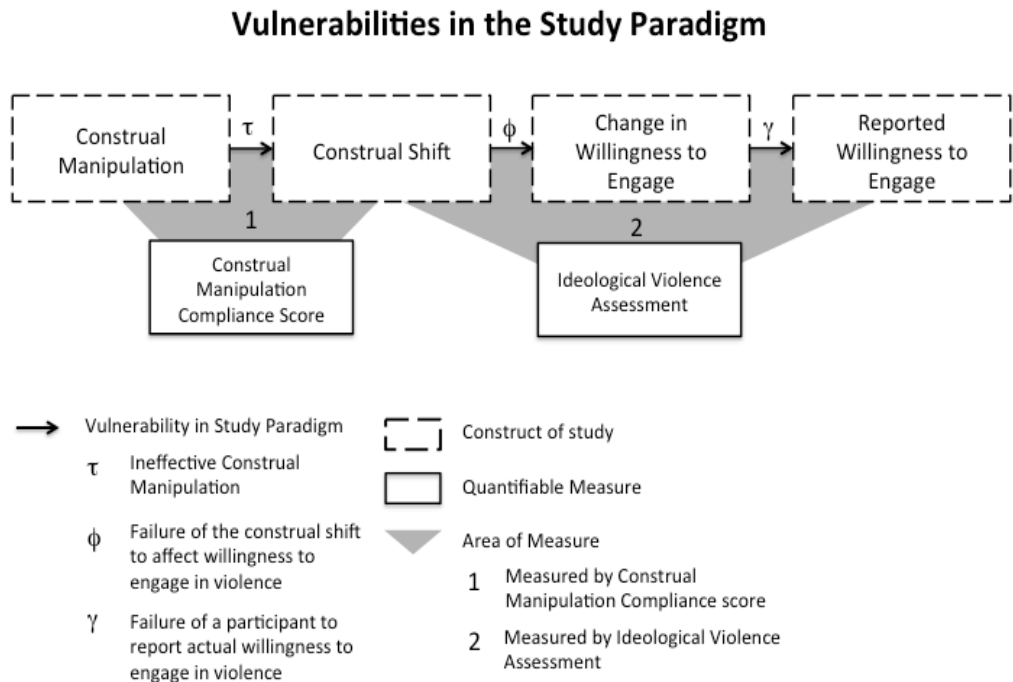


Figure 5.1. Vulnerabilities in the study paradigm diagram.

We identified three possible points of vulnerability in the study paradigm where a breakdown could have occurred.

- Tau ( $\tau$ )—ineffective construal manipulation: The application of construal was not appropriate or successful. Participants did not answer the “How?” and “Why?” questions in an expected manner and/or the construal manipulation failed to induce high-level and low-level construal for participants.
- Phi ( $\phi$ )—failure of the construal shift to affect willingness to engage in violence: The construal shift was not as effective as expected. The construal shift was not large enough to induce ideologically based violence and/or participants were not engaged fully during the study.
- Gamma ( $\gamma$ )—failure of participant to report actual willingness to engage in violence: The construal manipulation did affect a participant’s likelihood to engage in ideologically based violence, but the participant’s responses did not reflect this change. The participant does not want to admit how likely they are to commit a socially undesirable violent act.

Though it is impossible to measure the vulnerabilities in the paradigm directly, we can indirectly assess the success or effectiveness of study constructs through two quantifiable measures:

- Measure 1—Construal manipulation compliance score: This score was used to preface the validity of our hypothesis and the context of the results, and evaluate the abstractness or concreteness of participants’ responses. It can measure whether the construal manipulation resulted in an observed construal shift.



- Measure 2—Ideological violence assessment: This assessment was used to measure a participant's reported willingness to participate in ideologically based violence. This measure can inform whether the construal shift (if successful) affected reported willingness to engage in violence.

Measure 1 helps explain whether tau—ineffective construal manipulation—occurred. Measure 2 helps explain whether phi—failure of the construal shift to affect willingness to engage in violence—and/or gamma—failure of a participant to report actual willingness to engage in violence—occurred. However, we cannot distinguish between the occurrence of phi and gamma using this measure alone. This is because Measure 2 measures the effect of all study constructs between the construal shift and the reported willingness to engage in ideologically based violence.

**Evaluation of vulnerabilities in the study paradigm.** Using only our data, we cannot determine whether tau, phi, and/or gamma occurred. However, we are able to use our results and relevant literature to reasonably postulate whether these points of vulnerability were likely the cause of the non-significant results.

***Tau: ineffective construal manipulation.*** Tau implies that the construal manipulation was not appropriate or successful and there was a breakdown between the construal manipulation and construal shift constructs. This is a possibility, as both primary investigations had novel aspects; PI-1 and PI-2 both used ideology based construal action statements not found in literature. Additionally, PI-1 used a construal manipulation method that was not found in literature. We could not guarantee these novel approaches would create successful manipulations, and we did not know whether

participants would respond appropriately to the manipulation questions. However, we used the construal manipulation compliance scores to indirectly measure the success of these construal manipulations.

The average aggregate construal manipulation compliance scores for both primary investigations imply that the construal manipulations caused a successful construal shift. There was a significant difference in the observed psychological distance of the low-level and high-level conditions, and these conditions trended in the expected direction—less than 0 for low-level and greater than 0 for high-level. The construal manipulation compliance scores serve as a proxy to measure the construal shift, but cannot directly measure the shift. This measurement gap causes uncertainty in both parts of the primary investigation.

*PI-1 specific concerns.* The manipulation compliance check indicates the PI-1 construal manipulation succeeded in causing a construal shift. As explained in the results section, the difference in means between the low-level and high-level condition compliance scores was significant at  $\alpha = .05$ . However, we do not know and cannot precisely measure the magnitude of participants' change in psychological distance.

PI-1 used a completely novel construal manipulation method. Participants were asked to respond to prompts embedded throughout the vignette that were designed to facilitate a construal shift. These prompts appeared on separate pages in the survey, rather than on the same page. No existing literature validates this approach. Therefore, it is not possible to determine the magnitude of a participant's construal shift. We consider tau to be a significant point of vulnerability and a possible breakdown for PI-1.

*PI-2 validation.* PI-2 involved the use of a construal implementation methodology most prominent in literature (Trope & Liberman, 2010; Fujita et al., 2006). For this reason, we do not have the concern we had in PI-1 regarding the lack of a linear construal progression. We are more confident in the manipulation compliance check for PI-2, which shows the construal succeeded in causing a construal shift. As explained in the Results section, the difference in means between the low-level and high-level condition average aggregate compliance scores was significant. We do not consider tau to be a major contributor to the lack of significant results in PI-2. We must then look to phi and gamma for a potential breakdown in the study paradigm for this investigation.

***Phi: failure of the construal shift to affect willingness to engage in violence.*** Phi would occur if the shift in psychological distance was not strong enough to cause a significant effect on willingness to engage in violence. This might have occurred if the construal shift was not large enough to induce ideologically based violence or if participants were not engaged fully during the study. Phi and gamma are indirectly measured by the ideological violence assessment, not the construal manipulation compliance scores. The ideological violence assessment allows us to indirectly measure whether construal shift affected willingness to engage in violence, whereas the construal manipulation compliance scores shows whether there was a construal shift. However, the ideological violence assessment does not allow for a distinction between a phi and gamma occurrence.

Looking back through the paradigm, the construal manipulation compliance scoring can help us understand why the construal shift might not have caused a shift in

willingness to engage in violence. Analyzing the construal manipulation responses and the construal manipulation compliance process gave insight into whether phi is a likely breakdown in the study paradigm.

*Emotion, ideology, and psychological distance.* The politically charged construal conditions/action statements in our study differed from approaches seen in the literature where action statements typically consist of neutral, non-emotional tasks and goals (e.g. “Maintain good physical health”) (Fujita et al., 2006; Hansen et al., 2013). The raters and researchers observed that the ideologically charged nature of the vignettes caused participants to input emotion into their responses. Some participants, in turn, deviated from directly responding to the “How?” or “Why?” questions as they moved along the construal manipulation. These types of responses would have been scored as more broad or more specific for each construal response. However raters and researchers noted these responses held at an apparently constant level after the first construal response as participants used the response entry mechanism to voice their thoughts on the issue. This may have diluted the magnitude of the construal shift.

This issue with emotion and psychological distance has been observed in literature previously. Six studies focused on psychological distance and emotion demonstrated that “emotional intensity reduces perceived psychological distance” (Van Boven, Kane, McGraw, & Dale, 2010, pg. 1). This could have negatively affected the high-level construal manipulation, aimed to increase psychological distance, and positively influenced the low-level construal manipulation, aimed to decrease psychological distance. Therefore, we could have seen a significant difference between

the high- and low-level construal manipulations, but this shift might have been uneven. If this shift was not as strong as expected, the participants' responses might not have exhibited a significant construal effect.

With the construal shift diluted, participants' psychological distance might not have warranted a large enough change in willingness to engage in violence to reject the null hypothesis. Past construal research on psychological distance investigating self-control and perception of time showed that a small construal shift could elicit a change in measured response (Fujita et al., 2006; Hansen et al., 2013). However, a small shift in construal might not have been enough to influence willingness to commit a socially undesirable violent action.

***Gamma: failure of participant to report actual willingness to engage in violence.*** Measuring propensity to engage in violence even in a controlled scenario remains challenging. Involvement in violence is influenced by what a person believes to be in line with socially acceptable behavior. It is also influenced by what perceived boundaries must be crossed in relation to a self-imposed code of conduct (Yang et al., 2012). The between-subjects design we employed made it difficult to completely understand an individual's baseline propensity for violence. If construal shift significantly influenced likelihood to engage in ideologically based violence, social desirability bias could have caused participants not to report this willingness.

Social desirability bias is the tendency of individuals to deny socially undesirable actions (such as violence) and report behaviors in line with societal expectations (Zerbe et al., 1987). Social desirability bias has been seen in interpersonal violence research,

where people underreport their violent behavior (Saunders, 1991; Henning et al., 2005; Straus, 2004). A study in 2003 explored the presence of social desirability when participants read vignettes and answered questions about unethical decision making (Chung & Monroe, 2003). This study showed that social desirability bias was higher when participants were faced with a less ethical situation (Chung & Monroe, 2003). This bias has not been studied in ideological violence research, but it is reasonable to assume this study was affected by some level of social desirability bias because the central subjects—violence and ethical decision making—are controversial topics.

This study did employ methods to reduce the presence of social desirability bias. Allowing participants to complete a self-administered questionnaire without an interviewer present has been shown to reduce this bias (Krumpal, 2013). This study allowed participants to respond to the ideological violence assessment in private on their personal computer. Assessment language is also crucial. Social desirability has been reduced by starting an assessment with more general questions before asking about specific behaviors (Krumpal, 2013). This study attempted to use language that did not discourage the participant from indicating a willingness to engage in violence in the ideological violence assessment. We began the assessment asking about someone else's behavior and then asked about specific, personal decisions.

Though the study controlled for some social desirability bias, it did not incorporate methods to measure or adjust for social desirability. The Marlowe-Crowne Social Desirability Scale and other similar methods are often used in social desirability studies to determine and adjust for participant's level of social desirability bias

(Reynolds, 1982; Crowne and Marlowe, 1960; Saunders, 1991). However some research suggests measures such as Marlowe-Crowne can be unreliable, measuring for need for approval or other constructs rather than social desirability bias (Zerbe & Paulhus, 1987; Paulhus, 1984; Paulhus, 1988). We chose not employ the Marlowe-Crowne scale or any similar method in this study. This means we are not able to adjust for social desirability bias, and cannot rule out gamma as a point of vulnerability in the study paradigm.

### **Weaknesses and Limitations**

Through the course of conducting our research, we have identified several shortcomings in the study design that might have adversely impacted our results. These limitations were due to logistical limitations, vignette ideology issues, and novel features of our study.

The first logistical limitation of our primary investigations was that participants were all University of Maryland students between 18-24 years of age. This population sample may not represent those likely to engage in violent extremism. Secondly, participants completed the study online. While many psychology studies have been done online, it is possible participants did not consider their responses to the construal manipulation questions as carefully as they might have in a lab setting with the researchers present.

There are also potential statistical limitations because of the large number of vignettes used in the study. Because of the limited number of participants who read each vignette, we were not able to directly compare the ideologies. Future research could

reduce the number of vignettes. This would allow for stronger statistical analysis and less variability between subjects as more participants would be assigned to each vignette. If participants were recruited for the study through matching their ideologies with a vignette's underlying ideology, fewer vignettes would be needed.

Additionally, some participants became confused about which side of a debate an issue's label represented. For example, several participants ranked the "Pro-Life Movement" to indicate that it was an important issue for them. However, their responses clearly indicated that they possessed an affinity with the "Pro-Choice Movement." This confusion was not accounted for by our study.

Finally, a limitation specific to PI-1 was the embedding of the construal manipulation in the vignette. This method is untested. Due to other unproven variables in the methodology of our study we are unable to determine the validity of this construal manipulation method. If effective, this type of construal manipulation could be beneficial, as the construal manipulation is directly integrated into the vignette.

### **Future Directions**

Questioning the limitations of this study lead to consideration of potential changes to be made in future research. These limitations also introduce further questions that should be explored because of this study's inconclusive results. The pilot study proved that ideological issue vignettes were able to incite willingness to participate in violence. PI-1 showed that participants were affected in some way by the novel construal approach. PI-2 showed that the tested (but slightly novel) construal method did shift participants.



The pilot study proved that the vignettes were able to incite a willingness to participate in violence for some participants. However, these vignettes should be further tested, and if used in the future, altered vignettes dealing with ideological issues should be carefully derived for testing of ideologically based violence. The vignettes should not only be tested for ability to incite willingness to participate in violence, but also for accurate, specific representation of their ideological issue. In addition, narrowing down the scope of our vignettes by, for example, reducing the number of vignettes to 2 or 3, might reduce the effect that any variation among the vignettes had on participant construal and allow for more comparative statistical analysis.

PI-1's novel construal manipulation did pass the standard construal manipulation compliance check, but this does not prove that participants underwent a large construal shift. This construal manipulation method should be tested on its own. Several methods have been developed to test whether a participant is thinking abstractly or concretely. One such measure is the Behavioral Indication Form, which allows people to choose concrete or abstract descriptions for 13 behaviors to determine their construal level (Alter, Oppenheimer, & Zemla, 2010). PI-2 also used a slightly novel manipulation approach, using action statements corresponding to the issues in the vignettes as opposed to the standard phrases, "Maintain good physical health," used by Trope and Liberman (Fujita et al., 2006). In future versions of this study the standard action statements could be used.

In a future iteration of this study rather than using low-level and high-level manipulations the time distance method could be implemented. This is because past

construal manipulation studies have proven that when using vignettes time distance manipulations have been exceedingly effective to induce construal shifts (Tumasjan, Welppe, & Spörrle, 2013; Overton, 2010). This method would be the best way to prevent participant's responses to the manipulation questions from affecting their construal manipulation levels.

Finally, a simpler ideological violence assessment could be used in the future or a general alternative to the questionnaire. The ideological violence assessment may have had a construal effect independent of the condition. A one or two question response could have been used to first measure whether or not there was a general shift in willingness to participate in ideologically based violence. After this altered study, further research could be done to measure specific aspects of willingness to participate in ideologically based violence.

### **Conclusion**

This study did not prove that low- or high-level construal mindsets affect willingness to participate in ideologically based violence. Our explanation of the study paradigm has exposed this study's points of vulnerability and provided a basis for developing future research investigating construal and ideologically based violence. Future research should seek to eliminate or isolate individual aspects that could cause failure in the study paradigm. It is possible construal does not have a consistent or significant effect on an individual's likelihood to engage in ideologically based violence. However, previous literature implies it would be difficult to conclude construal has no effect on an individual's decision without further investigation. The way abstract and

concrete mindsets alter thought processes must be better understood before construal can inform the understanding of decision making patterns and ideologically based violence.

## Appendix A

### Vignettes Used In Pilot Study

#### **Church Scandal**

You and your family have been attending religious services at the same location for over a decade. The presiding preacher has been the pastor of the location for a few years longer than you and your family has been attending. Over that time, the preacher has administered all religious rites of passage to your children and as a result has become quite close to your family. Over the years, you have heard rumors about your preacher engaging in pedophilic behavior, but you wrote them off as untrue and unthinkable. Very recently, more stories have been coming out about the preacher being involved in child sexual abuse scandals. A few days after the stories were released, one of your children comes to you and discloses that the preacher sexually abused them. You approach the leadership in the religious organization about the issue, but they have moved to cover up the scandal, much like they had done before in the past. They move the preacher to another church in order to push the issues under the rug, and deflect criminal or civil cases against them. It begins to look like there will be no consequences placed upon the preacher who abused your child, or any of the other priests who have previously been alleged in this activity. This trauma is starting to affect your child's performance in school, and his general disposition. The police have conducted a thorough investigation, but the organization's leaders have made sure to eliminate all evidence. You've tried to get authorities to reopen the case against the preacher, but the authorities say there isn't enough evidence. It seems as though all peaceful options have been exhausted. If the Church is made to understand the consequences of their actions, then this activity could potentially cease.

#### **Big Company**

You are recovering from a severe automobile accident that was caused unexpectedly when the steering column in your car stopped working, making it uncontrollable. You had just bought this car after saving money for several years. After a couple of days, you return to work and hear breaking news regarding the manufacturer of your car on T.V. The manufacturer is being investigated for the widespread deaths and injuries that have been caused by the malfunctioning steering column. It was discovered that executives of the company knew about the part malfunction and turned a blind eye to increase profits. Furthermore, you learned that the company refuses to initiate a recall despite the widespread injuries and deaths because of the financial benefit of taking in lawsuits. The government has tried enacting more strict actions against the company, but weak Consumer Protection laws prohibit the government from forcing the company from

recalling these cars. Protesters have tried to raise awareness, but the company has taken action against them, imprisoning them for “interfering with Corporate Practice.” Meanwhile, people who need cars and have no other means of transportation must drive these vehicles, thereby risking injury or death. It seems like all peaceful options have been exhausted. If the company is made to realize the effects of their unethical actions, then the deaths and injuries could potentially be resolved.

### **Animal Cruelty**

You are a citizen of a local town who works at an animal shelter. You come in everyday to check up on the animals and make sure they are healthy. Many stray animals that are brought to the shelter are hurt or malnourished. Your job is to bring them into a home where they will be loved and cared for. Recently, you started noticing that some dogs are coming in much more mangled than usual. These dogs have bite marks and claw marks all over their bodies. From your observations, these injuries are a result of dog fighting. As this becomes more and more of an issue, rumors spread across town about an underground dog-fighting ring led by local gangs. This rumor becomes reality for you when a dog arrives in the shelter branded with the gang's symbol. You ask the local police to investigate the allegations, but they couldn't come up with enough evidence to convict the dog-fighters. Regardless, the local gang has enough prominence in the area that they could use their resources to evade consequence. It soon gets to the point where dogs are being euthanized in your shelter because they come in in such bad shape. Local dogs are even going missing, reappearing dead weeks later. Things are getting worse around the town, and it seems like nothing can be done to stop this group. If the group is stopped, it is possible that dog fighting may cease in your community.

### **Immigration**

Before you were born, your parents moved to the U.S. from a different country to avoid gang violence and political corruption. Your parents were able to get the proper visas to live in the United States through the help of your relatives. They hoped they would be able to raise a family, live the “American Dream,” and achieve the success that they've heard so much about. Both your parents were able to get honest jobs upon arrival, and have been doing quite well in the U.S. However, due to rising rates of illegal immigration, the government has enacted a radical policy of deporting all people suspected of being illegal immigrants, regardless of whether or not they actually are. This comes as a policy to “keep jobs for the Americans.” Alarmed by this, you decide to write to your representative regarding this new legislation only to get a reply saying that necessary steps are being taken to keep this “the greatest country in the world.” As anticipated, your parents have recently been detained as suspected illegals. Despite showing the proper documentation of residency in the United States, the police are

threatening to deport your parents. You've tried showing the proper documentation and written to your representatives again. There seems to be no other option available for you. It is possible that if the government understands the ramifications of their actions, they may stop enforcing this ludicrous policy.

### **Student Abuse**

The local high school in your community is renowned nationwide for its academic excellence. It has produced many students that have gone on to attend top schools become leaders in their fields. You have family that is currently attending the high school, and doing very well in its programs. However, allegations have been arising regarding abuse on behalf of the school. Several students have come forward claiming that they have been physically abused by some of the teachers at the school. They have gone on the news and told their story, but no action has been taken. One girl was found unconscious behind the school and claimed that one of her teachers went too far in reprimanding her for disrespectful classroom behavior. Police have been involved in the issue but, despite their best efforts, they have not found enough evidence to convict any teachers. The school board continues to back the educators stating, "Any actions taken by the educators are within the lines of their employment." Recently, your relative who attends the school confides in your family that one of the teachers has abused him for mildly disruptive behavior. The police have done what they can, and it seems like all options are exhausted. If the school board understands the damage that its employees are causing on these children, then they may take the necessary steps towards stopping this abuse.

### **Sexual Abuse**

Your family has recently moved to a new town because of a promotion your father received. You and your sister start school together after you move in. After attending the school for a couple weeks, you hear rumors being spread by some of the other students about sexual abuse occurring in the school. Some cases have even been brought to the school board, but they have been disregarded as "rampant imaginations." After some time, you notice that your sister looks dazed and nonresponsive. She rarely speaks and skips her meals with the family. She eventually confides in your mother that the gym teacher sexually abused her. She says that he would hurt your family if she ever told. Your family attempts to approach the school board, but they once again shrug it off as a wild story. While in the process of looking at your sister's case, several other cases have arisen regarding similar situations. There are too many allegations for this to be a "rampant imagination." The school board continues to back its teachers, saying that nothing of this magnitude could ever occur. Numerous parents have tried writing to the board, but to no avail. Many parents are unable to transfer their kids out of the public

school system because it's too expensive. It seems like there are no peaceful options remaining. If the school board is made to understand just how many people their negligence is hurting, they make finally take action.

### **Gay Students**

As a result of the increased visibility of gay rights activists on campus, and recent conservative takeover of leadership, your local private institution is banning gay students from attending. That is, they are observing students' original applications to expel those who originally identified as homosexual. You don't understand why, because all these students were trying to do was push for equality. Students that are openly gay are being pushed out of the University and being told to transfer to local community colleges. Their careers are being hindered and their academic goals halted as their education is being downgraded. As a supporter of equality for all, you witness a great deal of your friends being pushed out of the University that they have given so much to. The University has been approached about this issue, but they have responded stating that "They will find their academic path elsewhere" and that "This is what good Christians should do." Activists that have tried to peacefully protest the University have been prosecuted for their resilience, and some incoming students are even hiding their sexuality to obtain a quality education. The University has refused to take any more complaints or concerns regarding the change, and has received no penalties from the state for the recent change in policy because the private institutions are not under state control and jurisdiction. It seems like all peaceful options have been exhausted. If the University is made to realize the consequences of their actions, they may reconsider the new and oppressive policy.

### **Transgender (Military)**

Recently, the United States military has been having trouble with some allegations about cadet abuse. It is becoming nationwide news that some transgender individuals are being abused while in boot camp. Because of this new conflict, the military has decided to ban all transgender individuals from service. Any transgender person currently in the service will be discharged and relieved from their duties. Though repealing Don't Ask Don't Tell gave new legal guarantees for Lesbian, Gay, and Bisexual individuals in the Armed Forces, those same guarantees were not extended to transgender individuals. You watch as some of your transgender friends are discriminated against, and prevented from serving their country. Their dreams are shattered just because they were born in the wrong body. Your friends contact military officials and the federal government, but are told that they are just taking necessary steps to "prevent further conflict" and to "keep morale up among the soldiers." Those who have tried to peacefully protest the new policy have been incarcerated for "disturbing the peace." The military holds true to their actions throughout this change to the new policy. It seems like all peaceful options have been

exhausted in trying to exert change. If the military is made to understand just how discriminatory and harmful their policies are, they may reconsider.

### **Universal Health Care**

As a result of the push for Universal Healthcare by the current presidential administration, many doctors are being pushed to charge mandated rates for health services. Many doctors are being pushed out of their practice, and those who are not are avoiding proper service due to decreased prices of healthcare as a result of the new system. Even the services covered by your private health care disappear upon the mandatory change to the government provided healthcare. Even though one of your extremely close family members is dying from a treatable disease, you cannot obtain the necessary care because of the new health care reform. You've tried to contact the federal government, begging for aid in acquiring the necessary care, but they have told you "the needs of many outweigh the issues of the few." Even if they would make an exception, it would be at least two years before treatment is given because of the terrible guidelines set forth by the legislation. It is unlikely for licensed doctors to perform the operation in fear of losing their certifications; with so few doctors remaining, society can't afford it. It seems like all peaceful options have been exhausted. Your family member will die if they don't get the medical help that they need and deserve. If the government understands the consequences that their radical policies have on society, they may change the ridiculous legislation they passed.

### **Pollution**

The Tactile Company is a very large corporation with a chemical facility in your community. You just discovered that Tactile has been dumping chemical pollutants into the river that supplies water to your neighborhood. A lot of people in your neighborhood strongly suspects that the company had been doing this, but had no proof, nor did they experience any side effects that would be tied to any chemical dumping. However, recent reports released by local experts indicate that toxic levels in the area are well above acceptable, and attribute this to Tactile, claiming that pollutant concentrations are highest near their facilities. You and some of your family members have experienced vomiting and overall illness as a result of drinking some of the community water. Activists have attempted to peacefully protest Tactile about this issue, but Tactile has used their resources to persecute these protesters. The protesters have since been incarcerated for their efforts. Though this becomes a public concern, it is quickly swept under the rug due to the massive size of the company. You contact the company about the issue, but they have responded stating, "The interest of our shareholders is important above all else." Local government and police have worked hard to investigate this issue, but could not come up with enough evidence to incriminate the company. It seems like all options to



reason with the company have been attempted. If the company is made to understand how much their reckless disregard for the community is hurting so many people, they may alter their policies.

### **Political Action**

Recent political reform has struck the U.S. This reform involves an elitist group that has created a radical liberal party, one that appeals to the rising group of near socialists in the country. This group of socialistic individuals, called the "Peoples' Party," has worked their way into the government through an elaborate series of bribes and corruption. It is well known that this group seeks to take power away from the blue and white-collar workers, but the rising lower class continues to provide support to the People's Party simply through their immense voting power. The Peoples' Party is well known for its ability to cause massive social changes, and has made it clear that their next political action will be to remove all means of retaliation from the U.S. working class. They plan to create a new police force to oversee the middle class. It is believed that this is because the Party wishes to exert physical control over the population, and must remove any options of defense in order to do so. If this is to occur, the U.S. may lose its freedom and existing democracy. Protesters have already been imprisoned as a result of their efforts to halt the People's Parties actions, and journalists have been forced to create propaganda supporting the People's Party's claims. Efforts have been made to contact ally countries, but they hold firm to remain neutral in the United States' affairs, claiming that they will only act if it affects international relations. It seems like all peaceful options have been exhausted. If the People's Party is made to understand the absurdness of their actions, they may dissipate and the U.S. may return to its original state.

### **Pro-Choice**

You and your spouse have finally conceived a baby after years of trying. But after a recent checkup you learn that if you were to keep the pregnancy to term, both mother and child would not survive. Your doctor informs you that an abortion would save the mother's life, but the child would not survive. However, he informs you that due to recent state legislation pushed by far-right pro-life groups, he cannot give an abortion. Desperate and afraid, you and your spouse try to find a "back-alley" doctor to perform the procedure, but you know that that is unsafe, and you may lose both lives in the process anyways. Due to the massive power of the extreme conservative group, any peaceful attempt to challenge this recent legislation has been unsuccessful. Protesters of the new laws have been incarcerated for "disturbing the peace." The only justification conservatives have provided the public is that "it is what God wants." You've even tried writing representatives, but they respond saying that there's nothing that can be done now that the legislation is passed. Some of the pro-life supporting representatives respond

stating that it's "for the best." It seems like all peaceful options have been exhausted. If the pro-life organizers and politicians are made to understand how many lives are unnecessarily being lost, they may reconsider the legislation.

### **Pro-Life**

Women's Choice is an abortion clinic in your town. The clinic routinely performs late-term abortions and to-date has murdered more than 1,000 healthy, innocent babies. You learn that the clinic has been subjecting women to unsafe practices such as snipping babies' spinal cords and killing babies who were born alive. You have petitioned Maryland and the local governments to shut down the clinic, but the legislators have denied your requests. Then your sister, who is pregnant and is 24-weeks along, decides to abort her baby. You try everything in your power to talk her out of it, but she goes to Women's Choice to end the pregnancy. Later that day, you get a call from the hospital saying your sister is in serious condition; the doctors at Women's Choice punctured her uterus during the procedure. She will never be able to carry a child again. The next day you go to Women's Choice to confront the doctors, but once you began explaining, they called the police to escort you out of the building. You are told that if you come onto the property again, you will be charged with trespassing. Throughout the next week you try to contact the legal counsel, but no one will take your case. When you finally get someone to talk to you, they tell you there have been 20 cases against Women's Choice, and none of them have been successful. Because late-term abortion is legal in Maryland, the clinic cannot be shutdown. No lawyers are willing to take on a case that is guaranteed to fail. You know you need to take action to ensure other women and babies aren't subjected to these doctors' malpractice, but you're not sure what you can do. It seems like all peaceful options have been exhausted. If Women's Choice is made to understand the consequences of their actions, they may stop performing these terrible services.

### **Gay Marriage (Against)**

Due to recent social change, the state has permitted the legal marriage of individuals of the same sex. These individuals now have the same rights and titles as opposite sex couples. The state has even enacted new laws making it illegal for any religious institution to deny the union of individuals of the same sex. And although this goes against your churches' religious beliefs, you are pushed to believe that this is okay and change your religious traditions. Those who support this new change even label your church as an "institution of hate" just because your church expresses its dissent for the new change. Your church does not promote hate, but it does hold true to the relationships that God intended, one that involves the union of a man and a woman. Even though you and your church have tried to inform society that you do not hate homosexuals, you are still pushed out as outcasts. Recently, the state has decided to make your religion illegal

because your beliefs conflict with their new agenda. They state that because your religion is not “progressive” enough, you should not be able to legally express your own dedication to God. Members of your faith who continue to express their opinions of what God has in mind for relationships have been alienated. Even those who have simply identified with your religion in public have been penalized for going against the new laws. You have tried contacting state representatives, but they respond stating, “Your hatred for others has brought your downfall.” Even though these are your personal beliefs that you gathered from your study of the Bible and your religion, you continue to be discriminated against. It seems like all peaceful options have been exhausted. If the State is made to understand how ridiculous their actions are, they may reconsider the neglect that they have for your religious opinion.

### **Corrupt Judge/Gang violence**

Recently, crime has become rampant in your community. It has become very common to hear of murders, robberies, and other terrible crimes every night on the news. Rumors have spread across town of a corrupt judicial system that is accepting bribes from local crime lords to push their employees through an expedited judicial process that gives them ridiculously mild sentences for major crimes. This rumor seems a bit ludicrous considering the fact that the system has always seemed to be just and fair. However, the rumor gains some validity when one of your neighbors was murdered on the street and the suspect indicted for the crime received a 1-year sentence with possibility for parole. Situations like this have risen across your community, and some people have started to take action. However, those who have questioned the court system have been incarcerated and sentenced extremely harsh sentences. Protests that have occurred outside the judicial building have been silenced by threat of frivolous and extreme legal penalty. Even the legislative branch of your local government is rendered powerless due to the life terms that the existing judges are entitled to serve. Even though they could impeach the justices, legislators are afraid to do so out of fear of reprisal. It seems like all peaceful options to enact change have been exhausted. If the judicial organization in your community is made to understand the unjustness and corruptness of their actions, they may reform to a more fair system.

### **Tax Oppression**

Due to the recent shift in political power towards the Republican Party, the government has decided to alter taxes in the United States. They have chosen to shift taxes to favor big businesses and the “One Percent.” Now, tax rates for those with massive amounts of wealth are lower than tax rates for the middle and lower classes. You watch as people across the country struggle to budget for the new tax increases, as company officers and government officials enjoy greater wealth due to their tax cuts. Your working class

family is struggling to balance paying for your college, food, and other living expenses. Your parents have told you that college may now be too expensive for them to handle if taxes keep increasing. Some of your friends have already been pulled out of college due to the massive amount of economic struggle this tax discrimination is causing. You and others have tried to contact your Senators and Representatives, but they have only responded saying that they are only trying to stimulate business. However, almost all economists have released reports stating how bad this is for the economy. The government continues to hold to their new policy, silencing anyone who tries to go against pushing more wealth to the already wealthy; protestors to the new tax reform have been incarcerated for going against federal litigation. It seems like all peaceful options have been exhausted. If the government is made to understand how much their new policies are hurting your family and society as a whole, they may enact a more fair tax system.

### **Lost Unemployment Benefits**

Due to the recent economic downturn, many Americans across the country have lost their jobs. These families have gotten by because of the established Welfare system that this country has in place. Your own family has been able to survive these past couple years because of the system; your father lost his job a while ago because of the recession. However, because of political change shifting towards a more Conservative approach, welfare benefits are being cut in the country. The government has decided to take these funds gathered from taxes and put them towards our already massive defense budget. You watch as families across the country struck by the misfortune of unemployment now struggle to live and provide their children opportunities. Even your own family is hit hard, as paying bills and providing schooling for you and your siblings becomes near impossible. Your parents inform you that if your father can't find a new job immediately, they may have to pull you out of college. The new President has announced to the country that this removal of welfare benefits is necessary to protect the country from foreign threats, and that the American people are tough and will "survive." The government has refused to make any further comments on the issue, and has shrugged off all public concerns. People across the country are in bewilderment as to how to pay for their living expenses, and your family among others has even resorted to begging. The government continues to show no concern. It seems like all peaceful options have been exhausted. If the government is made to understand just how irrational the removal of welfare benefits is, they may bring back the program.

### **Pro Gun Control**

Recently, crime has been running rampant in your community. It is not uncommon to hear of murders, armed robberies, and other crimes occurring daily. Rumors spread that

the source of this crime is the relaxed gun control laws that have come about as a result of the new conservative shift in the government. These new policies allow almost any citizen to obtain a firearm simply by showing proof of citizenship. The government holds true to their argument that they are just protecting 2<sup>nd</sup> amendment rights. However, things progressively get worse as crime continues to become more and more prevalent. Numerous schools across the country have experienced shootings resulting from troubled students having easy accessibility to firearms. Things become personal when one of your family members is gunned down on the street and robbed for the money in their wallet. You try to contact local representatives about the issue, but they respond saying that they are acting within their constitutional power and are just protecting the right to bear arms. Protesters who try to peacefully reason with the government are thrown in jail for “disturbing the peace.” Meanwhile, crime continues to grow more and more rampant as guns saturate the streets. The overly conservative government continues to hold to their policies, even though shootings and violence become progressively worse. It seems like all peaceful options have been exhausted. If the government is made to understand just how much their policies are hurting the public welfare, then they might consider creating new and more protective policies.

### **Anti Gun Control**

Due to the increased amount of Democratic officials in the United States, the government has decided to completely ban the acquisition and use of firearms in the country. This comes as a part of their agenda to protect the public through any means possible. However, this policy proves to be counteractive when crime rates throughout the country go up. Gangs across the country are able to acquire firearms through underground markets while citizens are left defenseless against crimes. Numerous stories have been featured on the news regarding situations where armed robberies have occurred in citizens' homes and they were not able to defend themselves. Security guards across the country are unable to protect those they are supposed to because guns have been taken out of their hands. Things become too real for you when one of your family members is gunned down on the street for the money in their wallet, and local law enforcement was rendered powerless due to their lack of firearms. You and other citizens have tried to contact government officials about the new firearms policy, but they have responded saying “It's for the best” and “Citizens will learn to cope.” Protesters attempting to enact change have been incarcerated to keep the issue out of the forefront of public attention. The new liberal government continues to hold to their policies, even though this extremely radical change is doing nothing but hurt society and your family. It seems like all peaceful options have been exhausted. If the government is made to understand just how regressive and hurtful their policies are, they may consider putting the power to defend back into the hands of the public.

**Religious persecution**

Due to the recent acts of religious extremists who identify with your faith, the United States has become very hostile towards your particular faith. You and your family have moved into a town recently, which is mostly populated by people who practice a different religion than you. Normally that would not be a problem, but you begin hearing rumors that people who practice the predominant religion are very threatening. Your child tells you that some kids were getting bullied at school and in one instance a kid was hit, just for admitting that he practiced a different religion than the other kids at school. The teachers did not do anything to stop the bullying, ignoring it instead. A couple weeks later, your neighbor gets mugged by a group of people, who recognized him as a member of your religion by his attire. Your neighbor decides to go to the police, who were of no help, stating that they found no evidence of religious based discrimination. The next day, you come home and see that your window is broken. Upon entering your house, you see a brick lying in the debris of the window. The brick has a note attached to it, stating "If you're not careful, you're next." You immediately go to the police, pleading them to investigate the incident, and the note. After a couple of days, they give you the same answer that they gave your neighbor, that there wasn't enough evidence to take action. It seems like all peaceful options have been exhausted. If the offending religion is made to understand the cruelty of their actions, they may stop discriminating against other religions.

**Journalism/Freedom of Press**

Due to a shift in political agenda, the U.S. government has decided to limit the power of the press. This comes as a means to hide government actions from the public and maintain the most secretive atmosphere possible. Meanwhile, you are working for a major newspaper as a senior staff writer. You come into work one day, and meet with someone who provides you with some evidence that your government is engaging in illicit activities, such as bribery and even torture. You draft a story and send it in for publication the next day, but you receive an anonymous message telling you stop pursuing the story if you value your career. You talk to some of your colleagues about this, and they reveal that they too have received this same message. Soon, people start getting fired, and they tell you that they were working on similar stories, meant to expose the activities of the government. You see on the news that a journalist famous for their strong anti-government stances has been reported missing. You go to the authorities to report that people are being threatened because of stories they are trying to publish, but the police cannot help you because there seems to be no evidence to persecute anyone. You contact your government representatives, but they respond stating, "The legislation is for the best." You are fearful for your life and want to help make sure no one else gets

hurt. It seems that peaceful options are exhausted. If the government is made to understand that their policies are unacceptable, they may return freedom of the press.

### **For Stem Cell Research**

Due to the recent surge of Conservative government officials in the U.S., research involving stem cells has been declared immoral and illegal. This comes as a part of their agenda to “keep life holy.” People across the country who once relied on these stem cells for treatment of their medical ailments are now unable to receive the treatment that they need. You have always believed that embryonic stem cell research would be an important part of the future of medicine. You know that these new laws not only hurt countless people across the country, but even your best friend, who has been relying on stem cell research to treat his condition. He has told you that the only known treatment for his disease is through stem cell treatment, and that if he doesn't get treatment soon, his condition will quickly worsen and he will die within the year. You try to contact your local congressmen and other government officials about why they should repeal the new legislation, since many people will suffer as a result of their actions. You receive a reply stating “Unfortunately some will have to suffer in order for this country to get back onto the morally right path.” Protesters to the new legislation have already been incarcerated for “going against government action.” It seems nothing you say will change their mind. You know something needs to be done, but all peaceful options have been exhausted. If the government could just see how senselessly damaging their legislation is, they might reconsider their policies.

### **Oil Drilling at Sea**

Recently, a large oil spill has occurred in the Gulf. The spill covers an immeasurable amount of area, and is spreading every minute. Experts and reporters attribute the spill to DT Oil Company's negligence in engineering the oil drill. They claim that a frivolous engineering design caused the mechanism to fail. You watch as numerous reports emerge about the severity of the oil spill, and how it is harming the ecosystem. Thousands of animals are dying as a result of the spill, as the oil is mutilating their feathers, fur, and skin. DT Oil denies all accusations of their negligence, and even refuses to take action regarding the spill, even though they have the resources to. They claim that it is a “normal business risk” and “it's not as severe as the media claims it is.” However, economic repercussions start to arise, as ships importing crucial materials are barred from transporting into the gulf. You watch as people across the country begin to experience lay-offs, and even some of your family members lose their jobs as a result. Your parents inform you that they may not be able to keep you in college if nothing changes. DT continues to do nothing, as the situation in the Gulf keeps getting worse. The government has tried to stop the spill, but they lack the necessary equipment to do so. They also can't

force the company to stop the spill, as they do not have legislation that grants them the power to do so. DT refuses to take responsibility for their actions because they haven't seen a decrease in their profits; people have tried to boycott the company, but they are still one of the only companies that provide oil. It seems like all peaceful options have been exhausted. If the company is made to understand the severity of their negligence, they may begin to take action to fix the situation.

### **Treatment of Detainees/ Torture**

The U.S. has recently faced a slew of national security threats from foreign and domestic actors. In light of recent events, you read that the government of your country has backed away from its generally humanitarian stance of treatment towards prisoners, and has enacted new legislation that will allow them to torture their detainees and prisoners in order to get information. You and a lot of other citizens of the country are worried that the government is gaining too much power, and abridging the freedom of the prisoners that they detain. This situation hits you close to home when your best friend is surprisingly detained, facing charges of a crime that your friend did not commit. After your friend's disappearance, you start to worry, and hear rumors that the government is waterboarding their prisoners, and employing a variety of physical and mental tortures as well. You hear in the news that the few people who do return to their homes are reportedly mentally damaged. You call your congressman about your concerns, but in reply, you get a message stating that "national security is the most important concern on the government's mind, and the government will do whatever it takes to restore security to the nation." You know that this method of interrogation is certainly hurting many more people than it is helping. People are afraid to protest this movement in fear of being detained and subject to the same methods of torture. It seems that all peaceful options available to you are exhausted, but if the government is made to understand the destructive nature of their new legislation, they might repeal their new policies.



## Appendix B

## Social Issues related to Scenarios in first 24 Vignettes

Sexual Abuse in Institutions  
Unethical Business practices  
Animal cruelty  
Immigrant Rights  
Physical abuse in Institutions  
Sexual Abuse in Education  
Gay rights  
Transgender rights in military  
Universal Healthcare  
Pollution  
Dangerous political groups  
Pro-Choice  
Pro-Life

Gay marriage  
Corrupt Judicial system  
Unequal taxes

Gun Control (Favors)  
Gun Control (Against)  
Religious Persecution

Freedom of Press  
Stem Cell Research  
Environmental Protection  
Torture

Appendix C  
Pilot Study Prescreening Consent Form

<b>Project Title</b>	Pre-Study Screening
<b>Purpose of the Study</b>	This research is being conducted by Dr. Richard Yi at the University of Maryland, College Park. You are invited to complete a questionnaire assessing demographic characteristics. The purpose of this survey is to learn more about the demographic characteristics of individuals using Amazon Mechanical Turk.
<b>Procedures</b>	In this study, you will complete an online survey asking five simple questions about your age, highest education completed, place of residence, and the day of the week. The survey will take less than one minute to complete.
<b>Potential Risks and Discomforts</b>	<p>There are minimal risks from participation in this research. Although every possible means will be used to protect your privacy and identity, there is always a chance of an inadvertent loss of confidentiality. Your data in electronic form will be collected and maintained on a password-protected computer located in a secure, limited-access location on a secure server. In addition, you will be allowed to skip any question that you do not wish to answer. All information that you provide will be kept confidential, with the exceptions noted in the Confidentiality section.</p> <p>Your participation is voluntary and carries no legal or punitive risks. If participation in this survey arouses concerns or questions, then you may contact the Principal Investigator.</p>
<b>Potential Benefits</b>	There are no direct benefits from participation in this research. This survey will help the investigators identify demographic characteristics that may be used in later research studies.

<b>Confidentiality</b>	<p>Any potential loss of confidentiality will be minimized by keeping it in a secure, password-protected computer system. The personal information and questionnaire results will not be stored in a manner that associates them with the research respondent's name or identifying information.</p> <p>If we write a report or article about this research project, your identity will be protected to the maximum extent possible. Your information may be shared with representatives of the University of Maryland, College Park or governmental authorities if you or someone else is in danger or if we are required to do so by law.</p>
<b>Compensation</b>	<p>You will receive \$0.01 for completing the survey. You will be responsible for any taxes assessed on the compensation.</p>
<b>Right to Withdraw and Questions</b>	<p>Your participation in this research is voluntary. You may choose not to take part at all. If you decide to participate in this study, you may stop participating at any time. If you decide not to participate in this study or if you stop participating at any time, you will not be penalized or lose any benefits to which you otherwise qualify.</p> <p>If you decide to stop taking part in the study, if you have questions, concerns, or complaints, or if you need to report an injury related to the research, please contact the investigator:</p> <p style="text-align: center;"><b>Richard Yi, Ph.D.</b>  2103 Cole Field House  College Park, MD, 20742  (301) 405 7724  ryi1@umd.edu</p>
<b>Participant Rights</b>	<p>If you have questions about your rights as a research participant</p>

	<p>or wish to report a research-related injury, please contact:</p> <p style="text-align: center;"><b>University of Maryland College Park</b></p> <p style="text-align: center;"><b>Institutional Review Board Office</b></p> <p style="text-align: center;"><b>1204 Marie Mount Hall</b></p> <p style="text-align: center;"><b>College Park, Maryland, 20742</b></p> <p style="text-align: center;"><b>E-mail: <a href="mailto:irb@umd.edu">irb@umd.edu</a></b></p> <p style="text-align: center;"><b>Telephone: 301-405-0678</b></p> <p>This research has been reviewed according to the University of Maryland, College Park IRB procedures for research involving human subjects.</p>	
<b>Statement of Consent</b>	<p>Your electronic signature (Amazon Mechanical Turk username) indicates that you are at least 18 years of age; you have read this consent form; your questions have been answered to your satisfaction and you voluntarily agree to participate in this research study. You may print this screen for your records.</p> <p>If you agree to participate, please sign your name and date below.</p>	
<b>Signature and Date</b>	<p><b>USERNAME</b>  <b>[Please enter your Amazon Mechanical Turk username]</b></p>	
	<p><b>DATE</b></p>	

Appendix D  
Mechanical Turk Prescreening Survey

How old are you?

Response: \_\_\_\_\_

What day of the week is it?

Response: \_\_\_\_\_

What is the highest level of education you have completed or are currently completing?

Response: \_\_\_\_\_

What is today's date?

Response: \_\_\_\_\_

In what country do you currently live?

Response: \_\_\_\_\_

Appendix E  
Pilot Study Consent Form

<b>Project Title</b>	Social Psychology Study: Vignette Validation
<b>Purpose of the Study</b>	This research is being conducted by Dr. Richard Yi at the University of Maryland, College Park. We are inviting you to participate in this research project on social psychology because you completed an initial screening survey and are eligible to participate in this study. The purpose of this research project is to better understand which of our given vignettes are most impactful in order to validate their use in a future psychological study.
<b>Procedures</b>	In this study, you will read vignettes (which are short and evocative descriptions of an event used to elicit an emotional response), answer a questionnaire for each vignette, and complete a demographic survey. You will be given four vignettes from a catalog of vignettes and answer six questions following each vignette, for a total of 24 questions. For example, "On a scale from one to seven, with one being least and seven being most: How impactful do you find this story?", "On a scale from one to seven, with one being least and seven being most: How relatable do you find this story?". At the conclusion of the study, you will answer a demographic survey lasting roughly five minutes, which will consist of demographic characteristics, such as your sex, age, marital status, political orientation, and community involvement. The entire study, involving reading four vignettes and answering a questionnaire after each, will take approximately 30 minutes to complete.
<b>Potential Risks and Discomforts</b>	There are minimal risks from participation in this research. It is possible that some of the research vignettes or questions may make you uncomfortable or may conflict with your views on political, religious, or societal matters. You may choose to not answer questions that make you feel uncomfortable. Some sensitive topics that may appear in these vignettes include sexual abuse, abortion, school abuse, animal cruelty, LGBT abuse,

	<p>religious persecution, loss of family members and torture.</p> <p>Although every possible means will be used to protect your privacy and identity, there is always a chance of an inadvertent loss of confidentiality. Your data in electronic form will be collected and maintained on password-protected computers located in secure, limited-access locations on a secure server.</p> <p>Your participation is voluntary and carries no legal or punitive risks. If participation in this survey arouses concerns or questions, then you may contact the Principal Investigator.</p>
<b>Potential Benefits</b>	<p>You will not directly benefit by taking part in this study. However, the answers you provide in the questionnaires may help us to better understand factors related to aroused emotional sensitivity in response to social and political issues.</p>
<b>Confidentiality</b>	<p>Any potential loss of confidentiality will be minimized by the following: 1) The researchers will not collect any personally identifiable information on the consent forms and survey materials other than the Amazon Mechanical Turk username; 2) The personal information you provide to Amazon Mechanical Turk will be used solely for compensation purposes, names and/or other identifying information will not be shared with researchers; 3) Only the researchers will have access to the study data; 4) Study data, which includes the questionnaire responses, consent form, and non-identifiable personal information collected at the end of the study, received by the researchers through Mechanical Turk, will be secured in a password-protected laptop placed in a locked cabinet; 5) Your Amazon Mechanical Turk Username, questionnaire responses, and demographic survey responses stored on Qualtrics and Amazon Mechanical Turk will only be accessible with a secure login and password; 6) The online data will be downloaded and deleted immediately from the Qualtrics system after the completion of the study; and 7) Data collected will be kept for no more than 10 years, after which it will be destroyed.</p>

	<p>If we write a report or article about this research project, your identity will be protected to the maximum extent possible. Your information may be shared with representatives of the University of Maryland, College Park or governmental authorities if you or someone else is in danger or if we are required to do so by law.</p>
<b>Compensation</b>	<p>You will receive \$3.00 if you complete the survey. You will be responsible for any taxes assessed on the compensation.</p>
<b>Right to Withdraw and Questions</b>	<p>Your participation in this research is voluntary. You may choose not to take part at all. If you decide to participate in this research, you may stop participating at any time. If you decide not to participate in this study or if you stop participating at any time, you will not be penalized or lose any benefits to which you otherwise qualify.</p> <p>If you decide to stop taking part in the study, if you have questions, concerns, or complaints, or if you need to report an injury related to the research, please contact the investigator:</p> <p style="text-align: center;"><b>Richard Yi, Ph.D.</b>  2103 Cole Field House  College Park, MD, 20742  (301) 405 7724  ryi1@umd.edu</p>
<b>Participant Rights</b>	<p>If you have questions about your rights as a research participant or wish to report a research-related injury, please contact:</p> <p style="text-align: center;"><b>University of Maryland College Park</b>  <b>Institutional Review Board Office</b>  <b>1204 Marie Mount Hall</b>  <b>College Park, Maryland, 20742</b>  E-mail: <a href="mailto:irb@umd.edu">irb@umd.edu</a></p>



	<b>Telephone: 301-405-0678</b>	
	<p>This research has been reviewed according to the University of Maryland, College Park IRB procedures for research involving human subjects.</p>	
<b>Statement of Consent</b>	<p>Your electronic signature (Amazon Mechanical Turk username) indicates that you are at least 18 years of age; you have read this consent form; your questions have been answered to your satisfaction and you voluntarily agree to participate in this research study. You may print this screen for your records.</p> <p>If you agree to participate, please sign your name and date below.</p>	
<b>Signature and Date</b>	<b>USERNAME</b> <b>[Please enter your Amazon Mechanical Turk username]</b>	
	<b>DATE</b>	

Appendix F  
Pilot Study Warning Message

Please Read The Following Message About Your Assignment:

The assignment you are about to complete contains vignettes (short stories) which are based upon fictitious events. The vignettes contain a variety of topics that reflect current social dilemmas and are designed to evoke emotion from the reader. If you are concerned that these vignettes might bother you, then please exit the assignment and do not complete it in the future. If, while completing the assignment, you become bothered by the vignettes then please exit the assignment and do not come back to it.

Appendix G  
Pilot Study Questionnaire

On a scale from one to seven, with one being least and seven being most:

1) How impactful do you find this story?

1	2	3	4	5	6	7
---	---	---	---	---	---	---

2) How relatable do you find this story?

1	2	3	4	5	6	7
---	---	---	---	---	---	---

3) In general, what is your opinion about \_\_\_\_\_ (Customized for individual vignettes)?

Highly Against	Against	Somewhat Against	No Opinion	Somewhat Support	Support	Highly Support
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4) In this situation, how likely are you to resort to violence?

1	2	3	4	5	6	7
---	---	---	---	---	---	---

A) To what degree would your motivation for this violence be because you want to make a change

1	2	3	4	5	6	7
---	---	---	---	---	---	---

B) To what degree would your motivation for this violence is because you seek revenge?

1	2	3	4	5	6	7
---	---	---	---	---	---	---

## Customized questions for question 3

- 1) Church Scandal
  - a. In general, what is your opinion about stopping sexual abuse in religious institutions?
- 2) Big Company
  - a. In general, what is your opinion about stopping unethical corporations?
- 3) Animal Cruelty
  - a. In general, what is your opinion about stopping animal cruelty?
- 4) Immigration
  - a. In general, what is your opinion about immigrant rights?
- 5) Student Abuse
  - a. In general, what is your opinion about stopping abuse in educational institutions?
- 6) Sexual Abuse
  - a. In general, what is your opinion about stopping sexual abuse in educational institutions?
- 7) Gay Students
  - a. In general, what is your opinion about supporting gay rights?
- 8) Transgender in Military
  - a. In general, what is your opinion about supporting transgendered people's right to serve in the military?
- 9) Universal Healthcare
  - a. In general, what is your opinion about supporting Universal Health Care?
- 10) Pollution
  - a. In general, what is your opinion about stopping pollution?
- 11) Political Action
  - a. In general, what is your opinion about stopping dangerous political groups?
- 12) Pro-Choice
  - a. In general, what is your opinion about supporting the pro-choice movement?
- 13) Pro-Life
  - a. In general, what is your opinion about supporting the pro-life movement?
- 14) Gay Marriage
  - a. In general, what is your opinion about supporting gay marriage?
- 15) Corrupt Judge
  - a. In general, what is your opinion about stopping corruption in our courts?
- 16) Tax Oppression
  - a. In general, what is your opinion about tax reform?

## 17) Unemployment Benefits

- a. In general, what is your opinion about access to welfare programs?

## 18) Pro Gun Control

- a. In general, what is your opinion about controlling access to guns?

## 19) Anti Gun Control

- a. In general, what is your opinion about supporting the right to have access to guns?

## 20) Religious Persecution

- a. In general, what is your opinion about preventing religious persecution?

## 21) Journalism/Freedom of Press

- a. In general, what is your opinion about journalist's freedom of speech?

## 22) Stem Cell Research

- a. In general, what is your opinion about supporting stem cell research?

## 23) Oil Drilling

- a. In general, what is your opinion about protecting the environment?

## 24) Treatment of Detainees

- a. In general, what is your opinion about preventing the torture of detainees?

Appendix H  
Demographic Survey (for Pilot study and Primary Investigations)

1. Sex:

Male

Female

Other

Prefer not to answer

2. Age:

---

3. Marital Status:

Married/Partnered

Single/Never married

Separated

Divorced

Widowed

4. Political orientation:

Very conservative

Conservative

Moderate

Liberal

Very liberal

5. Please list your involvement with community and civic organizations and any leadership positions you hold within those organizations.

Organization:

Position:

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Appendix I  
Pilot Study Debrief Form

Debriefing Form for Participation in a Research Study

*University of Maryland*

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Thank you for your participation in our study! Your participation is greatly appreciated.

Purpose of the Study:

We previously informed you that the purpose of the study was to better understand what vignettes are most impactful in order to validate their use in a future psychological study.

Although **all the stories in the vignettes are entirely fictitious**, we understand that some of the questions and content in this study may evoke negative emotions or memories. As researchers, we do not provide mental health services and we will not be following up with you after the study. However, we want to provide every participant in this study with a comprehensive and accurate list of clinical resources that are available, should you decide you need assistance at any time. Please see information pertaining to specific resources at the end of this form.

Confidentiality:

You may decide that you do not want your data used in this research. If you would like your data removed from the study and permanently deleted please contact us through our Mechanical Turk account and we will remove your data.

Final Report:

If you would like to receive a copy of the final report of this study (or a summary of the findings) when it is completed, please feel free to contact us.

Useful Contact Information:



If you have any questions or concerns regarding this study, its purpose or procedures, or if you have a research-related problem, please feel free to contact the researcher(s) through the Mechanical Turk account.

If you have any questions concerning your rights as a research subject, you may contact the University of Maryland College Park Institutional Review Board Office (IRBO) at (301) 405-0678 or [irb@umd.edu](mailto:irb@umd.edu)

Further Reading(s):

If you would like to learn more about the use of vignettes in psychology studies please see the following reference:

Krosnick, J. A. (2006). Response strategies for coping with the cognitive demands of attitude measures in surveys. *Applied Cognitive Psychology*, 5(3), 213-236. doi: 10.1002/acp.2350050305

**\*\*\*Please keep a copy of this form for your future reference. Once again, thank you for your participation in this study!\*\*\***

## Appendix J

## Exact Mean Willingness to Participate in Violence per Vignette

The highlighted vignettes are the 10 used in the primary investigations

**Vignette Topic****Sup\_Vlnt Mean**

98 Sexual Abuse

4.3

202 Anti Gun Control

4.17

138 Political Action

3.88

66 Church Scandal

3.45

210 Religious Persecution

3.41

186 Lost Unemployment Benefits

3.41

178 Tax Oppression

3.28

146 Pro-Choice

3.21

194 Pro Gun Control

3.07

154 Pro-Life

3

90 Student Abuse

2.95

74 Animal Cruelty

2.89

218 Journalism/Freedom of Press

2.81

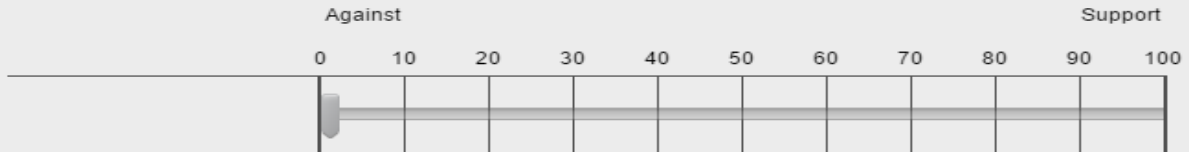
170 Corrupt Judge/Gang violence

2.77

### Appendix K Sample Ideological Violence Assessment

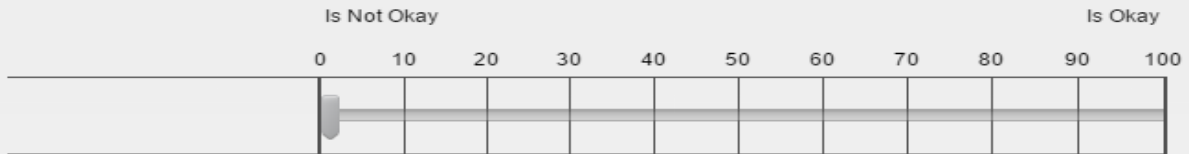
In general, what is your opinion about protecting American democracy from socialist policies?

I am strongly against supporting protecting American democracy from socialist policies  
0-----50-----100 I strongly support protecting American democracy from socialist policies  
(50 is neutral)



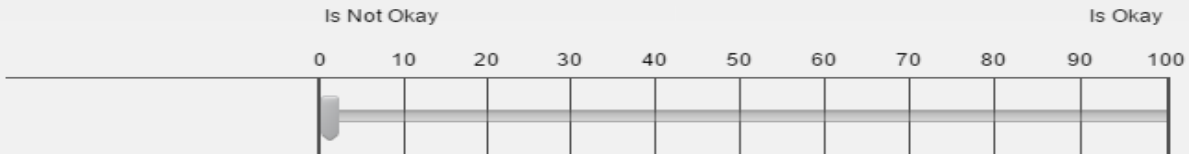
In this scenario, is it okay for someone to damage the homes of the People's Party officials responsible for this reform?

I strongly believe it **IS NOT** okay 0-----50-----100 I strongly believe it **IS** okay, (50 is neutral)



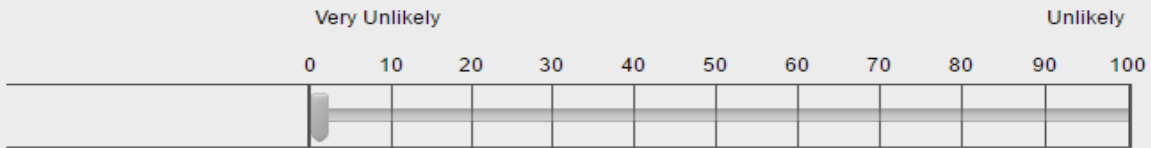
In this scenario, is it okay for an organization to damage the homes of the People's Party officials responsible for this reform?

I strongly believe it **IS NOT** okay 0-----50-----100 I strongly believe it **IS** okay, (50 is neutral)



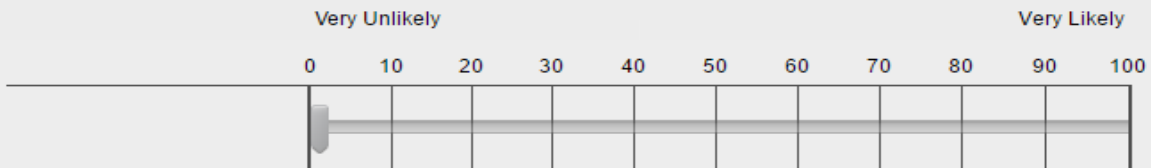
How likely are you to **HELP** someone damage the homes of the People's Party officials responsible for this reform?

Very Unlikely 0-----50-----100 Very Likely, (50 is neutral)



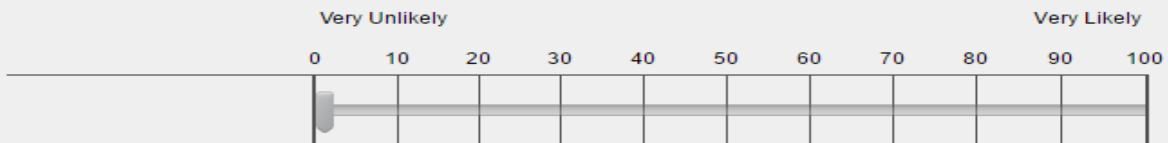
How likely are you to **PERSONALLY** damage the homes of the People's Party officials responsible for this reform?

Very Unlikely 0-----50-----100 Very Likely, (50 is neutral)



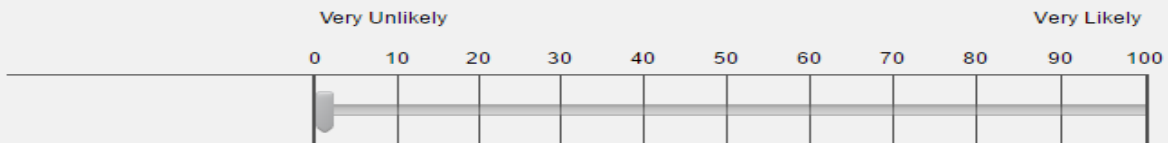
How likely are you to **JOIN** an organization, which is damaging the homes of the People's Party officials responsible for this reform?

Very Unlikely 0-----50-----100 Very Likely, (50 is neutral)



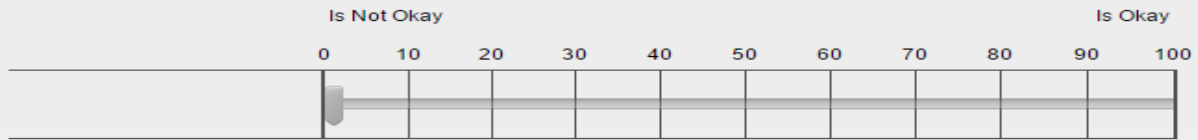
How likely are you to **START** an organization to damage the homes of the People's Party officials responsible for this reform?

Very Unlikely 0-----50-----100 Very Likely, (50 is neutral)



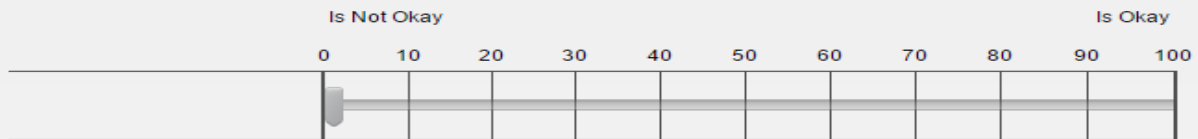
In this scenario, is it okay for someone to use force against the People's Party officials responsible for this reform?

I strongly believe it **IS NOT** okay 0-----50-----100 I strongly believe it **IS** okay, (50 is neutral)



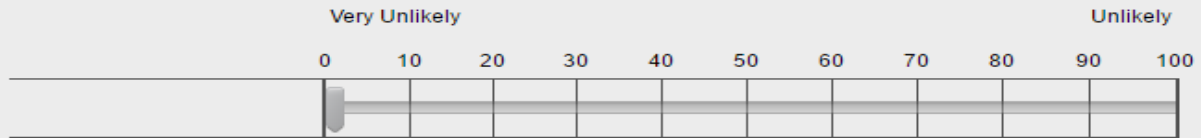
In this scenario, is it okay for an underground organization to use force against the People's Party officials responsible for this reform?

I strongly believe it **IS NOT** okay 0-----50-----100 I strongly believe it **IS** okay, (50 is neutral)



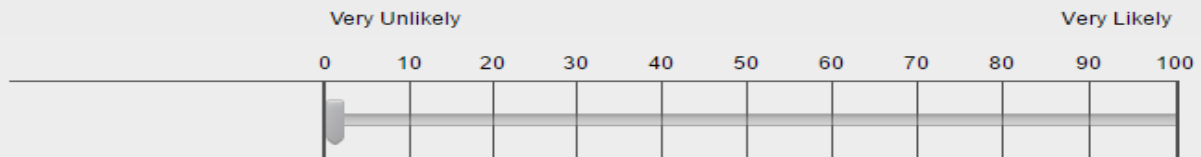
How likely are you to **HELP** someone use force against the People's Party officials responsible for this reform?

Very Unlikely 0-----50-----100 Very Likely, (50 is neutral)



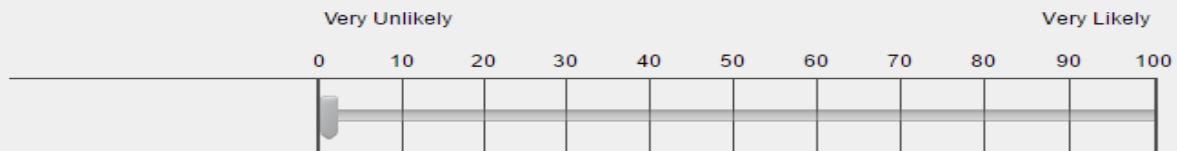
How likely are you to **PERSONALLY** use force against the People's Party officials responsible for this reform?

Very Unlikely 0-----50-----100 Very Likely, (50 is neutral)



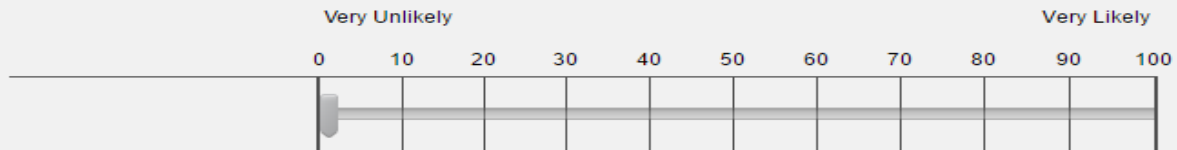
How likely are you to **JOIN** an organization, which is using force against the People's Party officials responsible for this reform?

Very Unlikely 0-----50-----100 Very Likely, (50 is neutral)



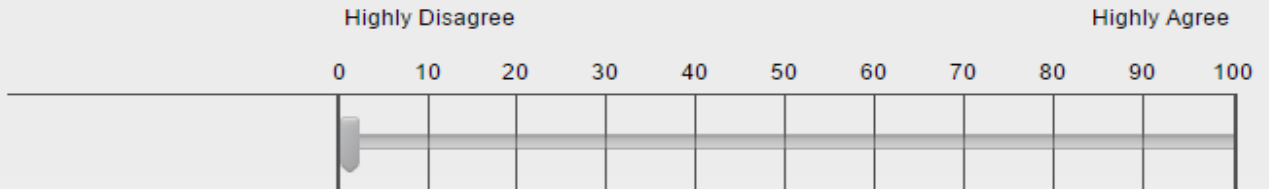
How likely are you to **START** an organization to use force against the People's Party officials responsible for this reform?

Very Unlikely 0-----50-----100 Very Likely, (50 is neutral)



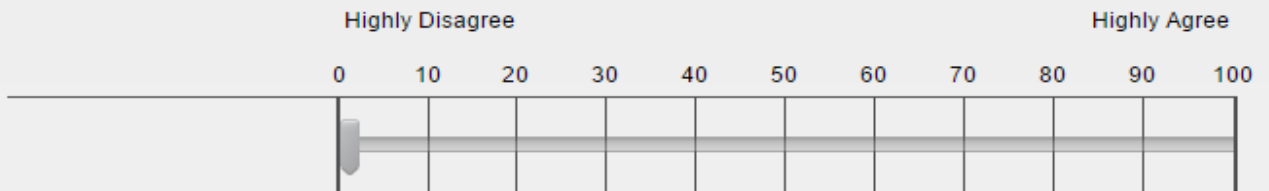
Given the current situation: the People's Party officials responsible for this reform are bad.

Highly Disagree 0-----50-----100 Highly Agree, (50 is neutral)



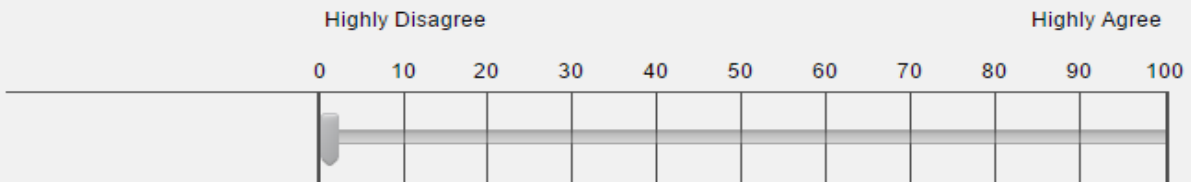
Given the current situation: a change should be made.

Highly Disagree 0-----50-----100 Highly Agree, (50 is neutral)



Given the current situation: if it is possible to make a change, making that change is your responsibility.

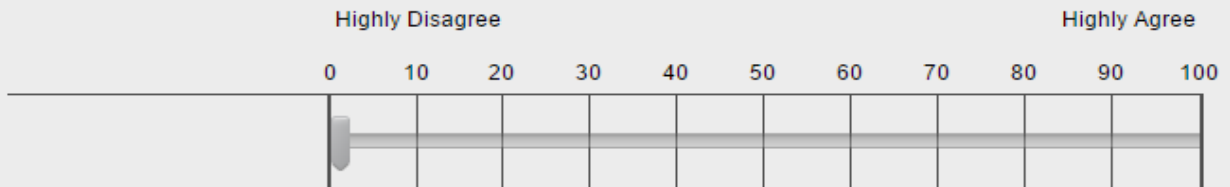
Highly Disagree 0-----50-----100 Highly Agree, (50 is neutral)





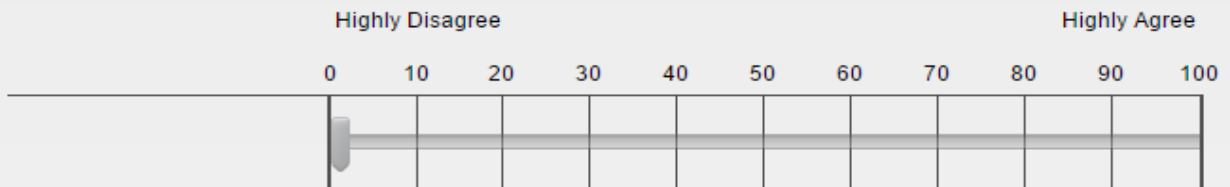
Given the current situation: It is okay to use violence if there are no other options.

Highly Disagree 0-----50-----100 Highly Agree, (50 is neutral)



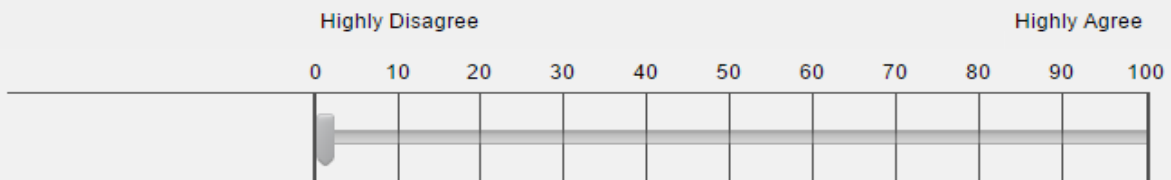
Given the current situation: In some cases violence is the best option.

Highly Disagree 0-----50-----100 Highly Agree, (50 is neutral)



Given the current situation: In this case violence is the best option.

Highly Disagree 0-----50-----100 Highly Agree, (50 is neutral)



Appendix L  
P1-1 Sample Construal Manipulation

High Construal Vignette:

**Oil Drilling at Sea**

Recently, a large oil spill has occurred in the Gulf. The spill covers an immeasurable amount of area, and is spreading every minute. Experts and reporters attribute the spill to DT Oil Company's negligence in engineering the oil drill. They claim that a frivolous engineering design caused the mechanism to fail.

Why should you be concerned about this oil spill?

You watch as numerous reports emerge about the severity of the oil spill, and how it is harming the ecosystem. Thousands of animals are dying as a result of the spill, as the oil is mutilating their feathers, fur, and skin. DT Oil denies all accusations of their negligence, and even refuses to take action regarding the spill, even though they have the resources to. They claim that it is a "normal business risk" and "it's not as severe as the media claims it is."

Why should an individual be concerned about this oil spill?

However, economic repercussions start to arise, as ships importing crucial materials are barred from transporting into the gulf. You watch as people across the country begin to experience lay-offs, and even some of your family members lose their jobs as a result. Your parents inform you that they may not be able to keep you in college if nothing changes.

Why should your family be concerned about this oil spill?

DT continues to do nothing, as the situation in the Gulf keeps getting worse. The government has tried to stop the spill, but they lack the necessary equipment to do so. They also can't force the company to stop the spill, as they do not have legislation that grants them the power to do so.

Why should the government be concerned about this oil spill?

DT refuses to take responsibility for their actions because they haven't seen a decrease in their profits; people have tried to boycott the company, but they are still one of the only companies that provide oil. It seems like all peaceful options have been exhausted. If the company is made to understand the severity of their negligence, they may begin to take action to fix the situation.

Why should the society be concerned about this oil spill?

Low Construal Vignette:

**Oil Drilling at Sea**

Recently, a large oil spill has occurred in the Gulf. The spill covers an immeasurable amount of area, and is spreading every minute. Experts and reporters attribute the spill to DT Oil Company's negligence in engineering the oil drill. They claim that a frivolous engineering design caused the mechanism to fail.

How can society help clean up this oil spill?

You watch as numerous reports emerge about the severity of the oil spill, and how it is harming the ecosystem. Thousands of animals are dying as a result of the spill, as the oil is mutilating their feathers, fur, and skin. DT Oil denies all accusations of their negligence, and even refuses to take action regarding the spill, even though they have the resources to. They claim that it is a "normal business risk" and "it's not as severe as the media claims it is."

How can the government help clean up this oil spill?

However, economic repercussions start to arise, as ships importing crucial materials are barred from transporting into the gulf. You watch as people across the country begin to experience lay-offs, and even some of your family members lose their jobs as a result. Your parents inform you that they may not be able to keep you in college if nothing changes.

How can your family help clean up this oil spill?

DT continues to do nothing, as the situation in the Gulf keeps getting worse. The government has tried to stop the spill, but they lack the necessary equipment to do so. They also can't force the company to stop the spill, as they do not have legislation that grants them the power to do so.

How can an individual help clean up this oil spill?

DT refuses to take responsibility for their actions because they haven't seen a decrease in their profits; people have tried to boycott the company, but they are still one of the only companies that provide oil. It seems like all peaceful options have been exhausted. If the company is made to understand the severity of their negligence, they may begin to take action to fix the situation.

How can you help clean up this oil spill?

Control Vignette:

**Oil Drilling at Sea**

Recently, a large oil spill has occurred in the Gulf. The spill covers an immeasurable amount of area, and is spreading every minute. Experts and reporters attribute the spill to DT Oil Company's negligence in engineering the oil drill. They claim that a frivolous engineering design caused the mechanism to fail.

You watch as numerous reports emerge about the severity of the oil spill, and how it is harming the ecosystem. Thousands of animals are dying as a result of the spill, as the oil is mutilating their feathers, fur, and skin. DT Oil denies all accusations of their negligence, and even refuses to take action regarding the spill, even though they have the resources to. They claim that it is a "normal business risk" and "it's not as severe as the media claims it is."

However, economic repercussions start to arise, as ships importing crucial materials are barred from transporting into the gulf. You watch as people across the country begin to experience lay-offs, and even some of your family members lose their jobs as a result. Your parents inform you that they may not be able to keep you in college if nothing changes.

DT continues to do nothing, as the situation in the Gulf keeps getting worse. The government has tried to stop the spill, but they lack the necessary equipment to do so.


They also can't force the company to stop the spill, as they do not have legislation that grants them the power to do so.


DT refuses to take responsibility for their actions because they haven't seen a decrease in their profits; people have tried to boycott the company, but they are still one of the only companies that provide oil. It seems like all peaceful options have been exhausted. If the company is made to understand the severity of their negligence, they may begin to take action to fix the situation.


Appendix M  
PI-2 Sample Construal Manipulation


High Construal Manipulation

Write why you should complete the first statement in the bottom-most box in the box above it. Then write why you should complete the second statement in the third box above it. Each box should say why you should complete the statement below.

Why? 

Why? 

Why? 

Why? 

Clean up the oil spill.

Low Construal Manipulation

Write how you would complete the first statement in the second box. Then write how you would complete the second statement in the third box. Each box should say how it accomplishes the box above.

Clean up the oil spill

How? ↓

How? ↓

How? ↓

How? ↓

Appendix N  
SONA Advertisement

**Condensed Study Information (To appear in “Active Studies” SONA System Section)**

Social Psychology Study: Procedure involves one session of reading two vignettes, each about one situation and its outcome followed by a questionnaire assessing your decision-making patterns based on the objects present in the vignette. The total session time is 30 minutes.

**SONA System Full Description Study**

Study Name: Social Psychology Study

Participating in the study consists of one session, lasting for 30 minutes.

Abstract: Participants will be asked read two vignettes and answer a questionnaire for each based on objects present in the vignette.

Description: The study explores the factors that influence decision-making as it relates to the participant's feelings given a situation that is presented. The vignettes are short stories, 1-2 paragraphs, presenting an issue or dilemma that the participant will be asked to answer about. Participants will be asked to complete a questionnaire about their feelings.

Eligibility Requirement:

1. Be an undergraduate UMD student

Prescreen Restrictions: Student must be between the ages of 18 and 24

Duration: Total study duration is 30 minutes

Credits: 0.5 course credit

Researcher's e-mail: Richard Yi, [ryi1@umd.edu](mailto:ryi1@umd.edu)

Participant sign-up deadline: 24 hours before the study is to occur

Participation cancellation deadline: 24 hours before the study is to occur



Appendix O  
Primary Investigation's Consent Form

<b>Project Title</b>	Social Psychology Study
<b>Purpose of the Study</b>	This research is being conducted by Dr. Richard Yi at the University of Maryland, College Park. The purpose of this research project is to better understand ideologically motivated actions.
<b>Procedures</b>	In this study, you will rank some of your interests, read two vignettes (short and evocative descriptions of a situation, used to elicit an emotional response), answer a questionnaire for each vignette, and complete a demographic survey. You will be given two vignettes and answer questions following each vignette. For example, "Is it okay for you to help do this action? " At the conclusion of the study, you will answer a demographic survey lasting roughly five minutes, which will ask about your demographic characteristics, such as sex, age, marital status, political orientation, and community involvement. The entire study, involving reading two vignettes and answering a questionnaire after each, will take approximately 30 minutes to complete.
<b>Potential Risks and Discomforts</b>	<p>There are minimal risks from participation in this research. It is possible that some of the vignettes or questions may make you uncomfortable or may conflict with your views on political, religious, or societal matters. You may choose to not answer questions that make you feel uncomfortable. Some sensitive topics that may appear in these vignettes include sexual abuse, abortion, school abuse, animal cruelty, LGBT abuse, religious persecution, loss of family members and torture.</p> <p>Although every possible means will be used to protect your privacy and identity, there is always a chance of an inadvertent loss of confidentiality. Your data in electronic form will be collected and maintained on password-protected computers located in secure, limited-access locations on a secure server.</p> <p>Your participation is voluntary and carries no legal or punitive risks. If participation in this survey arouses concerns or questions, then you</p>

	may contact the Principal Investigator.
<b>Potential Benefits</b>	You will not directly benefit by taking part in this study. However, the answers you provide in the questionnaires may help us to better understand factors related to arousing emotional sensitivity in response to social and political issues.
<b>Confidentiality</b>	<p>Any potential loss of confidentiality will be minimized by the following: 1) The researchers will not collect any personally identifiable information on the consent forms and survey materials other than SONA ID; 2) Names and/or other identifying information will not be shared with researchers; 3) Only the researchers will have access to the study data; 4) Study data, which includes the questionnaire responses, consent form, and non-identifiable personal information collected at the end of the study, received by the researchers will be secured in a password-protected laptop placed in a locked cabinet; 5) Your SONA ID, questionnaire responses, and demographic survey responses stored on Qualtrics will only be accessible with a secure login and password; 6) The online data will be downloaded and deleted immediately from the Qualtrics system after the completion of the study; and 7) Data collected will be kept for no more than 10 years, after which it will be destroyed.</p> <p>If we write a report or article about this research project, your identity will be protected to the maximum extent possible. Your information may be shared with representatives of the University of Maryland, College Park or governmental authorities if you or someone else is in danger or if we are required to do so by law.</p>
<b>Compensation</b>	You will receive half a credit if you complete the survey.
<b>Right to Withdraw and Questions</b>	Your participation in this research is voluntary. You may choose not to take part at all. If you decide to participate in this research, you may stop participating at any time. If you decide not to participate in this study or if you stop participating at any time, you will not be penalized or lose any benefits to which you otherwise qualify.

	<p>If you decide to stop taking part in the study, if you have questions, concerns, or complaints, or if you need to report an injury related to the research, please contact the investigator:</p> <p style="text-align: center;"><b>Richard Yi, Ph.D.</b>                  2103 Cole Field House                  College Park, MD, 20742                  (301) 405 7724                  ryi1@umd.edu</p>						
<p><b>Participant Rights</b></p>	<p>If you have questions about your rights as a research participant or wish to report a research-related injury, please contact:</p> <p style="text-align: center;"><b>University of Maryland College Park</b>  <b>Institutional Review Board Office</b>  <b>1204 Marie Mount Hall</b>  <b>College Park, Maryland, 20742</b>  <b>E-mail: <a href="mailto:irb@umd.edu">irb@umd.edu</a></b>  <b>Telephone: 301-405-0678</b></p> <p>This research has been reviewed according to the University of Maryland, College Park IRB procedures for research involving human subjects.</p>						
<p><b>Statement of Consent</b></p>	<p>Your electronic signature indicates that you are at least 18 years of age; you have read this consent form; your questions have been answered to your satisfaction and you voluntarily agree to participate in this research study. You may print this screen for your records.</p> <p>If you agree to participate, please sign your name and date below.</p>						
<p><b>Signature and Date</b></p>	<table border="1" style="width: 100%;"> <tr> <td style="width: 30%;"><b>SONA ID:</b></td> <td></td> </tr> <tr> <td><b>[Please enter your SONA ID]</b></td> <td></td> </tr> <tr> <td><b>DATE:</b></td> <td></td> </tr> </table>	<b>SONA ID:</b>		<b>[Please enter your SONA ID]</b>		<b>DATE:</b>	
<b>SONA ID:</b>							
<b>[Please enter your SONA ID]</b>							
<b>DATE:</b>							

Appendix P  
Participant Preference Ranking Table

Please rank the following issues in decreasing order of how passionately you support the movement, with #1 being the issue you support the most and #10 being the issue you support the least:  
(DRAG AND DROP)

Higher taxes for upper class	1
Right to own firearms	2
Protecting American democracy from socialist policies	3
Opposing corruption in religious institutions	4
Freedom of religion	5
Access to welfare	6
The pro-choice movement	7
Strict gun control laws	8
The pro-life movement	9
Ethical treatment of animals	10

Appendix Q  
Primary Investigation's Warning Message

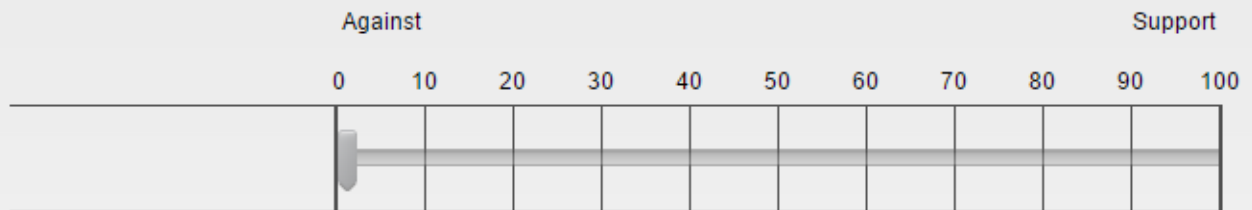
Please Read The Following Message About Your Assignment:

The assignment you are about to complete contains vignettes (short stories) which are based upon fictitious events. The vignettes contain a variety of topics that reflect current social dilemmas and are designed to evoke emotion from the reader. If you are concerned that these vignettes might bother you, then please exit the assignment and do not complete it in the future. If, while completing the assignment, you become bothered by the vignettes then please exit the assignment and do not come back to it.

Appendix R  
Primary Investigations' Sample Pre-Vignette Question

In general, what is your opinion about protecting American democracy from socialist policies?

I am strongly against supporting protecting American democracy from socialist policies  
0-----50-----100 I strongly support protecting American democracy from socialist policies  
(50 is neutral)



Appendix S  
Primary Investigations' Debrief Form

Debriefing Form for Participation in a Research Study

*University of Maryland*

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Thank you for your participation in our study! Your participation is greatly appreciated.

Purpose of the Study:

We previously informed you that the purpose of the study was to better understand the impacts of an application of Construal Level Theory to affect future and present thoughts on violent decisions that have a specific societal impact.

Although **all the stories in the vignettes are entirely fictitious**, we understand that some of the questions and content in this study may evoke negative emotions or memories. As researchers, we do not provide mental health services and we will not be following up with you after the study. However, we want to provide every participant in this study with a comprehensive and accurate list of clinical resources that are available, should you decide you need assistance at any time. Please see information pertaining to specific resources at the end of this form.

Confidentiality:

You may decide that you do not want your data used in this research. If you would like your data removed from the study and permanently deleted please contact us through

Dr. Richard Yi.

Email: ryi1@umd.edu

Address: 2103 Cole Activities Building

Department of Psychology  
University of Maryland  
College Park, MD 20742  
Phone: 301.405.0899

Final Report:

If you would like to receive a copy of the final report of this study (or a summary of the findings) when it is completed, please feel free to contact the researcher(s) at [gemstone.judgment@gmail.com](mailto:gemstone.judgment@gmail.com)

Useful Contact Information:

If you have any questions or concerns regarding this study, its purpose or procedures, or if you have a research-related problem, please feel free to contact the researcher(s) at [gemstone.judgment@gmail.com](mailto:gemstone.judgment@gmail.com)

If you have any questions concerning your rights as a research subject, you may contact the University of Maryland College Park Institutional Review Board Office (IRBO) at (301) 405-0678 or [irb@umd.edu](mailto:irb@umd.edu)

Further Reading(s):

If you would like to learn more about the use of vignettes in psychology studies please see the following reference:

Krosnick, J. A. (2006). Response strategies for coping with the cognitive demands of attitude measures in surveys. *Applied Cognitive Psychology*, 5(3), 213-236. doi: 10.1002/acp.2350050305

Clinical Resources:

- UMD Help Center: (301) 314-4357
  - <http://www.umdhelppcenter.org/>
- UMD Counseling Center: (301) 314-7651
  - <http://www.counseling.umd.edu/>
- Mental Health Service in UMD Health Center: (301) 314-8106
  - <http://www.health.umd.edu/>
- National Suicide Prevention Lifeline: 1-800-273-8255

**\*\*\*Please keep a copy of this form for your future reference. Once again, thank you for your participation in this study!\*\*\***



Appendix T  
PI-2 Sample Vignette

**Anti Gun Control**

Due to the increased amount of Democratic officials in the United States, the government has decided to completely ban the acquisition and use of firearms in the country. This comes as a part of their agenda to protect the public through any means possible. However, this policy proves to be counteractive when crime rates throughout the country go up.

Gangs across the country are able to acquire firearms through underground markets while citizens are left defenseless against crimes. Numerous stories have been featured on the news regarding situations where armed robberies have occurred in citizens' homes and they were not able to defend themselves. Security guards across the country are unable to protect those they are supposed to because guns have been taken out of their hands.

Things become too real for you when one of your family members is gunned down on the street for the money in their wallet, and local law enforcement was rendered powerless due to their lack of firearms.

You and other citizens have tried to contact government officials about the new firearms policy, but they have responded saying "It's for the best" and "Citizens will learn to cope." Protesters attempting to enact change have been incarcerated to keep the issue out of the forefront of public attention.

The new liberal government continues to hold to their policies, even though this extremely radical change is doing nothing but hurt society and your family. It seems like all peaceful options have been exhausted. If the government is made to understand just how regressive and hurtful their policies are, they may consider putting the power to defend back into the hands of the public.

Appendix U  
Pilot Study Mechanical Turk Advertisement

Mechanical Turk Human Intelligence Task description

Title: Social Psychology Study: Vignette Validation

Description: You will answer questions about how you feel about various scenarios.

Keywords: survey, money, decision-making, questionnaire, emotions, impact, vignette, beliefs

**Click the link below to complete the HIT. Thanks.**

[Link to survey](#)





Appendix W  
Confirmatory Factor Analysis Output

Confirmatory Factor Analysis Values					
	P-Value (Chi-Square)	Comparative Fit Index (CFI)	Tucker- Lewis Index (TLI)	RMSEA	SRMR
Primary Investigation 1	0.000	0.965	0.952	0.094	0.048
Primary Investigation 2	0.000	0.936	0.912	0.119	0.065

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