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## Altruistic Punishment Theory and Inter-Group Violence

Clayton Besaw  
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ALTRUISTIC PUNISHMENT THEORY AND INTER-GROUP VIOLENCE

by

CLAYTON BESA  
M.A. University of Central Florida, 2014

A dissertation submitted in partial fulfillment of the requirements  
for the degree of Doctor of Philosophy  
in the Department of Political Science  
in the College of Sciences  
at the University of Central Florida  
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Major Professors: Güneş Tezcür & Thomas Dolan

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## **ABSTRACT**

This dissertation explores the role of altruistic punishment, the act of punishing outsiders perceived to harm members of one's group at a personal cost, in explaining individual motivations to participate in inter-group violence. It first develops a social theory of this type punishment. This theory argues that an egalitarian social logic may be key to understanding motivations of parochial altruism, and that one's social environment may influence thresholds of anger needed to induce punishment behavior. Empirically, it conducts two survey-experimental studies. The first experiment utilizes subject partisan identity in the context of American politics and hypothetical acts of violence to study altruistic punishment behaviors among two different populations in the US. The second experiment utilizes a comparative sample of American, German, and Kurdish participants to assess whether priming for anger tied to acts of political violence by outsiders against their respective in-group increases support for a hypothetical in-group "punisher" of these outsiders. The results of these studies offer two key findings: (1) anger induced costly punishment of out-group perpetrators may be conditional on egalitarian attitudes; (2) this relationship is contextual and varies across population. The findings cautiously suggest two conclusions. First, there may be evolutionary and neurological mechanisms that promote participation in inter-group conflict and that superficial characteristics such as ethnicity, religion, and ideology may work in tandem with biological factors. Second, it suggests that social and political environments may be useful for modulating, or exacerbating, the role of anger in the decision to participate in inter-group conflict activities.

This project is dedicated to those that have felt the pain and humiliation of injustice. To those that have been told to be civil in the shadow of subjugation. To those that don't have the means or the privilege to escape the acts of violence that tests their physical and spiritual integrity. Let it be known that your anger is understood, and that it is human.

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I cannot bring resolution to your problems, but I can reiterate the promises I made to many of you during my time in the field. I promise that I will make my research accessible and highlight elements that provide intellectual and political justification to those that take extraordinary risks to protect their families, and their people, from injustice. I promise that I will continue educating friends, family, and even total strangers on the struggles of the Kurdish people and all people who



face the very-real threat of the erasure of their very existence. These are my promises to you, and please hold me to them. Thank you.

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## CHAPTER 1: ALTRUISM AND VIOLENCE?

Sometime between the end of 2014 and the start of 2015, Karim Franceschi, an Italian citizen, joined the People's Protection Units (YPG) (Harp, 2017). Franceschi, a bitcoin investor and polyglot, left life in Italy to fight alongside other international anarchists during the brutal siege of Kobani. Keith Broomfield, an American volunteer in the YPG, left a manufacturing job in Massachusetts to fight in Syria after having a crisis of faith (Associated Press, 2015). Conversely, Issam Abuanza, a 37 year old citizen of the United Kingdom made the trip to Syria to join the so-called Islamic State organization (Swann *et al.*, 2016). Abuanza, a medical doctor specializing in endocrinology, left behind a career with the National Health Service (NHS) and a wife and child.

These individuals, while hailing from diverse backgrounds and purporting varying ideological motivations, illustrate the potential for altruistic feelings to motivate participation in violent conflict. Each of these fighters took extensive risks to their personal well-being to travel to Syria. In the case of Broomfield, this risk-taking meant the loss of his life. For Abuanza, his choice put him firmly in the cross-hairs of the most powerful nation-states on Earth. While the possibility of selfish motivation is not trivial, it is unlikely that these individuals made their choices on self-interest alone.

All three of these individuals left-behind lives of stability, safety, and employment. As a result, their behaviors are puzzling. Perhaps with the exception of Abuanza, their travel to Syria was unlikely to improve their personal and financial well-being. For Abuanza, the Islamic State's focus on recruiting beyond combatants may of been an attractive option for improving his social standing. If the Islamic State hypothetically won the Syrian conflict, such an outcome would be reality. While it is difficult to realistically parse out the most important motivations for Abuanza, it is unlikely that an educated person such as himself believed such an outcome to be easily achievable.



While the siren call of the opportunities presented by the caliphate likely played a role in his decision to join the Islamic State, it is unlikely that it alone motivated his decision. Outrage concerning Muslim victimization in the context of the Syria conflict may have filled the motivational gaps that could push an individual to engage in the risky behavior of joining a foreign insurgency. While Abuanza may stand to benefit from an Islamic State victory, his actions were unlikely to be purely characterized by self-interest. Abuanza was cognizant of the danger he was in and the precarious position of the Islamic State, yet remained in his position heading an emergency triage unit when other medical recruits fled (Swann *et al.*, 2016).

More often than not, the concept of altruism evokes a certain moralistic and ethical image that seems to be more in line with pacifistic or pro-social practices (Cataldo, 1984). In fact, Auguste Comte coined the term to describe an ethical system that prizes behaviors which both minimize self-interest and promote a social duty to aiding others (Comte & Congreve, 1891). This conceptualization of altruism remains popular. Altruism, in this view, implicitly argues for a set of behaviors that minimize behaviors that hurt others in exchange for helpful or cooperative behaviors that do not necessarily benefit the actor conducting such behavior. From an ethical perspective, it can seem puzzling to connect the concept of altruistic behavior to participation in violent movements. Engaging in hurtful behavior towards others can be argued to be part of a range of anti-social behaviors (Cloninger & Kedia, 2011). While this socially intuitive divide between violence and altruism make up important aspects of both contemporary scientific work and popular conception, the above profiles of foreign recruits within the Syria conflict demonstrates that motivations behind violent behaviors are likely complex. The puzzling nature of individuals who leave objectively better circumstances to fight in a foreign war makes it difficult to exclude the potential of altruism in motivating behaviors that seem destructive and irrational from the perspective of an outsider looking in.

This dissertation argues that an evolutionary conceptualization of altruism can help us understand

the non-selfish nature of participation in inter-group conflict and political violence. Altruism, in the evolutionary context, is thus a trait that provides benefits to others at the expense of the altruist and is thought to have been selected for by humans as a way to improve biological success. More specifically, it argues that the concept known as parochial altruistic, or the discriminative allocation of benefits to in-group members, is potentially a useful framework for understanding some individual choice to engage in risky violent behaviors on behalf of one's group.

The manifestation of risky violent participation can be characterized as a form of parochial altruistic punishment. Parochial altruistic punishment entails a costly punishment behavior that targets out-group members for the benefit of fellow in-group members. Parochial altruistic punishment is argued to be motivated by the feelings of moral outrage, or anger felt following the violation of a moral or normative standard (Batson *et al.*, 2009). In the context of non-state political violence, anger tied to the violation of an in-group's norms may lead to the manifestation of violent outlashes against an out-group violator. Anger felt by in-group members can promote risk tolerance, hinder information acquisition and synthesis, and produce seemingly irrational shifts in preference ordering. The substantive research question explored by this dissertation is as follows. Does anger tied to violations against in-group members promote the usage and support of altruistic punishment behaviors against out-group violators?

The structure of this dissertation is as follows. The second chapter proposes a theory of parochial altruism and social standing. The approach here seeks to integrate insights and understandings from the scientific literature on altruism and altruistic punishment into the realm of society and an actor's environment. The third and fourth chapters are empirical in nature and serve as pilot studies for future research. The third chapter examines how anger elicitation in the context of partisan conflict promotes altruistic punishment behaviors within the American context. The fourth chapter is more comparative and direct. It asks participants to judge hypothetical actors who engage in altruistic violence on behalf of their respective in-group and samples participants from American,

German, and Kurdish populations.

The results of this dissertation are mixed. In the first empirical study, there is weak evidence for a zero-order relationship between anger tied to violence perpetrated by an out-group partisan and costly punishment behavior. When including egalitarian attitudes, the data shows a significant and conditional relationship. Egalitarians engaged in greater levels of costly punishment, and egalitarians in the anger condition punished more than their non-anger counterparts. In the second empirical study, Kurdish participants primed for anger tied to violence perpetrated by an out-group actor were more supportive of a hypothetical in-group punisher. In contrast, there was no significant relationship between the anger condition and support for the in-group punisher for American and German participants. Together the results suggest two things. First, altruistic punishment behavior may be conditional on social attitudes like egalitarianism. Second, there are likely comparative differences across populations and their spatial and cultural proximity to inter-group conflict when it comes to endorsement of violence for one's in-group.

## **CHAPTER 2: SOCIAL PAROCHIALISM, ALTRUISTIC PUNISHMENT, AND PARTICIPATION IN NON-STATE POLITICAL VIOLENCE**

What promotes participation in inter-group conflict? An underutilized theory in political science and security studies concerns the role of evolutionary traits such as altruism as potential catalysts for engaging in costly acts associated with conflict between groups. This paper proposes a new theoretical approach that seeks to integrate insights from the life-sciences, behavioral economics, political science, and political psychology into a unified theory concerning how parochial altruism may motivate individuals to participate in sub-state inter-group conflict.

First, it defines altruism as an evolutionary strategy and further specifies how altruism shapes costly behaviors known as altruistic punishment. Second, it defines the scope of this approach as concerning non-state political violence, and defines this phenomenon as a set of behaviors that encompass a spectrum of activities that includes acts such as rioting, violent rebellion, and terrorism. Building on this, it outlines how theories of individual participation in non-state political violence have largely failed to include the potential for emotion-driven altruism within its theoretical repertoire. Next, it proposes a number of theoretical mechanisms that may promote the manifestation of altruistic punishment as participation in non-state political violence. Finally, it outlines opportunities and challenges for the scientific study of altruism as a driver of participation in violent politics.

### **Evolutionary Altruism and Costly Punishment**

The main argument made in this chapter is that an evolutionary conceptualization of altruism may explain not only some pathways towards participation in inter-group conflict, but may also help us to understand why such violence is seemingly at odds with contemporary norms surrounding

killing and conflict. In its most basic form, evolutionary altruism can be defined as a behavioral trait that increases the fitness of another individual while decreasing the fitness of the actor (Hamilton, 1964a,b; Bell, 2008; Trivers, 1971; Alexander, 1974). The term fitness, as used here, indicating some kind of individual or shared utility. Here, it can be useful to briefly describe the biological underpinnings of altruism within a social species such as humans, as this helps to build a foundation for linking altruistic punishment behaviors to the social foundations of participation in organized non-state political violence.

The cornerstone of the theoretical argument posited above rests on natural selection. Natural selection refers to the variance observed in both survival rates and the reproductive success of individuals due to differences in observable traits (phenotype<sup>1</sup>). Evolution, as a result of natural selection, is the change in observable traits within a population over time. So why have animals, including humans, selected for altruistic traits? Within biology, a debate between proponents of kin selection theory and group selection theory provides some suggestions for why altruism may have developed in humans.

Kin selection theories posit that the unit of importance is the individual. Evolutionary change and trait selection happens at the individual level on a genetic basis. Kin selection theorists argue that this is a more appropriate conceptualization of evolutionary trait selection due to the fact that it is easier to recognize "gene redundancy" among kin-group members. In contrast, group selection theories posit that natural selection operates at the group level, and that evolutionary change focuses on traits that are group-advantageous. Traits such as altruism seem to be intuitively linked to the concept of group-advantage, and the group-selection argument claims to be more realistic when compared to theories of kin-selection.

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<sup>1</sup>Phenotype refers to an individual's observable characteristics. This includes size/structure, physiology, behavior, and the results of behavior

So which theory is most useful for connecting traits like altruism to participation in modern inter-group conflict? In many ways, the debate between kin-selection and group-selection is one of language. Kin-selection theories define altruism as an absolute decrease in fitness for the altruist, while group-selection theories define it as a relative decrease in fitness. As a result, the main differences between these approaches comes down to how they linguistically characterize natural selection.

So which theory is best suited for explaining motivations for engagement in inter-group violence? Hamilton's (1964a,1964b) theory of kin-selection and the diffusion of altruism provides a foundation for thinking about why altruistic traits became persistent within many social species. This paper argues that Hamilton's theory provides a strong basis for connecting human altruism to modern inter-group conflict for two reasons. First, while the decision to participate in political violence has social roots, it is still a distinctly individual process. Many individuals may face the same social pressures to engage in violence, yet participation in violence between groups on average is conducted by a small subset of any given human population. Second, Hamilton's theory of kin-selection provides an explanation that can explain why individuals behave altruistically towards non direct-kin members while retaining focus on the individual.

Hamilton (1964a) argues that 1) inclusive fitness and 2) social context create the conditions for the potential genetic diffusion of such an altruism trait. Focusing on the former condition, inclusive fitness argues that genes, which form the foundation for behavioral traits, seek to replicate themselves as many times within a population as possible (Hamilton, 1964a,b). If traits seek to manifest broadly across a population, then altruistic behaviors are likely to be selected for. This is because social groupings inherently contain redundant copies of any successful trait. For example, a close-kin group may be successful because it is skilled at hunting. If three individuals within the group have good hunting skills (eye-sight, steadiness, robustness/endurance), then altruism may manifest. If one of these hunters has traits for altruism, an injury or loss of life that stands to ben-

enefit their group without depriving the group of caloric income from hunting. In other words, while an altruistic actor may experience direct costs to their individual fitness, productive injury or death by altruists can potentially improve the inclusive success of the social group. While a group may lose a skilled hunter to an altruistic act, the benefits of their altruism stand to strengthen the group as a whole without hurting the hunting capabilities of a group already filled with skilled hunters.

Moving from inclusive fitness to social context, Hamilton (1987) argues that inclusive fitness within a species is a necessary, but not sufficient for the selection of altruism. Altruistic behaviors are thus thought to be conditional on the "social object" (Hamilton, 1987 p.420). This implicitly argues that a degree of social-construction, bounded within environmental constraints and a feasible range of extant genetic and behavioral traits within a species, is important in promoting behaviors such as altruism. To put it in language closer to social scientists, it is apparently the social norms which drive non-kin relatedness and cooperation that are powerful drivers for the selection of altruistic traits within a social species (Sherman, 1980). These factors suggest that the manifestation of altruism is not dependent on close genetic kinship, but familiarity and reputation built through social norms can direct the use of behaviors such as altruism beyond close relatives (Sherman, 1980; Park, 2007).

### Altruistic Punishment Behavior

Altruistic punishment, also known as strong reciprocity, is a specialized application of altruism. Altruistic punishment is broadly conceptualized as the use of a costly punishment strategy for the benefit of a group at the expense of both a "punisher" and a "free-rider" or "defector" (Fehr & Gächter, 2002). Altruistic Punishment Theory (APT) posits that the degree to which humans cooperate is unique. Ernst Fehr and Simon Gächter (2002) argue that the complexity and scope of human cooperation is difficult to explain through genetics and selfish incentives alone. Under self-

ishness<sup>2</sup>, or direct reciprocity, cooperation is thought to occur in a tit-for-tat framework. Namely that cooperation is the result of one's experience with an interaction and the expectation that others will act cooperatively into the future (Axelrod & Hamilton, 1981). Additionally, theories of indirect reciprocity and costly signaling, which show how reputation can build cooperation, are unable to understand why humans cooperate among genetically unrelated individuals or why they often cooperate in non-repeated interactions that fail to build reputation (Fehr & Gächter, 2002; Fehr & Fischbacher, 2003). As such, APT posits that altruistic punishment behavior helps to explain human cooperation through the deterrence of free-riding and defection. For parsimony, it is conceptually useful to integrate both free-riding and defection into a single concept, namely norm violation.

APT builds upon evolutionary theories of altruism selection, but conducts a greater focus on the role of social norms. APT is not necessarily concerned with how groups select for the altruism trait, but more so with how altruistic punishment can promote stable cooperation among unrelated individuals (Fehr & Gächter, 2002; Yamagishi, 1986). APT is especially salient when it comes to understanding cooperation across large and complex societies (Boyd *et al.*, 2003; Henrich *et al.*, 2006; Marlowe *et al.*, 2008). By privileging the social foundations of altruistic punishment, APT argues that norm-driven institutions such as freedom of action, many economic activities, and cooperation concerning public goods are possible because of the deterrence made manifest by altruistic punishers (Fehr & Fischbacher, 2003; Gintis *et al.*, 2003).

The social nature of APT provides for further specialization of the altruistic punishment behavior within both the intra-group and inter-group context. In most cases, APT refers to the intra-group context (Fehr & Gächter, 2002). Altruistic punishment within group forms the basis for building cooperative norms and helps to promote norm adherence and deter norm violation among member-

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<sup>2</sup>Selfishness, as used here, does not refer to a normative or negative connotation. It instead refers to motivations coming from self interest in an cooperative framework.



ship of a group. Inter-group altruistic punishment, also known as parochial altruistic punishment, specifies how altruistic punishment behaviors may manifest across different groups. Parochial altruism is the discriminatory allocation of altruistic behavior, with the altruistic actor giving preference to their own group (Rusch, 2014). Parochial altruistic punishment (PAP) is thus a sub-component of APT that considers how cooperative norms are established and challenged in the context of multiple, and often competing, groups (Bowles, 2006; Bernhard *et al.*, 2006; Choi & Bowles, 2007; Rusch, 2014). Generally, the manifestation of PAP behavior is similar to that of the intra-group variety. PAP simply extends the role of norm violator to some out-group actor. Rusch (2013) argues that there is a degree of asymmetry when it comes to observing PAP, namely that PAP behaviors were adapted to defend against norm violations and erosion by out-group members who neither benefit from or share the social norm to be defended. Outsiders who violate the norms held by one's in-group is thus interpreted as an act meant to degrade the fitness of one's group.

### Emotion and Altruistic Punishment

If altruistic punishment is related to the success and maintenance of cooperative norms, then what is the mechanism driving group-members to take on the mantle of costly punishment for the benefit of one's group? As Fehr and Gaecher (2002) state, avoidance of punishment and reciprocity in positive repeated interaction can seem intuitively rational. Yet, they often observe a puzzling willingness for punishers to act altruistically in non-repeated interactions that provide little tangible gain to the punisher once the interaction ends. To make sense of this, Fehr and Gaechter (2002) argue that negative emotions, specifically anger, are likely to be the driving mechanism. The social aspect of norm violation is key to understanding when altruistic punishment may manifest. The punisher, as a cooperator, buys into a norm that is held inter-subjectively across a group of actors. Norm violations produce an emotional stimulus tied to the the negative inter-subjective perception

such a violation carries.

Emotional states, while often characterized as negative and impulsive, play an important role in human decision making. While there is no universal definition for what an emotion "is", scholars have typically conceptualized emotion as having roughly four broad components (LeDoux, 1995, 2003; Coan & Allen, 2007; Bechara *et al.*, 2000; Richard *et al.*, 2002). First, emotions are short in duration. Second, Emotions influence both physical and psychological processes. Third, emotions modulate the formation of beliefs, information acquisition and retention, and judgment formation. Finally, emotions are tied to contextual events or stimuli.

Altruistic punishment theorists argue that anger is the likely mechanism behind this costly behavior (Fehr & Gächter, 2002; Seip *et al.*, 2009). Anger is thought to be elicited within an individual because of the moralistic underpinnings of norm violation. The catalyst, the norm violation, provokes a focused intensity towards the violator. A loss of regulatory control over one's feelings is argued to help push the "punisher" over the edge into costly altruistic behavior. In terms of parochial altruistic punishment in the context of inter-group conflict, anger can be generalized towards out-group violators. It should be noted though that the generalization of anger felt in laboratory experiments may not be as clean-cut in real life examples of inter-group conflict. Individuals and groups may also experience fear and anxiety in anticipation of norm violations by out-group members as well, with some evidence for the role of fear in promoting aggression in the context of ethnic conflict (Petersen, 2002; Spanovic *et al.*, 2010). For practical reasons, this theory focuses on anger exclusively but it must be conceded that fear and anxiety may 1) promote aggression against out-group members in anticipation of norm violation, and may 2) be correlated with or antecedent to anger. While anger will remain the main focus going forward, it is acknowledged that future work may benefit from a more explicit inclusion of fear and anxiety into understanding when altruistic motivations may promote participation in inter-group conflict.

While the anger mechanism is a promising theoretical bridge between violation and punishment, it is not straightforward to connect these concepts. While early APT theorists posited the emotion-punishment connection quite strongly, there has been a gap in empirically driven studies (Nelissen & Zeelenberg, 2009). In the last decade, the task of empirically validating the role of anger as a mechanism for altruistic punishment has been approached by both social scientists and their hard-science counterparts. Nelissen and Zeelenberg (2009) found that priming for both anger and guilt increased altruistic punishment in the form of third-party sanctions. Following Nelissen and Zeelenberg (2009), studies by Burton-Chellew, Ross-Gillespie, and West (2010) found that measured anger levels influenced the degree of cooperation or competition within an inter-group setting.

Anger thus seems to be linked to altruistic punishment behaviors in both theory and studies using reported measures, and this connection is indirectly strengthened by a number of biological-based findings. Neuroscientific studies have sought to bring an added level of complexity to the study of altruistic punishment behavior through the use of functional magnetic resonance imaging (fMRI). An early study found that participants who faced unfair economic offers experienced activation of the dorsolateral prefrontal cortex, the anterior cingulate cortex, and the anterior insula (Sanfey *et al.*, 2003). These neural structures are important in regulating cognitive control, cognitive-affective connections, and emotional processing (Sanfey *et al.*, 2003). This argument lines up with general findings concerning the role of emotion on human decision making, namely that emotions such as anger modulate learning and risk assessment based in the context of norm violation (Montague & Lohrenz, 2007; Singer *et al.*, 2009). This connection is further strengthened by studies of individuals who lack normal emotional regulation. Koenigs and Tranel (2007) found that individuals with lesion damage to the ventromedial prefrontal cortex made seemingly irrational economic choices in the context of an ultimatum game when compared to a baseline group, a finding in line with theoretical expectations concerning the connection between memory formation and emotional

impairment (Bechara *et al.*, 2000).

While a combination of social science insight and neurological research paints a solid connection between emotion and punishment, critics may rightfully argue that it is difficult to connect a specific emotion like anger to actualized punishment behavior. Studies addressing the neurological basis of altruistic punishment may never be able to conclusively illustrate this connection, but recent studies have provided cautiously convincing evidence. Using positron emission tomography, it was found that anger associated with a norm violation, combined with activation of the dorsal striatum drove both punishment and the cost taken to punish (De Quervain *et al.*, 2004). The activation of the dorsal striatum is argued to result in feelings of anticipated satisfaction with punishing violators, with anger and satisfaction providing a tandem of motivating feelings (De Quervain *et al.*, 2004). Using fMRI data and self-reported altruism scores, another study found that neural variation in dopamine production and emotion elicitation were strong drivers of punishment, a finding that strengthens the argument for connecting emotions tied to norms and the psychological satisfaction of enforcing or protecting them (Strobel *et al.*, 2011).

Finally, addressing parochial altruism, another study using fMRI found that this neural activity varied significantly across group context. Namely that the identity of the violator (in-group member vs out-group member) resulted in different neural activity (Baumgartner *et al.*, 2012). Participants experienced greater activation of structures associated with punishment when faced with violations by out-group members. In contrast, the same participants who observed violations by an in-group member experienced a different set of activations, which drove participants to conduct weaker punishment or to justify the the in-group member's behavior (Baumgartner *et al.*, 2012).

## Participation in Political Violence

If parochial altruistic punishment theory has the potential to explain some motivations for participation in political violence, then how might such a theory fit within the broader literature concerning participation? This literature is diverse, and somewhat amorphous. These are (1) strategic or rational motivations, (2) socio-political motivations, and (3) psychological factors. This literature is briefly described here, including their core arguments and limitations.

### *Strategic/Rational Motivations*

In terms of participation in political violence, the application of the rational actor model has been perhaps one of the most dominant theoretical trends in the study of political violence (Sandler *et al.*, 1983; Crenshaw, 1992; Moore, 1995; Kydd & Walter, 2006). Strategic, or rational, motivations for participating in political violence are built upon assumptions found in rational choice theory. The rational actor model is an approach that assumes individuals are able to specify outcomes of interest, known as preferences, and are able to rank order them using a combination of strict or weak inequalities (Von Neumann & Morgenstern, 1945). Rationality, as defined in this model, means that an actor would not choose a lower preference over a higher one (Von Neumann & Morgenstern, 1945). Depending on an actor's environment (information known, number of other players, constraints on action), a rational individual should seek to maximize preference outcomes based on the constraints of their interactions (Gintis, 2014). When applied to political violence, battlefield conditions, information and capability asymmetries, and organizational resources are argued to shape and direct the type of recruiting and targeting conducted by violent non-state actors (Bloom, 2004; Weinstein, 2006; Wood, 2010; Kalyvas, 2006).

The use of a rational choice model for understanding participation in political violence is prob-

lematic. Empirically, influential studies of the rational roots of radical behavior leverage group or country level variation to test hypotheses concerning the strategic nature of violent radical. Studies that leverage group or country-level data in an effort to capture the structuring of incentives to engage in political violence may suffer from the problem of ecological inference. Fearon and Laitin (2003) argue that civil war onset is not the result of social antagonisms between religious or ethnic cleavages, but instead occur due to opportunities. Their analysis finds that economic indicators, terrain, and population size explain civil war events because these factors provide opportunities to contest incumbent control. Collier and Hoeffler (2004) also attempt to find evidence for an argument concerning economic opportunities in their greed vs grievance hypothesis. In their study, economic variables display more explanatory power than social and political factors. While it is possible to find a correlation between macro conditions and the onset of political violence, this fails to explain why individuals choose to take up arms in the name of a rebel cause. While it is unlikely that potential rebels go through the same cost and benefit analysis of macro-level conditions as an econometric analysis would, this is not the core problem. The problem is that it is untenable to produce causal claims about an individual choice from macro-level data (Freedman *et al.*, 1998).

Other archetypal works surrounding the rational nature of political violence focuses on the structure of belligerents and their surroundings. The outbidding theory of terrorism (Bloom, 2004; Kydd & Walter, 2006; Nemeth, 2014) posits that variation in the killings conducted by violent extremist organizations are based on competitive incentive structures and the capture of popular support by directly signaling costly violence. In terms of civilian victimization, strategic theories have posited that structural conditions such as material endowments (Weinstein, 2006; Wood, 2010) and information asymmetry and control (Kalyvas, 2006) shape how belligerents treat non-combatants through a number of incentives related to achieving war-time objectives. The problem with these studies is that they focus more extensively on the collective violent behavior of groups and not on the reasons for why an individual may join a violent extremist group to begin with.

Focusing more on individual motivations for participation, the rationalist approach attempt to explain motivations for participation through how the structure of a conflict may create selfish incentives. Weinstein (2006) argues that social and economic endowments may shape the kinds of individuals recruited into a rebel organization. Groups that come into economic and material endowments on the onset of their movement may attract more individuals seeking some material gain. Groups that rely on social endowments (cooperation with the populace) may instead attract individuals that seek to join for social advancement or to cooperate with a cause they identify with. Differentiating between selfish motivations and non-selfish motivations is the most prominent attempt to explain participation within this rationalist literature. It is argued that grievances alone are not enough to produce participation, and that the individual must stand to benefit from it (Tullock, 1971). These benefits include direct material gain and/or social achievement and upward mobility (Lichbach, 1994; Lee, 2011). Other incentives, such as individual safety, may also drive participation in areas where non-combatants seek protection from violence or social sanctioning for non-participation (Kalyvas, 2006; Humphreys & Weinstein, 2008).

Rationalist theories concerning the selfish motivations of participation are robust to the ecological fallacy, but still fail to explain variation in participation fully. Specifically, it fails to explain why individuals from developed societies or individuals with high socioeconomic attainment heed the siren call of extremism. Foreign fighters, or those individuals that join a belligerent in a civil war outside of their native land, are one such example. It also fails to explain why many do not abide by these structural expectations. Refugees fleeing conflicts like the Syrian civil war is an example of this. Instead of joining a side, many instead fled the conflict altogether as great risks to themselves and their families. While some individuals may certainly have selfish motivations, these theories fail to explain individual participation absent these conditions and the failure to participation under them.

A second criticism of the rational model is that of conceptual misunderstandings. Discussion con-

cerning the mechanisms of "radical behavior" often implicitly mean black-box models of strategy and incentives for groups and radical leaders. Such approaches may offer novel theoretical arguments concerning the logic of seemingly "irrational" behaviors (Walter, 2017), but this is only novel in that proponents of the rational model implicitly assume away the role of individual variation. As a result, this approach may be under specifying models of participation in political violence. If such models can show that the structure shapes the actor, then it is easy to proscribe potential policy goals for reorganizing identified incentive structures driving participation. Yet, problematically, such a focus on the structuring of incentives fails to meaningfully inform us on variation between individuals who face similar structures, but who also vary on their choice to participate in political violence, especially when the number of participants is much smaller than non-participants (Victoroff, 2005; List & Spiekermann, 2013). This suggests that structure alone is not enough to predict the move from non-participant to participant and that without understanding individual variation we may also fail to understand fully macro outcomes such as civil war onset and terrorist campaigns as well.

As a result, the rationalist paradigm sometimes treads the line between novel insight and folkloric assumptions underlying the scientific rigor and universality of the incentive driven radical (Wiewiorka, 2004). In the end, such approaches miss the conceptual point of understanding participation; not "why does radical violence manifest a certain way?", but "what drives participation, and what explains variation among similar individuals?".

### *Socio-Political Motivations*

The second major approach to understanding participation in political violence proposes a number of identity driven mechanisms. Individuals who choose to participate in political violence may face inter-subjective pressures by both their own group and out-groups. The theory of social learning



and violence posits that aggressive behaviors associated with political violence may be the result of observation, cultural diffusion, or other forms of behavior sharing (Bandura, 1978; Akers & Silverman, 2004). The frustration-aggression hypothesis argues that both individuals and groups may use violence as a way to vent frustration due to social constraints or due to their inability to solve a complex problem (Dollard *et al.*, 1939). When individuals/groups are unable to actualize some goal due to structural conditions, it is theorized that violent acts can serve as a type of psychic coping mechanism. Relative deprivation theory, perhaps one of the most influential approaches, argues that individuals may choose political violence because an individual's/group's actual social, economic, political status fails to line up with some idealized status Gurr (1970).

Another social theory of participation is tied to systems of oppression. Frantz Fanon (1963; 1967) argues that systems of hierarchy found in colonial societies results in the breakdown of psychological normalcy among subjugated groups. In the context of the Algerian conflict, Fanon (1963) argues that a combination of observing colonial violence and the psychological strain of colonial societal norms created the conditions for seemingly irrational shifts towards violence among the Algerian population. Similar to the logic of the frustration-aggression hypothesis, oppressive conditions are theorized to drive the need for both individual and collective catharsis through the use of violence through to confront perceived and felt humiliation. Humiliation felt in the international context may be especially salient for explaining American attitudes post 9-11 and for understanding the rise of violent Islamist politics as well (Saurette, 2006; Fattah & Fierke, 2009). Turning to cultural idiosyncrasy, symbolic politics theory argues that the cultural-constructs found within groups can help to promote the use of radical violence against outsiders (Kaufman, 2006). Related to symbolic politics theory, some approaches consider the role of cultural norms as a whole (Weinberg & Eubank, 1994; Hoffman, 2006). These authors argue that a group's attitudes towards individuality *vis a vis* collectivism and religious or ethno-national norms surrounding the classification of out-group members can promote the production of political violence.

Turning a more critical eye to this literature, it is unclear how the socio-political approach deals with variance on participation and non-participation. Social learning and frustration may be accurate observations of why some radicals sought out their place in the fog of violence, but it fails to address why many others who experienced the same pressures failed to turn to violence. In terms of cultural idiosyncrasy, this is also problematic. While cultural structures may play a role in directing the use of violence, it is unclear how making subjective distinctions about the nature of a collective can improve our understanding of the choice to participate. Instead, these theories may be useful for understanding the object of violence, and may also provide insight into the exogenous events that may enable altruistic motivations towards violence.

### *Psychological Theories of Participation*

The third major approach to understanding participation in political violence is centered on the characteristics of individuals, namely psychological heterogeneity. Psychological approaches have two broad strains of work, (1) the pathology approach and the (2) psychology approach.

The pathological approach to political violence is both publicly popular and highly controversial. The main argument made by pathology researchers is that individuals who engage in acts like terrorism or rebellion may have clinical disorders that separate them from the psychological norm (Hacker, 1976; Victoroff, 2005). Potential pathological pathways to political violence range from Axis I disorders (mental illness, psychosis) to Axis II disorders (personality disorders) (Victoroff, 2005). Currently, there is no supportive empirical data concerning the connection between mental illness and participation in political violence (Victoroff, 2005). Intuitively, it is not difficult to cautiously rule out Axis I disorders altogether. Such disorders result in a "loss of reality" effect, something that may make participation difficult to achieve from the individual perspective.

Because of this, much of the pathology focus is on Axis II disorders, mainly anti-social personality

disorder (APD) (Victoroff, 2005). APD, popularly known as sociopathy, entails that an individual suffers from a "lack of conscience". Such a disorder is defined by a high degree of selfishness and disregard for others, sometimes to the point of dehumanizing all that does not qualify as self. While the connection between APD and political violence may be popular, scientific studies of current and former radicals found that the average participant in political violence does not have such a personality disorder (Rasch, 1979; Crenshaw, 1981; Merari & Friedland, 1985; Post *et al.*, 2003). This does not necessarily mean that there are no anti-social radicals out there, but the evidence does not support the argument concerning personality disorders as a broad pathway to violence (Victoroff, 2005).

In contrast to pathology, the psychology approach focuses on both psychoanalytic and non psychoanalytic theories of violence adoption (Victoroff, 2005). Psychoanalytic approaches build upon the Freudian tradition of clinical psychiatry, and are interested in how childhood development events influences future neurological traits, cognition, and the transfer of traumatizing information into one's unconscious (Fromm, 1992). The psychoanalytic approach to political violence is interested in how identity formation/volatility (Taylor & Quayle, 1994), narcissistic rage (Akhtar, 1999), and paranoia (Post, 1990) formulate motivations for acting out violent behaviors.

Non-psychoanalytic approaches concentrated on pathways to violence are focused on cognitive variation and bias (Victoroff, 2005). Cognitive capacity and cognitive style are thought to be especially related to the choice to participate in political violence (Victoroff, 2005). Capacity includes functions such as memory formation, concentration, language, learning, and judgment (Victoroff, 2005). Style is related to *ways of thinking*, including biases, heuristics, and tendencies (Victoroff, 2005). Cognitive capacity and style have been strongly linked to violent behavior in individuals, yet this research has yet to be applied systematically to the study of political violence (Victoroff, 2005). Most work has indirectly linked cognitive style in the form of complexity and flexibility to attitudes underlying extremism, ethnocentrism, intolerance of ambiguity, and racism

(Sidanius, 1985; Canetti & Pedahzur, 2002). These approaches suggest that individuals who are intolerant to *shades of grey* may be more attracted to violent radical movements.

While the non-pathology arguments made above are compelling, they still suffer from problems of development. Empirically, non-pathology frameworks are underdeveloped. It is difficult to measure and compare complex psychological traits and variation between violent radicals and comparable non-violent individuals. This literature also provides little insight into how one might measure broad patterns. Traits like narcissism and paranoia may be important, but it is difficult to make arguments for how traits like this lead to political violence. Many individuals probably know a narcissist, those individuals probably do not know a terrorist. While psychological traits and cognitive variation may play a role in some aspects of radicalization, it is unclear why individuals of potentially similar psychological dispositions may opt for very different behaviors surrounding political discourse and conflict.

Another strain of psychological research and participation in conflict focuses not on issues of personality and cognition, but emotion. Petersen (2002) argues that an emotion approach is useful for understanding participation in conflict, and ethnic conflict specifically. As discussed in the previous section, emotions are instrumental and situation. An emotion is triggered by some catalyst, or pressing concern, and as a result heighten focus on the catalyzing event and influence physical and psychological processes as a way to focus attention and resources on solving a problem (Petersen, 2002). For Petersen, specific instrumental emotions such as fear, hatred, and resentment are expected to enable participation in violence and brutality against out-group members seen as the source of such emotional stimuli.

Focusing on how emotions are instead influenced by conflict, Halperin, Russell, and Dweck (2011) argue that experience with intractable conflict can shape emotion elicitation. They find that feelings of anger towards Palestinians experienced by Israeli participants had contradictory effects on sup-

port for compromise depending on a participant's level of hatred. Those with low-levels of hatred indicated greater support for compromise when angry when compared to those participants with higher levels of hatred. This suggests that the potential relationship between anger and intractable conflict is conditional on prior hatred for an out-group perpetrator. Related to this, the concept of an Ethos of Conflict, or group-level beliefs related to inter-group violence may be seen as an important modulator of emotion in this way (Lavi *et al.*, 2014; Halperin & Pliskin, 2015). Related to this, Zeitzoff (2014) finds that proximity to violence may influence how anger promotes intragroup cooperation. Angry participants in a punishment game were more likely to more harshly punish free-riders when they came from areas closer in proximity to Palestinian missile attacks.

Compared to personality and cognitive psychology, a focus on emotion and conflict is more directly related to altruistic punishment theory. The main difference between this study and those articulated above, concerns a focus on motivations for costly behaviors in the context of inter-group violence. The above studies conceptualize emotion as being either directly instrumental in behavior or conditional on conflict context. In contrast, this study argues that anger is instead a mechanism for engaging in altruism as a way to promote cooperation or engage in group protection and maintenance.

### A Social Parochial Altruism Theory for Political Violence Participation

If extant frameworks for understanding political violence have trouble explaining some participation, how might altruistic punishment theory better inform the literature on this process? This chapter posits that parochial altruism in the context of both individual and environmental variation can promote participation, or lack thereof, in political violence. First, it outlines concepts and scope conditions that are important for narrowing the frame of application. Second, it specifies a theoretical approach that seeks to explain both the manifestation of altruistic individuals

at the group level and theorizes the conditions through which individuals may develop altruistic motivations to engage in costly punishment behaviors associated with political violence.

### *Concepts and Scope*

This study defines political violence as physical violence conducted by an actor for the purpose of furthering or achieving a social, political, economic, or religious objective. In terms of scope, it is important to account for the nature of the actor, or entity, involved in such acts. Political violence can be conducted by both individuals and groups, and furthermore by individuals and groups associated with both states and non-state entities alike. More specifically, it is assumed that individuals and group entities can inhabit a degree of membership roles between recognized governmental organization and non-governmental organization. Delineating between state and non-state political violence, it is argued that structural pressures and opportunities concerning agency and behavior are fundamentally different between state and non-state contexts. Entrenched institutional systems and norms may play a role in inhibiting or enabling political violence, while non-state actors must often work against these entrenched constraints on organization and mass-behavior.

Taking these differences into account, the focus here is on those individuals that choose to participate in non-state political violence activity. This is necessary for two reasons. First, it is difficult to parse out how elements of social and institutional structure may shape or direct the potential manifestation of altruistic punishment behavior. While altruistic punishment may play a role in developing the social norms needed to build cooperation around complex institutions such as government, it is likely that the success of these institutions may later suppress the expression of altruistic punishment behaviors, especially in open-access systems whose norms place emphasis on the use of impartial arbitration of conflict between individuals and groups alike (Gómez *et al.*, 2016). As such, this study seeks to specify how altruistic punishment theory may explain partic-

ipation in political violence behaviors outside of the state context. Such behavior may be used against the state, or against other non-state entities without the direct presence of state institutions. Such an approach is thus applicable to a range of manifestations of personally risky non-state political violence, including terrorism and guerrilla/unconventional warfare. Finally, in the context of the state, the government's coercive powers make it feasible to induce wide-spread non-voluntary participation (e.g. Conscription). To aid brevity, the remainder of this manuscript will use the term *political violence* to refer to participation in sub-state violence.

Finally, the scope of this study deals with parochial altruism situated in inter-group conflict. Altruistic punishment theory raises a number of interesting questions about the potential for violence within a group, but this is currently beyond the scope of this paper for two reasons. First, altruistic punishment within the group is a different behavior than parochial altruistic punishment of out-group members. Intragroup altruistic punishment is used to punish norm violators and to induce cooperation, while intergroup altruistic punishment is used to protect and maintain one's group boundaries in the face of norm violations. Second, in terms of violent non-state politics, it is likely that motivations to conduct these forms of violence follow different pathways. Violent groups that seek to punish non-collaborators or norm violators may utilize their resources to engage in intragroup punishment and could feasibly use this behavior to recruit individuals who are equally outraged at norm violation within group.

#### *Altruism's Place in the Ecology of Political Violent Participation*

The social nature of altruistic punishment behavior creates a need for an explicit theoretical connection between the manifestation of such behavior in an individual and the environmental conditions that surrounds them. It is feasible that variation in political, economic, and social environments may sometimes suppress, or sometimes catalyze, a latent altruistic disposition for violence against

norm violators. This concern is evident in a study of conspecific killing behaviors among humans and other mammals. Gómez, Verdú, González-Megí, and Méndez (2016) find that mammals, including humans, that are social and control territory are significantly more likely to engage in the killing of fellow species members when compared to the mammalian class. Interestingly, when analyzing human lethal violence across time, these authors find a declining trend in human killing. Such killings were more prevalent in tribal bands than they are in both historical and ancient states, and killings are significantly less in the modern age overall (Gómez *et al.*, 2016).

The results of this research suggests two things. First, the combination of territorial control and mammal sociality seems to cautiously strengthen the argument for an altruistic punishment theory of political violence. Related to this, Bowles (2008) argues that parochialism and altruism are co-developed, and that cooperative survival among an in-group is often bolstered in environments of competition and conflict with outsiders. Yet, and secondly, it underlies the necessity to frame any connection between altruistic punishment and participation as a multilevel process between the individual and the social environment individual's find themselves inhabiting. Like the biological origins of altruistic behaviors, it is necessary to specify an ecological framework that connects altruistic punishers to participation in violent politics. From here, this paper specifies both an individual and a social-environmental model for the manifestation of altruistic punishment motivations and ties both levels into a common ecological framework.

### *Individual Altruism and Inter-group Violence*

The central puzzle at the individual level concerns why participation in political violence is a rare event in an environment of shared structural pressures (economic factors, social grievance, past conflict, etc.) (Horgan, 2008). If these push factors are failing to explain the rare event of participation at the individual level, then what can altruism contribute to our understanding of this



puzzle?

At the individual level, one can characterize risky decision making as a boundedly rational process. The approach proposed here assumes that individuals have the ability to formulate preferences and that they attempt to optimize preference outcomes. Deviating from rational choice theory though, there is strong evidence for the fact that risky decision making often deviates from the expectations of utility maximization. Bounded rationality posits that deviations from preference optimization due to computational constraints (Simon, 1955, 1956). Humans often easily choose a lower payoff because of the complexity of many economic and social problems (Gintis, 2014) and develop adaptive heuristics and simplifying biases (Gigerenzer & Selten, 2002) as coping mechanisms for navigating decision making when computational ability is low, the cost of information acquisition is high, and when exogenous factors constrain more in-depth research (time constraints, environmental obfuscation, etc) (Tversky & Kahneman, 1974; Kahneman, 2003).

The concepts underpinning bounded rationality are good candidates for linking altruistic punishment to participation. Modern inter-group conflicts, when compared to experimental economic exchanges, fit many of the markers of a complex problem. At the individual level, information concerning collective action and the development of lethal means of violence make participation an incredibly costly behavior to take on. This may partially explain why participation is often rare. The average person, while implicitly or explicitly supporting the call to violence indirectly, likely considers direct participation to be weighted lower than self preservation. Assuming a preference for self preservation in the context of unclear/low confidence information about the abilities of an organized violence movement is thus a good candidate for altruistic punishment theory, especially when the majority of modern violent non-state actors rarely achieve their stated goals (Abrahms, 2006, 2008). If one buys this argument, then participation in inter-group conflicts represents a highly risky enterprise. When individuals experience anger-driven altruism, it may result in the individual choice to participate in inter-group conflict even when it is unlikely to succeed or be

optimal from a cost and benefit calculation.

This approach proposes that the mechanism underlying altruistic punishment behavior, anger, is important for understanding some degree of variation concerning the rare event of participation. Emotions like anger modulate their decision making both in terms of information acquisition, judgment, stereotyping, and the undervaluation of risk (Newhagen, 1998; Lerner & Keltner, 2001; Parker & Isbell, 2010; Petersen & Zukerman, 2010; Dolan, 2016). The nature of inter-group conflict events inherently violate, or sometimes even erodes, social norms held by one's in-group. While social norms were at the heart of the conceptualization of evolutionary altruism and inclusive fitness, they have yet to be formally defined here. Social norms are defined as the informal set of rules that govern the behavior and aesthetic of a society. These norms are held inter-subjectively and are often taken for granted. This means that in-group members often interpret behavior and observable traits as being "as is". They entail behaviors that one abides by almost automatically and without thought. As a result, as one observes violations of norms it is easily recognizable.

This study argues that violence conducted by out-group members against in-group members represents a paramount violation of one's normative framework. It assumes that individuals perceive such violence as an attempt to erode the integrity of one's group and is seen as an attack on the agency and autonomy of an in-group.<sup>3</sup> Anger tied to these violations represents a non-trivial psychological constraint on an actor's decision calculus when it comes to participation, especially if one assumes a widespread preference for self preservation as a result of the arguments made in the preceding paragraph. Figure 2.1 displays a simple model for connecting the altruistic individual to violent inter-group conflict participation via anger.

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<sup>3</sup>A common example in the post 9-11 years concerns the argument made about Islamic fundamentalism and its goal of eroding American freedom. As a result, common arguments justifying military force against such groups comes down to the defense of American values and freedom against a jealous and hostile foe.

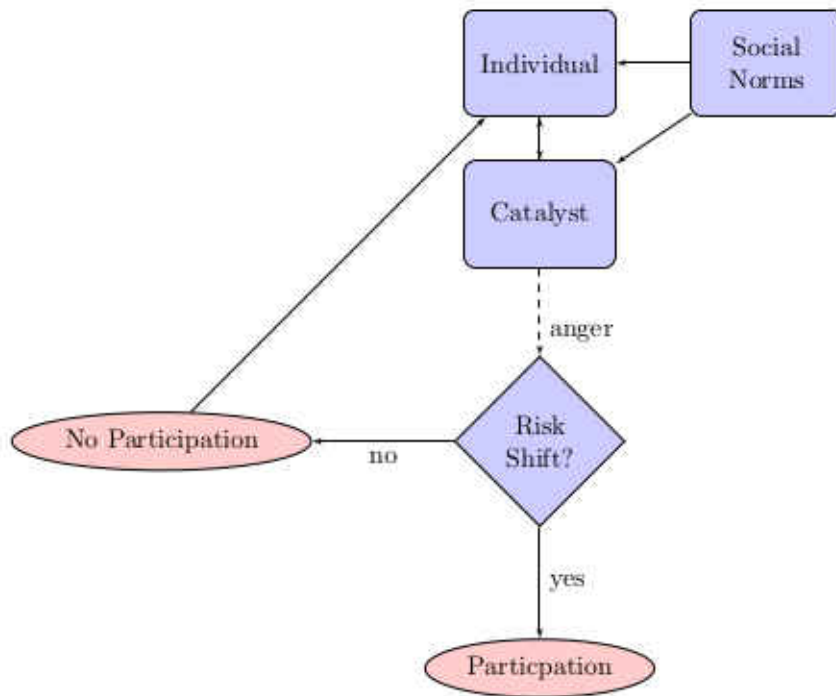


Figure 2.1: Pathway to Violence via Altruistic Punishment Motivations

The dotted line represents a probabilistic pathway, with anger being conceptualized as a type of lottery over the "prize" of anger manifestation. Instead of winning some payoff in the economic sense, it is argued here that a preceding catalyst may cause an individual to experience a level of associated anger in a way that is not anticipated beforehand. The decision to participate is dependent on an anger driven shift in risk perception due to anger. Because an individual may not know how much anger they will experience, a shift in risk perception is expected to drive an individual towards participation in costly behaviors related to inter-group conflict due to a distortion on reality experienced by the punisher. While many individuals may wish to punish out-group violators, those that do not experience a certain threshold of anger may fail to move on their feelings due to recognition of constraints on their actions or may reevaluate a norm violation and violator towards a less blameworthy appraisal. If reevaluation occurs, an individual may view punishment as being

less likely to achieve benefits for one's group.

Understanding the role of anger and risk perception shifts within an altruistic individual leads to a probabilistic hypothesis for participation in inter-group conflict:

*H1: As feelings of anger tied to inter-group conflict catalysts increases, the likelihood of participation increases.*

This parsimonious individual model is useful because it outlines a process that is agnostic to qualitative variation on social factors.<sup>4</sup> It assumes that any individual could be an "altruistic punisher" and that variation on individual idiosyncrasy, social environment/norms, and ideology are instead factors that direct punishment behaviors in a coherent logic. This suggests that looking for phenotypical markers may not be enough to predict who does and who doesn't participate in violence, and that it is fundamental to understand how variation in emotional stimuli reaction alongside conflict context. This conclusion is described well by Zoey Reeve (2017), who posits that adaptive evolutionary traits like parochial altruism present a salient mismatch between species evolution and much of modern political life. The mismatch entails that both real, and perceived, threats to the normative structure of one's in-group is enough to trigger the evolutionary impetus for some individuals to engage in altruistic acts of violence in defense of their people and way of life, even when such violence is often counter-productive or wholly ineffective.

A second aspect of the model predicted in figure 2.1 deals with the potential for repeated interactions with catalyst and risk shifting. Inter-group conflicts are assumed to hold the potential for

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<sup>4</sup>It should be noted that this model may also be gendered. McDonald, Navarrete, and Van Vugt (2012) argue that parochially altruistic behaviors in the context of group conflict may be distinctively a male phenomenon in the context of distrust concerning out-group males and competition over females. Males are thought to be more apt to engage in costly altruism because the loss of a male is less costly to the group than the loss of a female from a reproductive standpoint. Additionally, such an argument seems to fit with observations concerning the fact that most perpetrators of violence, political and non-political, tend to be young males. With young males being particularly susceptible to extreme feelings of emotion and weak emotion regulation.

multiple norm violation catalysts, which can disperse differently across individuals or within individuals across time. If an individual fails to experience some threshold of anger necessary to shift towards participation, they are not simply plucked from the pool of potential altruistic punishers without replacement. Their avoidance of violence during some catalyst in the current time period does not mean that they will inherently fail to heed the siren call of altruistic violence when the next catalysts come. Acknowledging repeated interactions with inter-group conflict catalysts, a second individual-level hypothesis is proposed:

*H2: As the number of norm-violation catalysts experienced increases, the likelihood of anger induced risk shift towards participation increases.*

Because emotional states are inherently time-based, it is important to consider the potential effects of state decay and compounding. It is difficult to measure and theorize about the rate of decay one experiences in something as personal as an inter-group conflict, but general predictions can be made by assuming an underlying compounding period effect for anger catalysts. In a hypothetical scenario, two individuals face the choice to participate in risky violence on behalf of one's in-group. Both individuals experience four norm violation catalysts across their respective conflicts, yet individual 1 experiences all four catalysts in quick succession while individual 2 experiences them across greater intervals of time. This model argues that individual 1 would be more likely to experience risk shift when compared to individual 2. Beliefs and judgments tied to anger stimuli are expected to be more strongly reinforced when the process of catalyst occurrence as some period value increases. Catalysts that happen multiple times per year *vis a vis* the same amount of catalysts over multiple years represents a potential example of the difference between individual 1 (periods within year) and individual 2 (periods across years). This produces an ancillary hypothesis for H2:

*H2b: Shorter norm-violation catalyst periods are expected to increase the likelihood of anger*

induced risk shift towards participation when compared to longer periods.

The theoretical approach discussed above is a good starting point for describing how feelings of altruistic anger may result in the manifestation of pro-social violence, but it suffers from a number of potential problems. First, like many of the theories that were criticized in the review of extant literature, it implicitly assumes that the actor is already a potential altruistic punisher and does not attempt to explain variation within groups that are involved in a conflict. Second, it fails to account for potential heterogeneity concerning the threshold of anger needed to shift one's risk disposition into participation territory, and how environmental factors may constrain or enable it.

Third, while it does address decay, it does not provide a concrete approach to understanding potential variation in decay rates. Acknowledging these problems, this discussion turns to the realm of the social as a way to more adequately theorize about how one might predict the presence of altruistic motivations within groups involved in a conflict, and how might their social and political environment shape the thresholds needed to shift towards risky conflict behavior. Finally, the argument made here explicitly links violent altruistic behavior to a biological process. The current model fails to capture potential genetic variation at the individual-level. This theory will not address this variation, but it does acknowledge the potential salience of a genetic link to altruism. Future research should seek to more neatly link genetic variation in hormone production (e.g. Testosterone) to parochial altruistic punishment behaviors. A full theory will never be complete until the linkages between genetics, environment, and the social are more fully identified.

### *The Social Nature of Violent Parochial Altruism*

The model proposed in figure 2.1 is useful, albeit simplistic. This paper proposes that the social is necessary for addressing important theoretical gaps at the individual level. By borrowing from

inclusive fitness theory, plural rationality, and prospect theory, a social theory of parochial altruism can be applied to the puzzle of participation in political violence. This approach integrates and augments the model proposed in figure 2.1 by asking two questions, (1) How do we know if an individual has altruistic motivations?, and (2) Can one leverage social-environmental variation to predict anger threshold levels needed for participation?

*How do we know the altruist?*

One may believe strongly in the catalyzing role of altruistic anger in pushing actors towards violence, but it is necessary to first propose a framework for understanding when such altruistic motivations are present. It is also necessary to concede the role of equifinality (Goertz, 2016). Many individuals may engage in political violence tied to inter-group conflict for many reasons. Even if it is clear how anger may catalyze parochially altruistic behaviors in the name of violence, it is unrealistic to claim that this is the only motivation. Individuals engaging in violence may be doing so to spite some individual or group of individuals. Maybe they have self-centered reasons for punishing out-group members, or maybe they honestly believe their punishment behavior will result in some social and/or physical reward that outweighs any potential cost to self. Altruistic motivations, as defined earlier in this paper, entail that the actor willingly takes on a cost to self to benefit one's group. Because it is difficult to generate credible data concerning the psychological and affective traits present in individuals engaging in conflict, this approach instead proposes an indirect method for ascertaining motivation for costly punishment behavior using concepts found in plural rationality theory.

Plural rationality, or cultural theory, is a social theory which argues that a social unit/organization can be understood by the combination of two concepts, *group* and *grid* (Douglas, 1978, 2003, 2004). The group concept corresponds to how an individual incorporates within a bounded social

unit and deals with the question of identity and belonging (Caulkins, 1999). The grid concept deals with the the level of stratification that governs one's behavior and addresses the question of what is socially permissible behavior from where the actor stands (Caulkins, 1999). For example, grid logic provides an individual with information about their appropriate behaviors within a group. High grid societies entail a degree of differentiation in social roles across individuals, with individuals being separated by the constraints of their position within society (e.g. Indian Caste System). Both the group and grid concept are argued to be dynamic continuous variables. Individuals may experience more, or less, group and grid pressures and that these pressures may change over time within individuals depending on the society they live in and individual agency. The central idea is that individual biases and heuristics concerning non-self entities, behavior, and risk are modulated by where one stands on their group-grid continuum.

Plural rationality theory posits that variation concerning the combination of high and low values on group and grid formulates four socially derived logics or rationalities (Douglas, 1978; Caulkins, 1999). Low grid/low (individualism) logic correspond to individualism, freedom, and entrepreneurial behaviors. Such environments contain norms that privilege less regulation on individual behaviors and allows for the dynamic creation and dissolution of social connections. High grid/low (fatalism) logic produce a set of norms that promote social isolation with individuals being more like constrained hermits who lack the benefit of social cohesion. Such a culture often produces distrust of others and can be characterized as a Hobbesian personality where individuals are driven by states of nature with little group cooperation. High grid/high (hierarchism) logic privileges norms that promote a hierarchically structured and cohesive organization. Oftentimes, such cultures manifest explicit divisions of social role and power among group members. Finally, low grid/high group (egalitarianism) logic promote norms that privilege group solidarity with minimal social divisions. Such cultures seek to promote group boundary maintenance and normative consistency/purity among members, often engaging in out-group scapegoating.



For this approach, plural rationality is defined at the individual level. While there is likely a correlation between the structure of a society (culture) and the social logic of an individual, it assumes that individuals have a degree of agency over how they shape their social orientation within the context of structural pressures to shape identity and belief. It also assumes that the four social logics detailed above are useful for understanding an individual's approach to states of nature and risk taking. These cultures are also assumed to be dynamic and non-uniform. It is rare that any one individual, society, culture, or nation could be described as having one logic, but it is likely that some groups have higher ratios of one logic over others (Schwarz & Thompson, 1990; Caulkins, 1999). Applying this theory of plural rationality to costly punishment behavior can provide useful indicators for predicting who is likely to engage in parochial altruistic punishment behaviors. In addition, recent research exploring the intersections between neuroscience, affective science, and social theory has argued that plural rationality approaches help to better understand the role of emotion on decision making in the social context an individual inhabits (Verweij *et al.*, 2015). Figure 2.2 proposes a framework for connecting these socially derived cultures to variation in costly punishment motivations or even non-action.

Building on previous conceptions of plural rationality, this approach argues that an individual's motivation for engaging in costly punishment behavior in the context of inter-group violence is dependent on their social logic. It does not assume that individuals must be discretely sorted into one of the four logics, but that psychologically normal individuals have degrees of adherence to all four with one or two dispositions taking dominance. Additionally, it assumes that individuals may shift in their ratios with experience and structural shocks. Starting with the non-altruistic motivations, it is necessary to break down the theoretical reasons for how these four logics may inform motivations for conducting costly punishment behaviors.

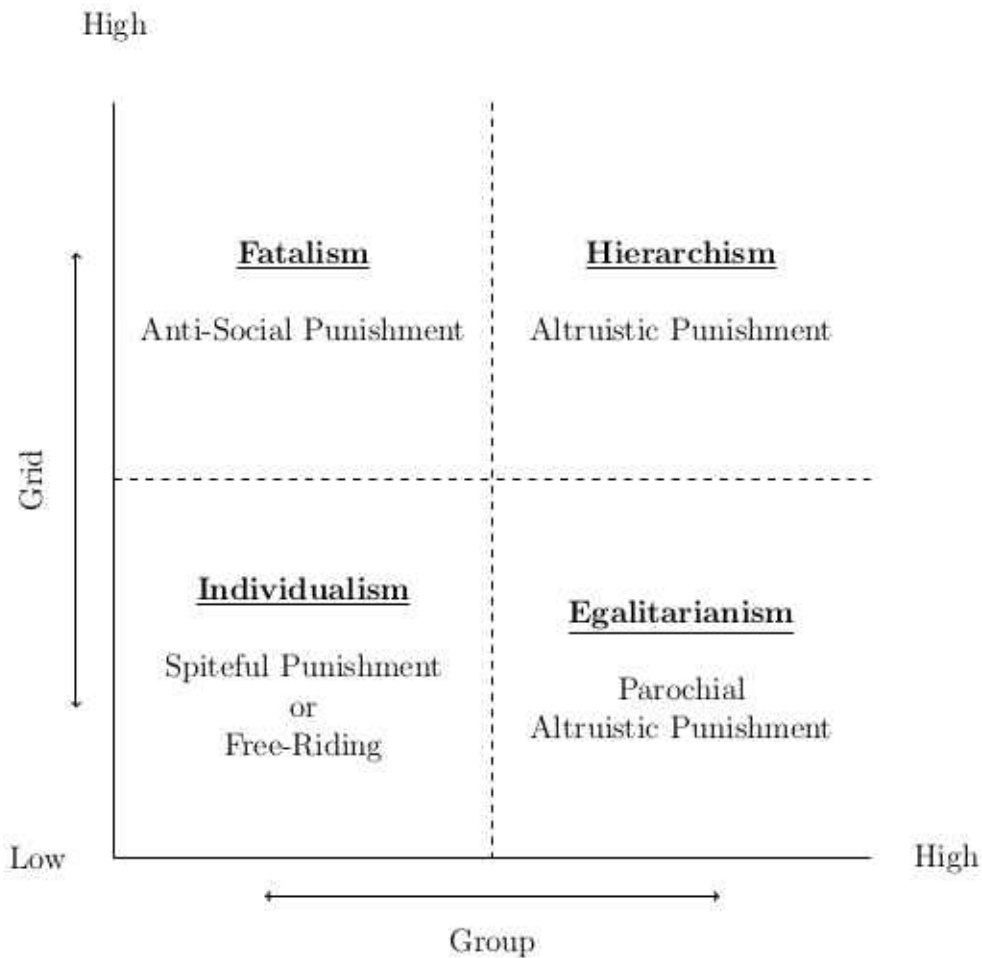


Figure 2.2: Cultural Indicators of Costly Punishment Motivations

### Individualists

Each of logics are theorized to be related to how norm violation catalysts are interpreted by the actor experiencing it. Individuals characterized by individualism are likely to be driven by conflict catalysts that target their persons or direct familial grouping. Selfish or spiteful punishment may be a way to appease the psychological costs of resulting anger without a pro-group motivation. Such actors may end up bringing benefits to their in-group, but their behaviors cannot be explained by a

truly altruistic consideration. When it comes to catalysts that target the group members beyond the individualist person, or their family, the motivation to engage in costly punishment is likely to lay dormant. This is because individualist actors typically fail to build salient social linkages within their group, thus depressing the anger tied to violations against broadly held group norms. This doesn't mean that individualist actors spurn the group altogether, but that they are not bounded to the idea of strict group identification and the adherence to the norms that come with it. As a result, individualist actors are likely prone to free-riding until adapting to the resolution of an inter-group conflict or engagement in fighting as a last resort.

### **Fatalists**

In contrast, actors characterized by the fatalism culture are likely to be motivated by anti-social punishment motivations. Anti-social punishment, as used here, refers to the punishment of those that are pro-social. Their adherence to survival and isolation paints a bleak picture of others, and especially the norms held by groups of others. Like their individualist counterparts, fatalist actors are expected to respond to catalysts that target their persons, direct kin, or proximate environment. The catalyst may also be stronger when the source comes from group behavior. Such punishment may appear as irrational to those with high levels of the group trait, but to the fatalist, their rejection of the social is a coherent response to what they see as encroachment onto their self by the offending group. For example, Ted Kaczynski's (FBI, n.d.) seclusion and bombing campaign under the as a result of industrial development in rural Montana is likely an archetypal example of fatalism driven anti-social punishment behavior. Such development may of been economically and socially beneficial to the state, but Kaczynski's behaviors may have been meant to punish those that he perceived as encroaching on his livelihood and hermitage.

### **Hierarchists**

Moving into the realm of altruistic motivation, the concepts of hierarchism and egalitarianism

can help to differentiate distinct altruistic punishment motivations. Actors characterized by the hierarchism culture are driven by both group cohesion and the social rules that govern their position in society. It is expected that hierarchial actors will be motivated to conduct altruistic punishment in a way that is more in line with the original conceptualization formulated by Fehr and Gächter (2002). These actors accept risks to their persons or status in an effort to deter future deviation from societal norms that are perceived to be beneficial to the cohesion of the social unit. Modern examples of this behavior may be present in highly caste like societies, where individuals may violate the law to enforce conformity to caste roles through acts of violence. Another example could be the act of honor killing, an act that may be seen as a beneficial in fundamentalist circles of Islam (Rai & Fiske, 2011). Many perpetrators of honor killings face stiff punishment for their actions, especially in western countries, but their actions may be perceived as pro-social in that it attempts to deter future violations of strongly held norms governing in-group behavior.

### **Egalitarians**

Moving to the logic of importance for this approach, it is argued that actors characterized by egalitarianism are likely to be motivated by parochial altruism when it comes to engaging in costly punishment. Such actors appear to be prime candidates for recognizing parochial altruism because of their strong emphasis on group identity without relying on heavy role differentiation. Because of their low grid/high group disposition, norms are tied distinctly to group identity. As a result, the egalitarian focuses on identity/group maintenance and defense. Catalyzing acts that target these identity markers are expected to focus altruistic anger outwardly against out-group perpetrators. The marker of potential egalitarians is a strong connections to identity markers such as direct kinship, religion, ethnicity, class, gender, sexual orientation, nationality, and political ideology.

Because of their strong identification with the group alongside weak perceptions of social stratification between self and fellow in-group members, the egalitarian is expected to almost directly

identify with catalysts that target the group more broadly. Even if the catalyzing event does not directly target the egalitarian, they may very well interpret the event in a similar manner to how individualists experience violations of their persons or direct surroundings. For the egalitarian, the individual is the group. Affronts to the group, are affronts to the individual. Additionally, there is indirect empirical evidence for the egalitarian logic as motivator for altruistic punishment behaviors in the context of income redistribution (Dawes *et al.*, 2007). Even within groups, if an egalitarian perceives enough distance between their markers (low-income) and other in-group members (high-income) (Fowler *et al.*, 2005), parochial altruism may result both within and between groups. This connection between an individual's social logic concerning egalitarianism and feelings of anger tied to inter-group conflict catalysts formulates the logic for the first social-oriented hypothesis:

*H3: Individuals with a low grid and high group logic (egalitarians) are more likely to be motivated by parochial altruism when engaging in costly punishment behaviors.*

### *Social Modulators of Anger Thresholds*

A central question concerning the linkage of individually experienced altruistic anger and participation in an inherently social form of violence concerns how much anger is necessary to cross the line into action. Anger is common and distinctly human. We experience anger throughout our lives, yet it is rare that this results in physical aggression. Most affective science and neuroscience studies that quantify magnitudes of anger are inherently lab based (Richard *et al.*, 2002). Because of this, theory is useful for augmenting our understanding of how anger thresholds vary across potential altruistic punishers in the "wild". This approach proposes three possible theories for observing variance on anger thresholds across social space.

### *Relatedness, Hamilton's Rule, and Group Fractionalization*

One possibility for understanding anger thresholds returns to the biological concept of inclusive fitness. Such an approach is a good candidate as it formulated as a way to explain the puzzling presence of altruistic acts within human evolution. Assuming the egalitarian logic of the parochial altruistic punisher, it is simple to re-purpose the concept of gene as group identity.

$$\text{group fitness} = \frac{\text{own contribution} + \text{contribution of co-group members}}{\text{average contribution of the population}}$$

Breaking down the above ratio, a parochial altruist inhabits an environment where their group may be more heterogeneous or homogeneous. Because the egalitarian logic of the parochial altruist rests on group identity, it is possible that how uniform or fragmented a group's identity markers are can predict how much or how little anger is needed to reach the risk shifting threshold. Hamilton's rule provides the logic for this approach. Imagine a parochial altruist punisher  $a_i$  and the punisher's in-group  $x$ . The punisher's contribution to group fitness is the sum of the punisher's inclusive contribution to the group and the total contribution of others within the group:

$$w_i = a_i + w$$

The total group contribution to  $a_i$ 's group fitness is determined by the following equation:

$$x = \sum_j r_{ij} b_{ij}$$

$r$  is a coefficient that measures relatedness, or how close the punisher ( $i$ ) and the group ( $j$ ) match on identity markers. A coefficient of 1 is a perfect match, and a coefficient of 0 is total dissimilarity.  $b$  is a measure of the contribution for both the punisher and group. Group fitness then takes the

form of:

$$w_i = a_i + \sum_j r_{ij} b_{ij}$$

A punisher's contribution to group fitness is the sum of individual-group relatedness and total fitness, with relatedness being the most important variable for understanding the punisher's contribution to group fitness. In a costly punishment scenario, the punisher's contribution value will be  $a_i < 1$ , as their potential contribution to a group's identity and maintenance may cease as a result. For the punisher's contribution to group fitness to be greater than 1,  $r$  must be high given reasonable values of  $b$ . Reformulating the equation above into Hamilton's rule (Hamilton, 1964a,b), one can propose a framework for predicting anger thresholds using the following:

$$rB - C > 0$$

then

$$\frac{C}{B} < r$$

If the relatedness measure of a group's identity is greater than a ratio of the cost of punishment over the benefit to the punisher's group ( $\frac{C}{B}$ ), then one should expect for the anger threshold needed to participate to be lower. When group relatedness is high, catalysts targeting the group may be perceived more intensely by the punisher. Low identification distance between the punisher and the group is likely to exacerbate the feelings of personal offense, and vice-versa when identification distance is higher. Additionally, the relatedness of a group signals to the punisher that their po-

tential death will not unduly hurt the identitarian makeup of their in-group by depriving their own contribution to a group's identity and gives the punisher a degree of confidence that their potential punishment of out-group transgressors will do more good than harm. As a result, the punisher needs less anger to justify the risk they take on when they are sure that their actions will fit within the framework of an already cohesive group identity.

A identity-relatedness explanation for anger modulation also suggests patterns about the influence of multiple identities on anger thresholds. In many countries, individuals are likely to hold multiple, and sometimes competing, identities. It is beyond the scope of this project to more rigorously define identity and operationalize the potential rationing of multiple identities across individuals, but some thoughts are in order. In environments with high degrees of identity homogeneity, this explanation expects anger thresholds to be less when perceiving or experiencing a catalyzing violation. In environments that are heterogeneous, like the United States and western Europe, it is more probable that individuals will be the product of multiple, and sometimes competing, identities. Individuals stretched between different religious, ethnic, and class identities are hypothesized to have higher thresholds of anger when experiencing or perceiving a norm violation.

These expectations are likely due to the added complexity of multiple-identities, and the need to think more thoroughly about one's place within a constellation of identity markers. As a result, the expectations outlined in this theoretical approach are likely to better capture the behavior of those with relatively uni-dimensional identity markers. This could be due to structural conditions at the group and societal level, or individual conditions such as isolation from more diverse segments of society. Cautiously generalizing to the societal level, it is possible that more homogeneous environments are more likely to produce greater numbers of participants within an inter-group conflict, compared to more diverse environments.

*H4:* As group fractionalization (identity markers) decreases, thresholds for anger driven parochial



altruistic punishment behavior will decrease.

### *Legal Institutional Culture*

Another candidate for predicting anger threshold variance concerns legal institutions and their ability to resolve conflicts absent violence. Robust rule of law and a credible ability to provide non-violent resolution between conflicting parties may depress the thresholds of anger needed to engage in altruistic violence against out-group members. The logic behind this explanation uses a modified version of the dual threshold model of anger (Geddes & Callister, 2007). The dual threshold model posits that there are two types of anger expression. First, anger may be expressed in ways that are appropriate or normatively acceptable. The second threshold entails that anger may be expressed in ways that are deemed socially unacceptable or inappropriate Geddes & Callister (2007).

It is plausible that anger driven costly punishment against out-group members can fit into either threshold depending on the strength and credibility of the legal institutions that resolve conflicts between individuals and groups. Groups that inhabit environments with credible and representative legal institutions are assumed to have a lower tolerance for anger driven physical aggression. In these environments, anger driven parochial altruism is expected to fit into the second anger threshold that deems their acts inappropriate given expectations for pursuing grievance restitution. Conversely, groups that inhabit environments with no credible legal institutions, or non-representative institutions, are expected to have a higher tolerance for anger driven aggression, and subsequently a higher acceptance of parochial altruistic punishment. Such a theoretical connection between legal institutions and anger thresholds is indirectly supported by field experiments concerning norm violation size (Balafoutas *et al.*, 2016), in which it was found that credible counter-punishment scenarios created second thoughts in would be punishers.

Because these environments lack the structures for non-violent resolution and a monopoly on violent punishments that these institutions prescribe, punishers may expect less resistance to their actions, or even explicit approval. One can imagine a scenario of legal corruption or anarchy, where vigilante justice takes on informal tasks concerning conflict resolution and retribution for out-group transgressions. If the punisher suspects this, then the anger needed to justify the risk of action is expected to be lower. A focus on legal institutional culture formulates two hypotheses that capture distinct absences of systematic legal conflict resolution from both an anarchic and deprivation perspective.

*H5a:* Individuals inhabiting environments lacking a credible legal system for conflict resolution will have lower anger thresholds for participation. (anarchy)

*H5b:* Individuals inhabiting environments where their in-group is denied a credible legal system for conflict resolution will have lower anger thresholds for participation. (deprivation)

#### *Prospect Theory and the Framing of Catalysts*

The final approach for predicting anger thresholds borrows concepts from Kahneman and Tversky's prospect theory (Kahneman & Tversky, 1979). Prospect theory argues that individuals facing a decision may experience risk distortion from how the outcomes are framed around a reference point. If an individual stands to gain something (domain of gains), they will be risk averse when it comes to risky choices. Conversely, when an individual stands to lose something (domain of losses) they will be risk acceptant. More recently, some studies have sought to understand how emotion may influence or modify framing effects (Mercer, 2005; Druckman & McDermott, 2008). Specifically, experimental research using emotion elicitation suggests that feelings of anger exacerbates behaviors within the loss domain by depressing loss aversion (Campos-Vazquez & Cuijly, 2014).

While it is difficult to directly apply laboratory findings to the reality of inter-group conflict, the findings by Campos-Vazquez and Cuijty (2014) suggests that the anger felt by parochial altruistic punishers may be influenced by the framing of a catalyzing event. Punishers interpret the findings through their own experience, but also through their in-group discourse. Group-level discourse that disseminates a loss frame around an event may lower the anger thresholds needed for a punisher to act (Tezcür, 2016).

Because costly punishment behavior is risky in the context of inter-group conflict, prospect theory would suggest that punishers would be risk and loss averse and would likely rather accept the psychic cost that comes with the norm violation catalyst as opposed to potentially losing one's life. If feelings of anger are integrated into this framework, then one should expect the opposite to occur. If a catalyst is interpreted as being in the domain of losses, feelings of anger needed to produce a risk shift should be lower as loss aversion is depressed. Knowing what may constitute a potential domain of loss or gain is important here. Dominant groups that experience norm violation catalysts may not perceive the event to be in the domain of losses if their status as the dominant group is not substantially eroded. Minority groups may be more apt to interpret catalysts within the domain of losses when the out-group perpetrator is socially dominant. Minority groups may be more keenly aware of their relative capacity to defend against encroachment by out-groups, making the likelihood of a loss frame greater. Using this logic, the final hypotheses specify a general and asymmetric set of framing expectations for anger thresholds.

*H6:* Individuals perceiving norm violation catalysts in the domain of losses will have lower anger thresholds for participation.

*H7:* Individuals belonging to a minority group will be more likely to perceive norm violation catalysts in the domain of losses, and subsequently have lower anger thresholds for participation.

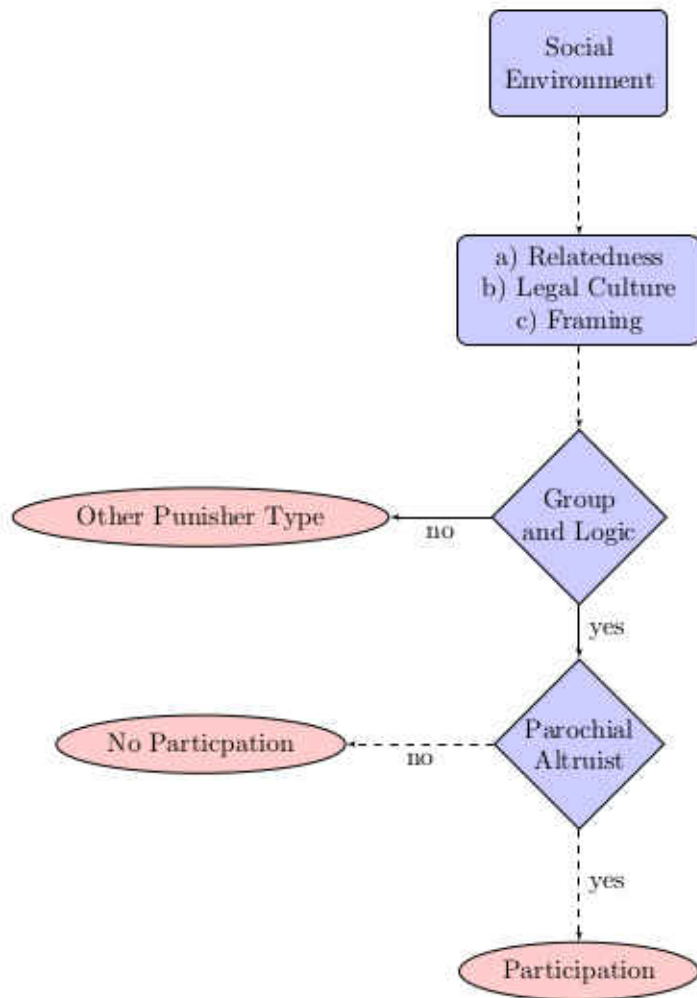


Figure 2.3: Unified Model of Parochial Altruistic Punishment

*A Social Framework for Parochial Altruism in Conflict*

Understanding who may be motivated by parochial altruism and how much anger is needed to result in participation helps to plug important theoretical gaps in a solely individual model of parochial altruistic punishment and inter-group conflict. Figure 3 illustrates a unified model that combines the social approaches described above with the individual model specified in figure 2.1. The innovation of this model is to integrate the social with the individual expectations of parochial

altruistic punishment theory in an effort to strengthen our theoretical understanding of how individual pathways towards pro-social violence operate in the complexity of the social world.

As far as the author knows, this is the first attempt to explicitly specify a framework for the study of anger driven parochial altruism and participation in inter-group conflict. The goal of this framework is to provide a base for empirically driven research linking altruistic behaviors to pro-social violence. As a result, it leaves much to be answered. First, it does not theorize about the decay of anger. Emotions are volatile and often short in duration when measured in the lab (Nussio, 2017). It is possible that both social-level variation and individual characteristics can substantially alter how long anger stays, and the distribution of its decay. Second, it does not specify a process of group emotion. The model proposed here is implicitly group driven through the discussion of the social nature of parochial altruism, but in its current form, it does not provide a framework for understanding how collective frames such as ideology promote group-held emotional states. From this perspective, it is important to explore how distinct individual emotions are from those that are held collectively. Finally, it does not account for the potential mobilizing influence of violent organized groups. Such groups may actually be the source of the social factors described in the previous paragraphs. It is important that future development moves from the an abstract model into more concrete theories that link group ideology and organizational style to the potential production of altruistic punishers (Atran *et al.*, 2014; Schubiger & Zelina, 2017; Tezcür & Besaw, 2017).

Finally, while this approach is concerned with the intersection between the individual and the social, it also provides some insight into why some inter-group conflicts take on an intractable character relative to other conflicts. If a conflict is producing more parochial altruistic punishers, conflict intractability could be promoted through two processes. First, because norm violators are unlikely to be punished through legal means, the parochial altruist may be driven to continue conflict activities and engage in strategies of reprisal against out-group members, and spoiling or outbidding against moderate factions of their in-group. Another condition for intractability may

also come from a sort of punishment feedback cycle. In an effort to alleviate feelings of anger, a punisher is likely to incite similar feelings within members of an out-group. While violent altruism seems to have been a useful adaptation in our evolutionary history, modern conflicts may manifest the most negative aspects of these behaviors. As punishers take action against out-group perpetrators, they themselves become the perpetrator. As groups engage in increasingly violent interactions that break down the norms surrounding treatment of outsiders, conflicts may become increasingly intractable. In essence, modern conflicts present a sort of "altruist dilemma". Either continue feelings of anger and humiliation, or alleviate them through violence that promotes increasingly intractable interaction.

### Concluding Thoughts and Ways Forward

The theory specified in the above paragraphs attempts to integrate the individual pathway towards altruistic violent with the realm of the social. Acknowledging the limitations of this model, it is useful as a theoretical starting point for the study of a difficult and complex behavior. It does not seek to replace other theories, but instead it provides a more developed approach for understanding how an individual may develop parochially altruistic motivations and how the social environment may catalyze or depress the individual-level pressures that altruistic anger provokes. The difficulty in measuring and identifying the factors that are theorized to drive parochially altruistic individuals into inter-group conflict also makes this approach more interesting. Specifying a more rigorous set of falsifiable expectations is a first step to building an empirically grounded theory of social parochial altruism and conflict behavior.

Another aspect of this theory is its scope on the individual. When distinguishing between elites and non-elites, this approach is currently unable to make distinct expectations on how the status of an individual may play a role in their social logic and anger threshold. The nature of elite politics

is complex, and one should be careful to apply this approach in its current form to non-elites. Elites likely have different structure pressures concerning their ability to cope with information asymmetries and anger modulation. However, while this current model should not be applied generally to elites, that does not mean that elites are not influencing it. Elites may play a role in shaping and promoting the social and environmental factors that modulate anger thresholds. Elites may strategically manipulate concepts such as identity relatedness, violation framing, or withhold access to political institutions at the societal level. While this current formulation of the theory does not explicitly address these roles, it is acknowledged that such factors are potentially salient.

Starting with this limited scope, the approach specified here can help to answer two distinct questions concerning the connections between parochial altruism and violent behaviors. First, how do we know an individual has parochially altruistic motivations for participating in inter-group conflict? Second, how do social factors influence the level of anger needed to induce violent participation on behalf of one's in-group? Exploring these questions will not be easy, but a number of different research approaches may be valuable in more rigorously testing the expectations specified above. This paper concludes with a brief discussion of three potential research methodologies for the empirical evaluation of the theoretical expectations proposed here.

### *Experiments in the Lab or Survey*

Using experiments is perhaps the most widely utilized approach to understanding how anger can induce punishment behaviors. Lab designs typically induce parochial altruism by placing participants in certain roles and by providing the opportunity for norm violation to occur in monetary exchanges in an effort to understand the evolutionary development of parochial altruism (Bernhard *et al.*, 2006; Abbink *et al.*, 2012). Yet, how may we explore the connection between parochial altruism and participation or support for inter-group conflict?

First, one could design a more descriptive study that connects psychometric measurements related to grid/group logic to expectations surrounding anger driven parochial altruism. The expectation being that anger elicitation in the context of out-group norm violation would be stronger for those that are identified as egalitarian in social logic. Another approach would be to design an experiment that randomly allocates different structural conditions that reflect the hypothesized conditions above. Randomizing perceived or objective relatedness in an experimental in-group, the framing discourse of norm violations, or the provision of a credible and inclusive independent conflict resolution tool would allow for the exploration of how these social-environments may influence the degree to which punishment is carried out.

Furthermore, those interested in political violence should also seek to test these concepts using vignette experiments that attempt to link support or action to realistic conflict scenarios. While such approaches are inevitably going to face questions of external validity, it is necessary to take first steps. While lab or survey participation will never be a perfect match for understanding individuals that participate in inter-group conflict, such studies allow for incremental advancements of our understanding surrounding the connection between parochial altruism and pro-social violence activities directed at out-group perpetrators. The results of these studies may be key to further refinement of concepts and measures in a way that allows us to extend them, albeit imperfectly, to real-world actors.

#### *At-a-Distance Approaches*

The nature of social conflict and the intersection of human fallibility and ethics makes it highly impracticable, and sometimes impossible, to rigorously study and control elements of the parochial altruism process in the real-world. Using some at-a-distance approach to studying both individuals and groups expected to be driven by parochial altruism may provide to be a useful alternative.



Qualitatively, process-tracing individual pathways to violence may be useful for identifying the presence of social variables that formulate and guide parochially altruistic behaviors. Additionally, such an approach may also be useful in identifying competing or alternative factors that have yet to be specified. With enough development, information on individuals known to be parochial altruists could be used in more traditional case studies. Most similar designs that attempt to randomize social-environmental conditions may be able to leverage structural variation in an effort to understand how anger driven parochial altruism changes across context.

Another approach may involve the use of text analysis and machine learning. Combining psychometric data that captures the egalitarian - parochial punisher with text and rhetoric could possibly allow for an approach that can identify such individuals in the "wild". The central idea being that an individual's speech does not only reflect what they believe, but also how they believe. Parameter tuning approaches such as the LASSO regression method may be able to find the best words, or grammatical structures in terms of predicting one's motivational disposition towards support or engagement in pro-social violence. Combining this with developments in text analysis found in Neural Networks (NNs) and Restricted Boltzmann Machines (RBM) can allow researchers to both potentially predict an individual's motivational disposition based on their speech, or even generate hypothetical speech that reflects parochial altruism. Such approaches may be especially useful for attempting to quantify and recognize the markers and magnitude of anger within speech, something that would deeply improve the empirical utility of a computational at-a-distance approach.

### *Macro and Multilevel Approaches*

While a discussion of macro approaches to an intrinsically individual process may seem counter-intuitive to some degree, one should be hesitant to leave it out of the one's tool-kit altogether. Multilevel modeling that combines macro-level conflict data with group and individual level in-

formation concerning broadly held motivations may provide indirect tools for testing the above hypotheses. Such an approach would require great effort by the researcher(s). First, one would need to identify and measure conflict events that represent potential parochial altruistic punishment against out-group members. Starting conditions would be attacks that are both 1) costly to the perpetrator, and 2) and only target out-group victims.

If one can identify a credible set of parochially altruistic conflict events, testing group-level and social-environmental measures against event counts and outcomes can provide indirect observational evidence for or against the social hypotheses specified above. Such an enterprise would be difficult both in practice and argument, but clever research designs and novel operationalization may help to provide diversity in evidence across commonly used research design methodologies.

#### *Inclusion of Alternative Emotions*

Finally, a substantive way to move forward with this work is to further examine emotions beyond anger. Anger has been the sole focus of this approach due to its close conceptual nature with altruistic punishment. Yet, conflicts are complex and the decision to participate altruistically within an inter-group conflict may be driven by more than just anger, and even multiple emotions. Does sadness depress behavior, while anger catalyzes it? What about positive emotions that may result from the witnessing of punishment, or feelings of joy from successfully punishing an out-group violator?

These potential emotional mechanisms raise a number of questions that may be important to this process. What if anger and joy work in tandem? It is possible that those who feel anger due to a norm violation also anticipate joy as a result of punishment. It is also possible that those that feel anger, but do not anticipate joy, may be more reluctant to engage in altruistic punishment behaviors. If emotion is distinctly tied to the decision to participate in inter-group conflict, and

to engage altruistically, it is necessary to understand the potential interaction between multiple emotions and whether certain emotional states depress participation or encourage other types of punishment beyond altruism as well.

## CHAPTER 3: PAROCHIAL ALTRUISM, ANGER, AND PARTISAN PUNISHMENT

Do conflicts between groups promote parochially altruistic behaviors? More specifically, can images of partisan violence induce greater levels of parochial-driven punishment of out-group perpetrators? Building off of altruistic punishment theory, and work on conflict and altruism (Bowles, 2006; Choi & Bowles, 2007; Bowles, 2008) , this study seeks to find laboratory evidence for the role of anger tied to conflict in the punishment of out-group perpetrators. Parochial altruism is any behavior that results in a personal cost to the actor in an effort to benefit one's in-group, an act that can potentially describe a good number of violent behaviors, or even support for such behaviors, within conflicts between groups. The objectives of this study are twofold. First, it seeks to address theoretical and empirical gaps within the political science literature concerning participation in inter-group conflict. Second, it seeks to specify and build a micro oriented approach to both theorize and study why individuals choose to engage in costly punishment behaviors within the context of inter-group conflict while taking into account the social nature of altruistic motivations.

Within the extant inter-group conflict literature, there are two dominant strands of research that attempt to explain the onset of phenomenon such as civil-war, insurgency, terrorism, and low-level communal violence. The *strategic or rational choice model* has proved to be one of the most influential approaches to explaining inter-group conflict at the sub-state level (Sandler *et al.*, 1983; Crenshaw, 1992; Moore, 1995; Kydd & Walter, 2006), yet much of this work either focuses on macro-level empirical indicators of opportunity and constraints (Fearon & Laitin, 2003; Collier & Hoeffler, 2004) or specifies theories in which the actor of interest is assumed to concerning preferences towards engagement. At the micro-level, rationalist theories often focus on selfish motivations. It is argued that non-material grievances are not enough to induce participation, and

that individuals must stand to benefit in some way from their choice (Tullock, 1971). These benefits may come in the form of direct material gain (Lichbach, 1994), or a change in social standing and access to upward social mobility (Lee, 2011). Additionally, the ecology of the conflict may also shape the behavior of potential recruits. Individuals may seek participation to gain safety from war-fighting or to avoid social sanctioning for non-participation (Kalyvas, 2006; Humphreys & Weinstein, 2008)

The main shortcomings of the rationalist approach is three-fold. For those studies that focus on macro and group indicators, there is a problem of ecological inference. For instance, while Fearon and Laitan (Fearon & Laitin, 2003) find a statistical relationship between poverty, terrain, and population and the onset of civil war, this cannot explain individual choices to participate as is. Secondly, rational choice theories concerning micro-level motivations for participation are empirically problematic because micro-level research on strategic behavior has often discovered contradictory behaviors within the laboratory when it comes to the evaluation of outcomes (Kahneman & Tversky, 1979; Allais, 1990; Ellsberg, 1961; Gintis, 2014).

Extrapolating findings on abstract economic activity to the "wild" likely exacerbates these empirical contradictions, especially so in the context of inter-group conflict due to information ambiguity, emotion tied to conflict catalysts, and the high degree of risk participation entails. A third shortcoming of this approach deals with theory. Rational choice theories may fail to explain why actors who face similar constraints and hold similar preferences opt for varying degrees of participation within a conflict. Constraints on preference maximizing behavior are expected to be important, but rational choice models may under specify important individual variation concerning the manifestation of pro-conflict preferences to begin with. How does one know when an actor will be rationally motivated to take cues from constraints and to develop a cost-benefit understanding of participation? Are all humans motivated by this, or only some? Studies of political violence driven by rational choice often explicitly must specify the preferences of certain types of actors, or implic-

itly assume that such preferences have a degree of universality. Both approaches are problematic in that the former does not explain inter-personal variation on preferences and behavior while the latter assumes them away.

Another influential strand of political science research is concerned with group and societal processes. *Social-political motivations* are one of the oldest approaches to explaining participation in inter-group conflicts, and has an ongoing rivalry with rationalist theories, as articulated in the greed vs grievance debate concerning the onset of intrastate conflict phenomenon. The main strains of research in this field focus on inter-group conflict focus on how factors such as group-identity and inter-subjective norm formation (Fanon *et al.*, 1963; Fanon, 1967; Weinberg & Eubank, 1994; Kaufman, 2006), cultural diffusion and learning (Bandura, 1978; Akers & Silverman, 2004), and relative deprivation between groups (Gurr, 1970). Like the rationalist approach, these social theories are limited in explaining why individuals from very similar cultural and social environments choose different paths in navigating conflict events. While repression and unequal social standing may provide the antecedent conditions for engagement, it does not explain why two individuals facing the same social motivations may opt for violence or non-violence respectively (Horgan, 2008). Additionally, more narrowly focusing on the idiosyncrasies of cultures and social groups as cause for violent participation (i.e. warrior cultures) may prove limited in specifying more general theories. At best, this limitation is especially salient in that there is little in the way that theorizes how individual heterogeneity in both environment and psychology interacts with group-level processes of organization and at worst may be prone to stereotyping and bias.

Building on work in behavioral economics, political psychology, and neuroscience, this study specifies a social theory of parochial altruistic punishment as a way to address the theoretical limitations described above. Going beyond established altruistic punishment theory, it outlines an approach that seeks to integrate an individual's logic of their social surroundings as a factor for determining who may be more likely to engage in altruistic punishment behaviors against out-

group perpetrators of violence. By theorizing and studying the role of emotion-driven altruistic punishment motivations in engaging in costly punishment, this study attempts to provide additional clarity to the complex puzzle of engagement in inter-group conflict at the micro-level.

To explore how altruistic punishment theory may help to explain engagement in costly punishment of out-group perpetrators, this study utilizes a series of vignette experiments to prime participants for anger. These vignettes attempt to leverage current partisan polarization in the form of conservative and progressive politics as a way to simulate inter-group conflict scenarios among American participants. Priming was performed by asking participants to evaluate hypothetical acts of violence by out-group partisans against a participant's partisan in-group. Following vignette priming, participants were then asked to divide a hypothetical pool of money between what they would keep and what they would donate to punish the perpetrators.

Connecting anger tied to partisan violence proves to be weak across samples. In the student sample, it is actually found that anger decreased punishment of out-group perpetrators. In contrast, focusing on possible social drivers of altruistic motivations to punish in the form of egalitarian attitudes there is more robust support. Across almost every sample, anti-egalitarian attitudes seemed to depress punishment of out-group perpetrators. This suggests that the egalitarian attitudes of a potential punisher may modulate their subsequent behaviors concerning the punishment of out-group members who conduct violence against in-group members. If egalitarian attitudes modulate how much a person punishes an out-group perpetrator, this provides evidence for a conditional theory of parochial altruism at the individual level. Namely that egalitarian attitudes may be a precursor to parochially altruistic behaviors within conflict.

The outline of this study is as follows. First it specifies a theory of social parochial altruism within inter-group conflict and respective hypotheses. Second, it outlines the research design and methodology used to test altruistic punishment hypotheses within three different experimental samples.

Finally, it discusses the promises and limitations of the findings and methodology and discusses how one may move forward with these line of research.

### A Social Theory of Parochial Altruistic Punishment

What drives potential variance in risky violent participation among individuals who share similar structural pressures to do so? Altruistic punishment theory may provide insight into the evolutionary roots of costly punishment behaviors both within a group and between groups and represents the potential for a more general micro-level theory of determining who may be more likely to participate in violent inter-group conflict. From an evolutionary perspective, altruist behavior is any behavior that results in a loss of fitness, reproductive success, for the actor in an effort to benefit another individual (Hamilton, 1964a,b; Alexander, 1974). Building on theories of fitness and gene replication, altruistic behaviors are selected for because they are useful in promoting the collective fitness of some social grouping as a whole. Inclusive fitness posits that social groupings often contain redundant copies of traits. Under this logic, altruism is beneficial to collective fitness in that the altruistic act will improve the status of the group while not substantially removing beneficial traits from the group as a whole.

Hamilton (1987) argues that altruistic traits are also conditional on some social object. Social object's pertain to both the environment and norms in which some group operates. A salient question remains though. Why do humans engage in altruistic behavior with non-kin individuals to the extent that they do? Non-kin altruism is puzzling in the animal kingdom and biological theories still struggle with understanding this behavior (Bell, 2008). To explain this, theories of non-kin altruism have focused on the role of social norms as drivers of altruistic trait selection in social groupings that extend beyond genetic kin (Sherman, 1980; Park, 2007). Instead of genetic distance, relatedness through norm driven familiarity and reputation building are argued to be



influential in explaining this phenomenon.

If altruism is evolutionary driven, what connects altruistic traits to potential violence? Fehr and Gächter (2002) argue that altruistic punishment is fundamental to regulating and maintaining a group's set of cooperative norms. Altruistic punishment is thus a specialized form of altruism, in which an actor "punisher" takes a personal cost to punish defectors and free-riders (Fehr & Gächter, 2002; Fehr & Fischbacher, 2003). Altruistic punishment theory as conceptualized here is argued to be one of the missing conceptual links between evolutionary selection on altruistic traits and non-kin altruistic behavior. With a greater focus on social norm violation, or the violation of those behaviors and traits that bind a group together, altruistic punishment theory provides a framework for understanding why complex social groupings can maintain relative stability (Boyd *et al.*, 2003; Henrich *et al.*, 2006; Marlowe *et al.*, 2008). Social norms underlie almost every institution that individuals engage with, from friend group maintenance to engagement in high-level economic activities. Because altruistic punishers may provide a credible deterrence to norm defection and cooperative free-riding, it is argued that such complex cooperative behavior is possible (Gintis *et al.*, 2003).

Breaking down altruistic punishment into sub-components, there are two frames through which altruism manifests. In Fehr and Gächter's (2002) original conceptualization, altruistic punishment is inward looking. Punishment occurs within groups as a strategy for maintaining an in-group's stability. Potential violence is focused on in-group members that are perceived to be violating some collective norm concerning behavior. In contrast, altruistic punishment can also be outward facing. Known as parochial altruistic punishment, the focus shifts towards out-group members who interact with the structures and norms held by one's in-group. Parochial altruism is thus the discriminatory allocation of altruistic behaviors in which the benefits of an altruistic act are intended for in-group members only (Rusch, 2014). Parochial altruistic punishment occurs when identifiable out-group actors engage in the violation or erosion of norms held by one's in-group,

a behavior expected to have developed in the competitive environment in which human social groups found themselves operating (Bowles, 2006; Choi & Bowles, 2007; Abbink *et al.*, 2012; Rusch, 2013).

By specifying a theory of altruistic punishment, and more specifically parochial altruistic punishment, it is possible to articulate a social altruism theory of individual participation in inter-group conflict. But before this can be done, it is necessary to specify the causal mechanism through which altruistic punishment motivations manifest. In the altruistic punishment literature, anger is argued to be the mechanism of action (Fehr & Gächter, 2002). While repeated interactions with individuals can produce seemingly rational cooperation or punishment based on past behavior, the puzzle that Fehr and Gächter (2002) articulate is that individuals in the lab often very willingly opt for altruistic punishment acts with complete strangers in non-repeated interactions.

Anger as mechanism seems to be a good candidate for connecting norm violations by strangers to altruistic punishment behaviors, especially with regards to findings in both the affective and neuroscience literatures. Emotions are conceptualized as intense short-term phenomena that have both physical and psychological consequences (LeDoux, 1995; Bechara *et al.*, 2000; LeDoux, 2003; Coan & Allen, 2007), that modulates belief and judgment formation and information acquisition. Specifically focusing on anger, empirical studies have found that anger increases third-party punishment behaviors (Nelissen & Zeelenberg, 2009), promotes competition between groups (Burton-Chellew *et al.*, 2010), depresses information seeking Parker & Isbell (2010), and promotes risk tolerance and underestimation (Lerner & Keltner, 2001; Druckman & McDermott, 2008; Campos-Vazquez & Cuijly, 2014). Specifying anger as a focal mechanism for engaging in parochial altruistic punishment, leads to the first testable hypothesis:

*H1*: Individuals who experience anger tied to out-group violations of in-group norms will be more likely to engage in costly punishment against out-group perpetrators.

While anger tied to out-group norm violations may provide general expectations, such an approach ignores the potential influence of the "social-object" as coined by Hamilton (1987). This study theorizes that motivations to engage in parochial altruism are a function of both experienced anger and an individual's social attitudes. Mary Douglas's (1978; 2003) theory of plural rationality provides a framework for understanding an individual's navigation of information and risk taking and seems especially salient for understanding how emotion modulates risk perception (Verweij *et al.*, 2015). Plural rationality posits that individuals inhabit various forms of social logic that pertain to the concepts of grid and group (Caulkins, 1999). Group logic underlies how an individual incorporates within a bounded social-unit, with emphasis placed on perceptions of identity and belonging relative to one's group. Grid logic deals with how an individual perceives social stratification within a group. The combination of these social logics may condition an individual's perceptions of risk by modulating their beliefs about what is permissible behavior concerning where the individual stands within group stratification and role divisions.

Framing individual social attitudes in terms of group and grid, plural rationality argues that there are four general social types that correspond to high or low values on both grid and group logic (Douglas, 1978; Verweij *et al.*, 2015). Individualists are those actors that have low values of both group and grid. These actors privilege individualism, freedom, and the entrepreneurial spirit and as a result hold dynamic social relationships and easily opt out of norms that bind social groupings. Fatalists, or actors with high grid logic and low group logic, are individuals who engage in social isolation. Fatalists are likely to see group encroachment through a critical scope and typically see the world as anarchic and are more likely to feel threatened by collective norms and identity. Hierarchists, or actors with both high grid and group logic, are actors that value strong group cohesion and place an emphasis on explicit divisions of social role within a group. Hierarchists are likely to view risk through their position within society and to act in defense and maintenance of the social grid. Finally, egalitarians, those with high group logic and low grid logic, are actors

who privilege norms that strengthen and maintain group identity. Egalitarians thus place normative emphasis on identity markers such as religion, ethnicity, nationality, and ideology. Additionally, egalitarians are likely to promote group solidarity from within and seek to develop and maintain boundaries between in-group norms and out-group members.

Using a plural rationality framework for costly punishment motivation, this study argues that egalitarian individuals are more likely to be motivated by parochial altruism when it comes to engaging in costly punishment behaviors. Their emphasis on high group solidarity and cohesion absent of social hierarchy provides two reasons for why this may be the case. First, egalitarians are more likely to self-identify with norm violations against fellow in-group members. Affronts to a group's normative makeup are more likely to be interpreted as personal norm violations. Egalitarians inherently see less distance between themselves and non-kin group members, and fits nicely into evolutionary explanations of non-kin altruism discussed earlier in this paper. Second, because the egalitarian is driven by norms corresponding to identity, they are more likely to respond with punishment to norm violations by out-group perpetrators as they interpret such acts as an erosion of in-group cohesion and structure.

In terms of the other three social logics, it is expected that they have differential influences on the kinds of costly punishment motivations one experiences. For example, individualists may opt for free riding or selfish punishment, while fatalists may opt for anti-social punishment, or the punishment of pro-social individuals. In terms of non-parochial altruistic punishment, hierarchists may be driven to enforce stratification norms within a group as opposed to focusing on out-group violators. In terms of the overall usefulness of this plural rationality approach, it is assumed that social groups may have varying ratios of individuals that fit into one or many of these logics. It is also possible for both individuals and social groups to change in their respective logic ratios over time and vary by space. For parsimony, this theory assumes that individuals may inhabit multiple logics, but typically experience motivations for risk taking based on the logic that is majority

held. For example, an individual may be both individualist and egalitarian, but dominated by an egalitarian social frame in the context of the logic ratio at the individual-level.

A focus on egalitarian logic has previously been linked to intragroup altruistic punishment as well. Dawes, Fowler, Johnson, McElreath, and Smirnov (2007) argue that egalitarian motivations may have been an important factor in the evolution of altruistic punishment and may drive negative emotions towards non-egalitarian individuals. Evidence from public goods games suggests that egalitarian individuals were more likely to altruistically punish free riders (Johnson *et al.*, 2009). While this is promising for the theory proposed here, it is possible that egalitarian attitudes work somewhat differently intra-group *vis a vis* inter-group. Within groups, egalitarians may punish to decrease the amount of stratification between group members. Between groups, may be more incensed by attacks on their in-group because they more closely identify with the group as a whole.

This focus on egalitarian logic leads to two social hypotheses of altruistic punishment against out-group norm violators.

*H2*: Individuals who experience anger tied to norm violations and who have low grid/low group logic (egalitarianism) are more likely to engage in altruistic punishment against out-group perpetrators.

### *Scope Conditions*

Before moving on to research design and results, it is necessary to frame the scoping conditions of the theoretical approach outlined above. First, this social theory of parochial altruism applies to individuals and not groups. It cannot make claims about how the individual influences the social setting, but only how an individual's perception of social logic may condition their motivations concerning the violation of inter-subjective norms. Second, when applying this theory to conflict

participation, it must be so at the sub-state level. At the state level, organizational capabilities and norms that depress or enable violent behaviors against out-group targets (i.e. War) is fundamentally different from the theory outlined above. While the evolutionary roots of pro-social violence may fuel both state organized and non-state organized participation in violence, states are able to utilize resource incentives and coercive strategies (i.e. conscription, propaganda, social and financial good allocation) for recruiting individuals into inter-state conflict. Finally, this theory as applied to inter-group conflict participation, applies best to low-level violent activity between two distinct groups (in-group vs out-group). Communal violence and rioting, terrorism, and insurgency are all possible scenarios from which non-state organized conflict actors may harness the evolutionary power of parochial altruism. Because these actions have different levels of feasibility across population, it is expected that parochially altruistic violence will be strongest in places with low institutional capture. The presence of parochially altruist motivations and costly punishment behaviors within low-level non-state conflicts is also expected to be strongest when out-group norm violators are substantially distant in terms of relatedness to a potential punisher.

### Research Methodology

The research design strategy used to test the above hypotheses utilize a survey-experiment that contain randomly allocated vignettes meant to prime anger in the context of inter-group violence. The unit of analysis is the survey participant, and samples are drawn from two groups of Mechanical Turk (MTurk) (n = 49, n = 186) workers and political science undergraduate students at the University of Central Florida (n = 76). All surveys were conducted in the fall semester of 2017. In terms of sampling methodology, all three experiments were conducted by convenience sampling as opposed to random sampling within the population. The former strategy is both more financially and logistically feasible and allows for the development of insights into this nascent research

program before devoting time and resources to random sampling strategies. The use of both undergraduate participants and MTurk workers, while not perfect, provide greater demographic capture than either would alone. And while MTurk studies have come under scrutiny recently, there is evidence that data sampled from these workers is more demographically diverse than traditional lab studies and is of comparable quality as a cost-effective alternative to lab samples and nationally random sampling (Paolacci *et al.*, 2010; Buhrmester *et al.*, 2011; Casler *et al.*, 2013)

Because it is not feasible to experimentally analyze altruistic punishment behavior in the context of real-world violence, the research design proposed for this study is substantially different than most behavioral experiments that utilize abstract games of cooperation and punishment. The main concession made here concerns the hypothetical nature of both the vignette and the act of costly punishment. While it is feasible to ask participants to punish norm violators in terms of real-world money, it is substantially more difficult to do this in an ethical and practical way with individuals who may feel free strong antagonism towards out-group perpetrators when it comes to acts of violence conducted by one participant's group against another. As a result, it is likely not possible to gain approval for an experiment that may create real antagonisms between participants who may be sensitive to partisan conflict.

As such, both vignette framing of violence and monetary allocations towards punishment are completely hypothetical. It must be conceded that this represents a non-trivial departure from reality when it comes to making the decision to give up some pot of money to punish out-group perpetrators. This is addressed by leveraging partisan polarization to provoke realistic feelings of anger in a time of increasing polarization and documentation of violent acts between partisan factions across social media platforms. Partisanship is a good example of group sorting within the American context, and has been found to be a particularly interesting source of costly punishment behaviors in previous research (Smirnov *et al.*, 2010).

Concerning the vignettes, two separate experiments were conducted. These vignettes use a common anger prime that depicts partisan violence. Participants are asked to read a scenario in which a co-partisan is attacked and killed by individuals belonging to the out-group (conservative or progressive). While hypothetical, the structure and language of the story is based on multiple news stories depicting partisan conflict in the post-2016 election time frame.

Both experiments attempt to keep the control condition as similar as possible to the anger prime. To do this, both control conditions also depict analogous acts of partisan violence but in the context of foreign political actors. Both use the same general language, but differ in two ways. Version I (MTurk = 49, UCF = 76) depicts acts of violence between supporters of two Finnish political parties, Kansallinen Kokomuuus and Vasemmistoliitto, as the victim and perpetrator respectively. The logic behind this vignette is that it would be difficult for participants to emphasize with actors that are foreign to the reader. While they may see an act of violence, it is assumed that the difficulty in understanding Finnish names would distract in a way that does not happen when reading about American victims.

Version II (MTurk = 186) uses a less subtle attempt at obfuscating the control condition. In version II, those in the control condition are given a scenario that depicts conflict between liberal and conservative parties, but changes the nationality from American to Moldovan. The main difference between version I and version II of the control condition relates to how well the participant can parse out the partisan identity of the victim. In version I, participants would be unable to know the partisan loyalties of the victim unless they were familiar with Finnish politics. In version II, participants are able to directly know the partisan identity of the victim as it is written in English.

The use of two vignette versions is justified because it allows this study to examine the results from two different strategies for eliciting partisan anger. Keeping the control and anger conditions as similar as possible is necessary to gain leverage over whether a participants identity is driving



punishment against out-group perpetrators, but it is also necessary to avoid inadvertently angering both conditions based on hypothetical violence alone. The results of this study should indicate whether there are similar levels of punishment across vignette versions or whether they differ.

### *Independent Variables*

The main independent variable is *anger* tied to acts of violence committed by out-group partisans against the subject's in-group. The strategy is to identify and provoke the feelings of anger that occur when out-group members violate one's norms. This is achieved through the random allocation of an anger vignette to some subjects and a similar, but purposely obfuscated, control condition. Participants are first asked to balance a feeling thermometer that ranges from 0-100 between their evaluation of the terms conservative and progressive. Based on the subject's choice, they are then sorted into partisan-relevant vignette tasks. For example, subjects that indicated 51 or above on their feelings concerning the conservative concept were given vignettes that displayed a hypothetical scenario of far-left violence against a conservative political activist.<sup>1</sup> In the event that subjects indicate a 50/50 split between their evaluations of conservative and progressive, the participant is given an early termination of the survey. This is done to avoid credibility problems that may occur when randomly allocating such individuals into either partisan condition. By focusing on those that explicitly sort into one partisan grouping over another, it is possible to leverage their partisan identity in a framework expected by parochial altruism theory. As such, anger is operationalized as a dichotomous indicator of treatment (anger tied to inter-group conflict) and control.

The second independent variable is not experimental, but is an observed psychometric indicator. *Egalitarian* logic is captured by using three questions derived from the Social Dominance Ori-

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<sup>1</sup>Vignette text for both treatment and control conditions are provided in the appendix

entation (SDO-6) scale (Pratto *et al.*, 1994). The SDO scale captures both between group dominance beliefs and anti-egalitarian beliefs concerning one's in-group. Each question concerning anti-egalitarian attitudes ranges from 1 (more egalitarian) to 7 (more anti-egalitarian) and forms an additive index that ranges from 3 (most egalitarian) to 21 (least egalitarian). While the priming of anger tied to inter-group conflict is used to test H1, the anti-egalitarian scale is used to test H2.

### *Dependent Variables*

To measure parochial altruistic punishment outcomes, subjects are asked to allocate a hypothetical pool of 100 dollars between what they would keep for themselves and what they would donate to punish out-group partisan perpetrators. This serves as an indirect way of measuring participation, and is likely necessary. Asking individuals directly if they would conduct acts of violence themselves is likely to evoke problematic feelings. In the experimental setting, individuals may feel judged if they were to choose such an option and may depress true feelings. Additionally, it is likely that directly measuring violent participation is impossible. In the real-world moment, individuals conducting violent altruistic punishment are unlikely to be critically thinking about their actions. In the experimental setting participants are reading and processing information and such an environment is not directly comparable. Their allocation of money presents the choice to take a cost to themselves to punish perpetrators in a more reasonable, albeit imperfect way. As a result, the results of this study must be framed cautiously in that such a measure can only provide indirect experimental evidence linking anger driven parochial altruism to participation in violence against out-group perpetrators.

To more robustly capture the dependent variable measure, altruistic punishment is operationalized in two ways. 1) *total punishment* and 2) *costly punishment*. Costly punishment is operationalized as a dichotomous measurement that codes altruistic punishment as 1 if the punishment allocation

is greater than or equal to 51/100, and 0 otherwise. The logic is that if an individual gives up more than 50% of their monetary pool, they are taking on a significant cost to their pool of money. Total punishment is measured on the interval level as the total number of dollars a subject allocates towards punishment and can range from 0 - 100. Splitting the punishment measures in this way allows for this research to examine the potential differences in how altruistic punishment can be measured. While any punishment is acceptance of a cost to the participant, there could be substantial differences between general cost taking and cost taking at the 51% threshold. As far as the author knows, there are no studies that explicitly operationalize costly punishment as 51% or more allocation. But, such a measure is a practical way of examining variation among those participants that gave at least a majority of their money away.

#### *Control Variables*

Alongside the variables of interest to this study, both demographic and psychometric factors are included as potential alternative explanations. Focusing on demographics, four participant characteristics are considered. First a dummy for partisanship (1 = progressive, 0 = conservative) captures the potential for ideological differences between both groups. While it is difficult to articulate empirically rigorous expectations concerning the difference in punishment, it is possible that progressives and conservatives perceive punishment opportunities differently. Additionally, participant age (interval), sex (dichotomous: 1 = male, 0 = female), and family income (interval: 1 - 14). Participant age may be an important modulator of feelings of anger, as there is empirical evidence that feelings of anger diminish and are experienced less as humans age (Schieman, 1999). In terms of sex, males may have asymmetric responses to the anger prime when compared to their female counterparts. Empirical evidence suggests that males more intensely experience a range of emotions, especially negative emotions such as anger (Brebner, 2003). Finally, regarding family income, there is evidence that higher incomes promote both positive life evaluations

and can strengthen emotional well-being and regulation to a certain income threshold (\$75,0000) (Kahneman & Deaton, 2010). It is also possible that those from higher income backgrounds are unconsciously more willing to part with small pools of money than those participants who come from lower-income households where the choice to part with money is more salient.

In terms of psychometric controls, two constructs are used. All construct batteries were given to participants following the experimental conditions above. Alongside these control batteries, anti-egalitarian attitudes from the SDO-6 scale that make up the second independent variable were also administered in the same phase of the survey as the control batteries. To prevent spill over effects from the anger manipulation, participants were given a one-minute puzzle as to distract participants from their previous anger priming. First, a measure of authoritarianism put forward by Feldman (1997; 2003) is given. This construct measures attitudes towards child rearing practices and seeks to measure authoritarian personality through preferences regarding social conformity. Such a measure is included because authoritarian personality has been observed to exacerbate hostile attributions and punishment (Milburn *et al.*, 2014). Finally, a measure of retributive punitiveness is administered to participants (Kugler *et al.*, 2013). A participant's decision to punish may be influenced more by a general punitive disposition, a trait that has been documented well among individuals from the United States (Lieberman, 2006; Kugler *et al.*, 2013).

Table 3.1: Descriptive Statistics for Sample Characteristics

Variable	Mean	SD	Min	Max	N
UCF Student Sample					
Anger-Treatment	0.53	.	0	1	76
Progressive Dummy	0.63	.	0	1	76
Male Dummy	0.45	.	0	1	76
Age	21.6	3.34	18	31	76
Income	5.09	4	1	12	76
Authoritarian	1.33	1.2	0	4	76
Punitiveness	19.51	4.01	11	28	76
Anti-Egalitarian	7.67	3.95	3	19	76
MTurk Sample 1					
Anger-Treatment	0.53	.	0	1	49
Progressive Dummy	0.57	.	0	1	49
Male Dummy	0.65	.	0	1	49
Age	34.86	10.49	24	63	49
Income	5.06	3.01	1	12	49
Authoritarian	1.02	1.22	0	4	49
Punitiveness	18.8	4.29	8	27	49
Anti-Egalitarian	8.55	5.01	3	21	49
MTurk Sample 2					
Anger-Treatment	0.5	.	0	1	186
Progressive Dummy	0.54	.	0	1	186
Male Dummy	0.54	.	0	1	186
Age	35.7	10.1	19	73	186
Income	5.38	3	1	12	186
Authoritarian	1.04	1.21	0	4	186
Punitiveness	19.6	4.39	4	28	186
Anti-Egalitarian	8.08	4.99	3	21	186

### *Sample Characteristics*

Finally, Table 3.1 displays the descriptive statistics for all independent and control variables across sample. For the treatment and dummy variables, one should interpret the mean value as the percentage of the sample that displays the condition (ex: Anger-Treatment .53 is equal to 53% of the sample experiencing the anger condition). Across factors, each sample is statistically similar with the exception of age. The student sample is more than ten years younger on average than their Mechanical Turk counterparts. MTurk Sample 1 also has roughly ten percent more males present than both the student sample and MTurk Sample 2. Each sample experienced roughly equivalent treatment ratios and have similar characteristics on income and psychometric traits. In terms of progressive and conservative partisan identity, the student sample has the most progressive partic-

ipants, while MTurk sample 2 has the least. Across all samples, progressives make up at least the majority of participants but are evenly distributed in the MTurk samples than the student sample.

## Results

To analyze the results of the three surveys, a combination of visualization and regression modeling is used to evaluate the hypotheses outlined in the theoretical approach. For total punishment outcomes, ordinary least squares regression is used. For costly punishment outcomes, logistic regression is used.

### *Anger*

#### *Total Punishment*

Figure 3.1 displays bar-plots that compare the mean level of total punishment across treatment and control conditions. Inspecting mean values of punishment between treatment and control conditions across all three experiments presents mixed evidence for hypothesis 1. In the student sample, the control condition actually showed higher levels of punishment for the control condition and higher absolute punishment than either MTurk sample. The MTurk samples both showed expected differences, but only the MTurk sample utilizing vignette version I displays meaningful difference between the control and anger conditions.

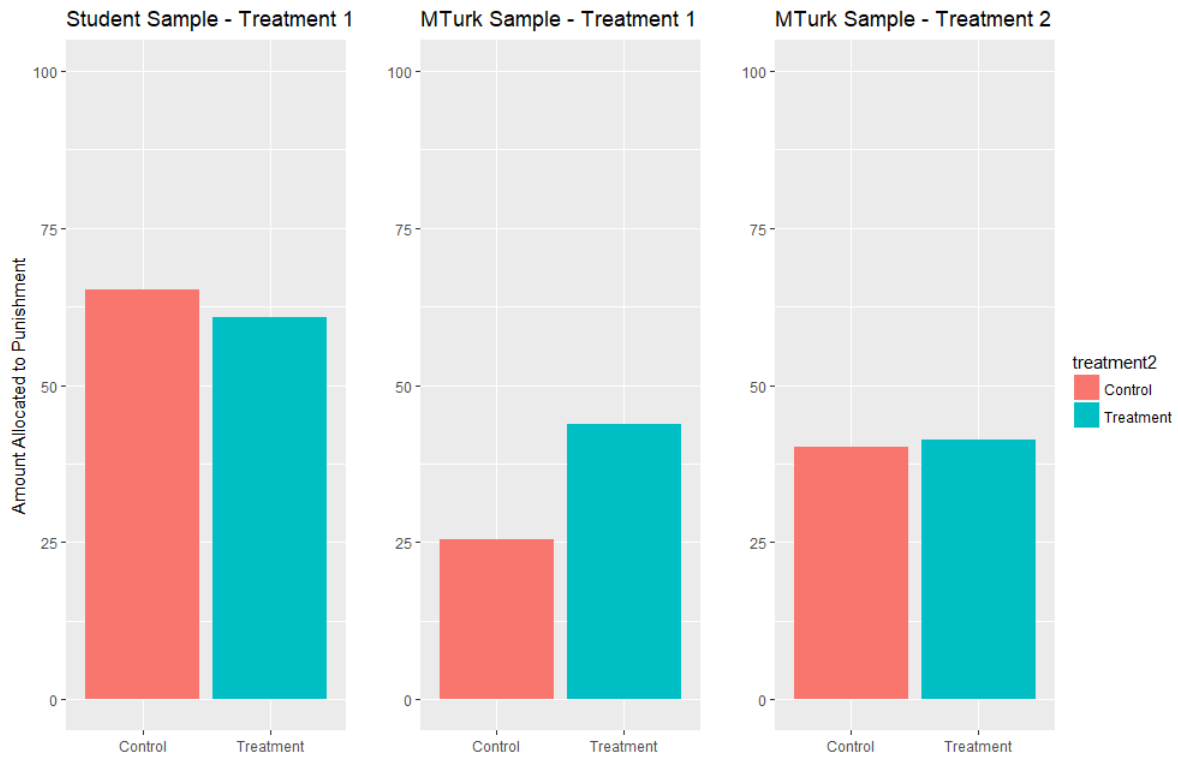


Figure 3.1: Total Punishment Across Experimental Condition

Table 3.2 displays OLS regression models that tests the expectation of H1. Models 1 and 2 are bivariate and multivariate models for the student sample. Models 3 and 4 examine the MTurk sample with treatment 1, and models 5 and 6 examine the MTurk sample with vignette version II. As with figure 3.1, there is mixed evidence for the anger hypothesis. Only models 3 and 4 show both statistical significance and the hypothesized coefficient direction. For those MTurk participants who experienced the anger condition, total punishment allocation increased by 18.411 (bivariate) and 21.193 (multivariate) when compared to their control condition counterparts. Models 1 and 2 correspond with expectations from figure 3.1 with those student participants who were allocated to the anger condition actually experienced less anger, albeit without statistical significance. While one should not directly compare models 5 and 6 (MTurk - treatment 2) to the other two experiments,

the anger coefficients are in the hypothesized direction but do not reach statistical significance.

Table 3.2: Bivariate & Multivariate Models for Anger Condition (Total Punishment)

Variable	Total Punishment					
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Anger	-4.289 (8.090)	-0.355 (8.000)	18.411** (9.559)	21.193** (9.962)	1.043 (6.045)	0.185 (5.888)
Progressive		17.784** (8.860)		16.752* (11.056)		9.263* (6.416)
Male		-8.247 (7.958)		9.157 (10.988)		-8.262* (5.936)
Age		0.048 (1.288)		0.790* (0.478)		0.829*** (0.294)
Income		1.483* (1.062)		0.489 (1.708)		2.154** (1.007)
Authoritarian		-2.384 (3.655)		4.136 (4.487)		4.196* (2.666)
Punitiveness		2.023** (1.049)		1.803* (1.155)		0.300 (0.688)
Constant	65.139*** (5.869)	10.636 (34.794)	25.435*** (6.963)	-59.713** (34.258)	40.247*** (4.274)	-11.255 (19.000)
n	76	76	49	49	186	186

Note: One-Tailed Values

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

In terms of control variables, some interesting patterns emerge. Across all models, progressive participants contributed more to punishment than their conservative counterparts and each model shows some level of statistical significance. It is difficult to theorize the reasons why progressives seem to punish more, but the finding may be of interest to future study of contemporary parti-



sanship and the punishment of out-group partisan perpetrators of violence. Participant age was significant in models 4 and 6, but the coefficients were the opposite of expectations. As participant age increased, so did punishment. Income was statistically significant in models 2 and 6, and their coefficients were in line with the second expectation concerning higher income and more easily parting with a hypothetical pool of money. Finally, punitiveness was statistically significant in models 2 and 4 with expected coefficient directions. Participants who indicated more punitive attitudes increased their total punishment allocation by around 2 dollars per point on the punitive scale.

### *Costly Punishment*

Turning to costly punishment, figure 3.2 displays a series of bar plots that compares the total number of costly punishers across experimental sample. While each sample varies significantly on the number of participants that allocated 51% or more, each sample is more in line with general expectations concerning the role of anger on altruistic punishment behaviors. In every experiment, the anger condition shows a larger amount of costly punishes than the control condition with the gap being largest in the MTurk sample that uses treatment 1. While one should be cautious in interpreting these comparisons, operationalizing altruistic punishment as a dichotomous measure indicating more than 50% allocation to punishment seems to indicate more substantive evidence for H1.

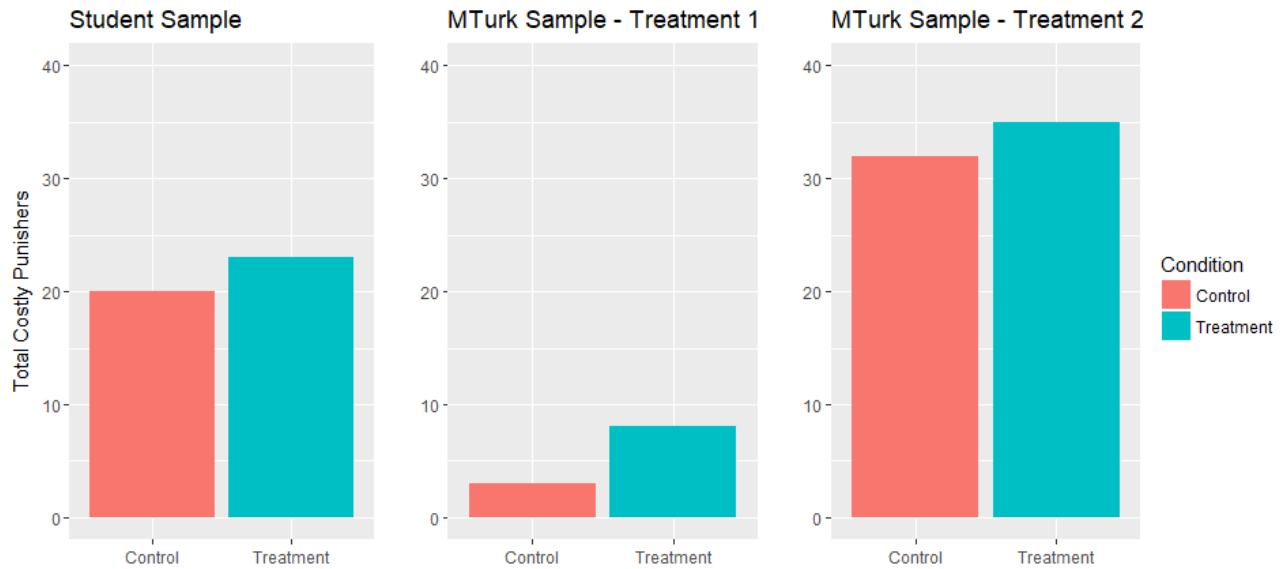


Figure 3.2: Costly Punishment Across Experimental Condition

Table 3.3 displays the results of six logistic regression models that are analogous to the model parameter structures used in table 2. In terms of testing H1, there is again mixed evidence. The anger condition shows the expected coefficient direction in all models, but is only statistically significant in models 3 and 4. While costly punishment captures the substantive expectations of H1, there is only limited evidence for the effect of anger. In terms of control variables, the results are mainly in line with the results displayed in table 1. Age and income show significance across at least two models and retain the coefficient directions found in the OLS models. Punitive attitudes are also significant in models 2 and 4 and show the expected coefficient direction.

Table 3.3: Bivariate & Multivariate Models for Anger Condition (Costly Punishment)

	Costly Punishment					
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Anger	0.079 (0.463)	0.263 (0.520)	1.086* (0.751)	1.815** (0.953)	0.140 (0.306)	0.114 (0.318)
Progressive		0.513 (0.567)		1.198 (0.990)		0.440 (0.350)
Male		-0.074 (0.519)		1.384* (0.996)		-0.169 (0.320)
Age		0.001 (0.081)		0.064* (0.044)		0.036** (0.016)
Income		0.168** (0.073)		-0.107 (0.169)		0.118** (0.054)
Authoritarian		-0.220 (0.235)		-0.078 (0.422)		0.234* (0.143)
Punitiveness		0.089* (0.069)		0.269** (0.123)		0.022 (0.038)
Constant	0.223 (0.335)	-2.420 (2.237)	-1.897*** (0.619)	-10.938*** (3.921)	-0.645*** (0.218)	-3.424*** (1.085)
n	76	76	49	49	186	186

Note: One-Tailed Values

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

*Egalitarian Traits*

*Total Punishment*

Turning to H2, figure 3.3 displays the conditional relationships between total punishment and egalitarian attitudes. High egalitarianism is indicated by negative values on a z-distribution of the

scale, while low egalitarianism is indicated by positive values on a z-distribution. Examining the data visualized in figure 3.3 shows more robust support for H2 than for H1. Anti egalitarians are expected to be involved in less total punishment than their more egalitarian counter-parts, and this bears out almost universally across experimental sample. In the MTurk sample using vignette version 1, those in the anger condition actually showed the opposite trend. Less egalitarian individuals showed increased punishment in the anger condition, deviating not only from those in the control condition but also from all participants in both of the complimentary experimental samples.

So what can one take from the data visualized in figure 3.3? One can cautiously conclude that total punishment allocation is a function of both the elicitation of anger and a participant's attitudes towards egalitarianism. In terms of an interaction effect, it is difficult to parse out. Each plot shows the archetypal interaction deviation, but the student sample and the MTurk sample using treatment 2 are unlikely to be large enough to produce a statistically significant interaction effect. Regardless, it is interesting to find such a pattern across most of the three samples. It provides more robust evidence for H2 and suggests that future studies of altruistic punishment against out-group perpetrators may find it fruitful to explore the potential influence of egalitarian attitudes on punishment outcomes.

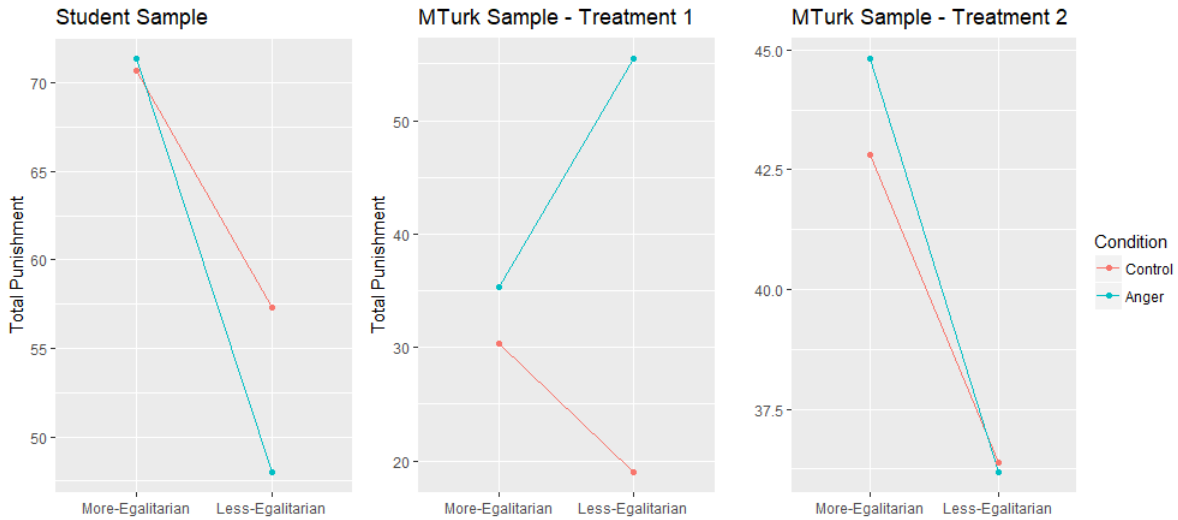


Figure 3.3: Total Punishment Conditioned on Anger and Egalitarian Attitudes

Table 3.4 provides a formal test of H2 by using OLS regression models. The only difference between the previous analysis in table 1 and table 3 is that the egalitarian scale has been added as a covariate. The measure of anti-egalitarian attitudes is statistically significant in all specifications with the exception of model 3. Anti-egalitarian attitudes also displays the hypothesized coefficient direction in all models except for models 3 and 4. This is not surprising, as the data visualized in figure 3.3 also displayed this counter-intuitive finding.<sup>2</sup> In the rest of the models, anti egalitarian attitudes are consistent with H2.

<sup>2</sup>As expected, interaction terms between the anger condition and anti-egalitarian attitudes are not statistically significant except for in model 4.

Table 3.4: Models of Total Punishment with Anti-Egalitarian Measure Included

	Total Punishment					
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Anger	-1.676 (7.692)	2.838 (7.611)	19.225* (9.565)	24.373** (9.642)	0.753 (5.981)	-0.023 (5.788)
Anti-Egalitarian	-3.064*** (0.978)	-3.947*** (1.278)	1.064 (0.962)	2.431** (1.111)	-1.347** (0.601)	-1.855*** (0.690)
Progressive		3.078 (9.614)		28.943** (11.955)		-0.007 (7.189)
Male		-3.676 (7.646)		9.916 (10.518)		-8.276 (5.835)
Age		-1.162 (1.275)		0.996** (0.467)		0.844*** (0.290)
Income		2.338** (1.039)		-0.002 (1.650)		2.174** (0.990)
Authoritarian		-0.729 (3.487)		3.036 (4.322)		4.658** (2.627)
Punitiveness		1.950** (0.989)		2.269** (1.125)		0.457 (0.679)
Constant	87.271*** (8.980)	67.465* (37.607)	15.902 (11.068)	-101.982** (38.043)	51.271*** (6.483)	4.615 (19.589)
n	76	76	49	49	186	186

Note: One-Tailed Values

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

In terms of controls, there are no significant changes in the results with the exception of the indicator for progressive individuals. While variance inflation measures do not indicate problematic multicollinearity between anti-egalitarian attitudes and progressive identity, it is telling that the standard errors increased in a significant way. This may suggest that anti-egalitarian attitudes were

at least partially captured by the distinction between progressive and conservative identity and that a focus on measuring anti-egalitarian attitudes has conditioned the general statistical importance of partisan identity as a rough measure for the presence of egalitarian beliefs. This is especially interesting when considering stereotypes of political ideology in the American context. Progressives are typically conceptualized as being more egalitarian than individualist conservatives, but the results may suggest that there is an important distinction between individualist individuals and egalitarian individuals regardless of ideological preference when it comes to punishing out-group partisans.

### *Costly Punishment*

Going back to the costly punishment measure, the potential importance of egalitarian attitudes comes into focus. The relationship between egalitarian attitudes and costly punishment across experimental condition is displayed in figure 3.4. Across all experimental samples, there are more costly punishers in the more egalitarian subset than their less egalitarian counter parts. Focusing on the relationship between more egalitarian attitudes and the anger manipulation, those with more egalitarian attitudes and who are also in the anger treatment condition show more costly punishment than those in the control condition across all experiments. Additionally, comparing across all samples, those who are more egalitarian and were allocated to the control condition show more costly punishment than less egalitarian individuals also in the control condition. As should be expected from the strong deviation visualized in figure 3.4, the MTurk sample using treatment 1 is unique in that those in the anger condition had equal amounts of costly punishment regardless of their variation on egalitarian attitudes.

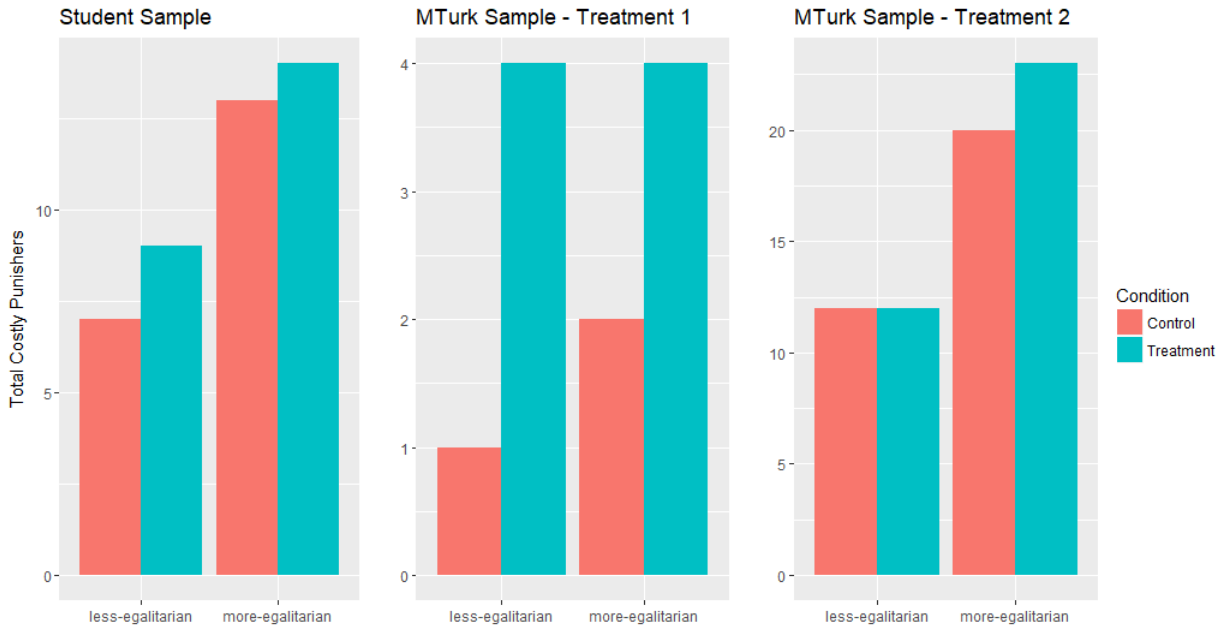


Figure 3.4: Costly Punishment Conditioned on Anger and Egalitarian Attitudes

Table 3.5 displays the final set of logit models that tests the expectations of H2 with the costly punishment operationalization. As from the analysis of total punishment, there are no surprising differences. Anti-egalitarian attitudes are statistically significant in all models but model 3, and display the hypothesized directional effect in models 1, 2, 5, and 6. In model 4, the deviation in figure 3.5 can be seen as anti-egalitarian attitudes actually increase the probability of being a costly punisher. Turning to control variables, there are no substantial changes when compared to the OLS models and the total punishment measure. The loss in statistical importance for the indicator of progressive partisan identity remains.



Table 3.5: Models of Costly Punishment with Anti-Egalitarian Measure Included

	Costly Punishment					
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Anger	0.173 (0.476)	0.464 (0.556)	1.159* (0.765)	2.331** (1.065)	0.130 (0.308)	0.111 (0.322)
Anti-Egalitarian	-0.104** (0.061)	-0.249*** (0.100)	0.062 (0.069)	0.253** (0.119)	-0.056** (0.033)	-0.095** (0.042)
Progressive		-0.330 (0.690)		2.967** (1.427)		-0.020 (0.409)
Male		0.290 (0.572)		2.396** (1.358)		-0.196 (0.324)
Age		-0.080 (0.092)		0.089** (0.051)		0.039*** (0.016)
Income		0.242*** (0.087)		-0.124 (0.193)		0.126** (0.055)
Authoritarian		-0.150 (0.251)		-0.462 (0.498)		0.265** (0.147)
Punitiveness		0.093 (0.074)		0.416** (0.171)		0.029 (0.039)
Constant	0.982* (0.563)	0.959 (2.694)	-2.495*** (0.946)	-18.638*** (6.451)	-0.199 (0.334)	-2.708** (1.132)
n	76	76	49	49	186	186

Note: One-Tailed Values

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

### Discussion and Conclusions

The goal of this study is to more directly explore the potential interaction between anger driven parochial altruism and punishment. To do this, it utilized a series of experiments that asked par-

ticipants to read and react to a series of vignettes meant to trigger anger concerning violence perpetrated by out-group partisans. Testing two hypotheses of altruistic punishment, the empirical results are mixed. Evidence for anger driven punishment of out-group members is weakest with the measure of total punishment. The anger condition was not statistically informative across samples and even displayed counter-intuitive results with the student sample. When measuring parochial altruism as an indicator for costly punishment over 50%, the results are more supportive but not strong. Logit coefficients showed the expected directions, but are only statistically informative in one experimental sample out of three.

Evidence for the expectations outlined in H2 (egalitarian attitudes) is significantly more supported when compared to the anger condition alone. Egalitarian attitudes are significant in every sample, and show the expected coefficient direction in all samples except for one. Less rigorous evidence points to a potential interaction process between egalitarianism and anger tied to violence perpetrated by out-group members within the partisan setting. This suggests some evidence for a social theory of parochial altruistic punishment. In terms of parochial altruistic punishment, one should expect that those who hold egalitarian views about their group may be more apt to punish out-group perpetrators of violence. This is unique evidence for conditional parochial altruism found in partisan conflict situations. Speculating about how this may generalize, one could think about foreign recruits traveling to Syria to fight on behalf of the Islamic State. The Islamic State organization utilized images of Muslim victimization to galvanize recruitment (Tezcür & Besaw, 2017). In addition to this, the Islamic State was somewhat unique in its definition of the Umma, which included all Sunni Muslims regardless of background and experience with conflict. Painting a picture of victimization at the hands of a western out-group, and the promotion of a more egalitarian definition of Muslim society, it is possible that those Islamist recruits coming from the west were further galvanized by the combination of anger eliciting images of victimization and a world-view that conceptualized the Caliphate as a more egalitarian framework for governing Muslim society.

Taking the above into account, one should be cautiously optimistic about the results found here. The experimental endeavor here represents a pilot study that is the first attempt to connect a more developed theory of social parochial altruism to realistic examples of political inter-group conflict. One should be cautious of the results for three reasons. First, the experimental samples here have some degree of non-uniformity and it is difficult to directly compare patterns across models. Second, due to resource constraints, practicality was privileged over uniformity. Future experiments should seek to gather larger samples and to keep the sample number uniform across different populations. Third, there is evidence that the experimental manipulations used here may not have been efficient in eliciting meaningful differences in anger.

Pre-anger values and post-anger values were measured using the discrete emotions questionnaire (Harmon-Jones *et al.*, 2016). The discrete emotions questionnaire requires that participants rank their feelings of anger based on four terms on a scale of 1 (no feeling) to 7 (extreme feeling) on an additive scale that ranges from 3 to 28. Comparing the difference between post anger and pre anger across experimental conditions indicates weak differences between the anger manipulation and the control condition. One-tailed t-tests designed to test whether there is a significant difference in anger increase between treatment and control are statistically insignificant in the samples that use treatment 1 (students:  $p = 0.34$ , MTurk = 0.22). In the MTurk sample that used treatment 2, there is weak statistical significance ( $p = .061$ ) but with a counter-intuitive result in that the control condition (7.06) experienced more anger than the treatment condition (5.5). This suggests that the choice of vignette and the style of anger manipulation is important and possibly sensitive. It is necessary to specify highly similar conditions, but it is possible that participants were feeling anger regardless of their condition. Samples that used treatment 1, in which the control condition used Finnish political party names, did show the expected anger difference even if the differences were not statistically different. This suggests that further research and development into political vignettes is necessary to build a more rigorous and nuanced set of experimental vignettes for the

study of altruistic punishment in realistic settings.

Knowing the strengths and weaknesses of this study is key to building more robust research on the influence of parochial altruism and participation in inter-group conflict. The main takeaways are two-fold. First, it is necessary to consider parochial altruistic punishment through the social lens. Any study that seeks to tie realistic conflict scenarios to costly punishment would benefit from a focus on how egalitarian attitudes may modulate punishment behavior. Second, the results of this study show that any empirical approach to altruistic punishment and political violence will have unique conceptual challenges. It is necessary to build off the literature coming from behavior economics and experimental political science, but it is also important to place any theory of altruistic violence into the already existing literature of inter-group conflict. It is also necessary to experiment and to take risks and to understand that this nascent research program must be built from the ground up within political science and security studies as a whole.

## **CHAPTER 4: ANGER AND SUPPORT FOR ALTRUISTIC BEHAVIOR IN POLITICAL CONFLICT**

Is support for violent political conflict a function of evolutionary traits such as altruism? In the inter-group context, how does violence conducted by out-group members catalyze feelings of support for costly actions conducted by in-group members against out-group perpetrators? This study argues that insights from altruistic punishment theory may be useful for understanding when individuals choose to support violent behaviors conducted by co-group members.

Building on work in behavioral economics, this study utilizes altruistic punishment theory to examine how the elicitation of anger tied to real-world acts of political violence against a participant's in-group may shape support for altruistic punishment against the perpetrator. To achieve this, a series of vignette experiments are utilized across three populations. In each experiment, participants are randomly allocated to an anger condition or a control condition. In the anger condition, the participant is faced with a short passage explaining the context of a number of images depicting the aftermath of an act of violence conducted against their respective population. In the control condition, participants are given images that represent a completely neutral topic, in this case the topic being household plants.

After viewing their images, participants are then asked to read a hypothetical story of an in-group member who decides to travel to Syria to join in the fight against out-group perpetrators of violence. Following this vignette, participants are then tasked with making a series of judgments about the in-group member's actions, with these judgments capturing the conceptual underpinnings of parochial altruistic punishment behavior. To strengthen generalizability, three distinct populations are sampled. These are college students from the United States, German adults recruited from Mechanical Turk, and both college students and adults from the Kurdish diaspora in Germany. As

a result, this study explores judgment and endorsement of parochially altruistic acts as opposed to asking participants to directly punish an out-group perpetrator.

The findings of this study are mixed, but promising. Only the Kurdish diaspora sample demonstrated the expected relationship between anger and support for altruistic violence. In contrast, the American student sample showed weak support and the German adult sample was uniformly against support across experimental conditions. The results are interesting in that they suggest sensitivity to population and that any theory of parochial altruistic punishment and support for inter-group violence must take into account variance across groups and individuals and their distance to political conflict. In other words, how the Kurdish sample perceives threats to their collective existence may be much stronger than their American and German counter-parts. The outline of this study is as follows. First it specifies a theory of parochial altruism within inter-group conflict. Second, it outlines the research design and methodology used to test altruistic punishment hypotheses within three different experimental samples. Finally, it discusses the promises and limitations of the findings and methodology and discusses how one may move forward with these line of research.

### Parochial Altruistic Punishment Theory

Altruistic punishment theory may provide insight into the evolutionary roots of costly punishment behaviors both within a group and between groups and represents the potential for a more general micro-level theory of determining who may be more likely to participate in violent inter-group conflict. From an evolutionary perspective, altruist behavior is any behavior that results in a loss of fitness, reproductive success, for the actor in an effort to benefit another individual (Hamilton, 1964a,b; Alexander, 1974). Building on theories of fitness and gene replication, altruistic behaviors are selected for because they are useful in promoting the collective fitness of some social grouping

as a whole. Inclusive fitness posits that social groupings often contain redundant copies of traits. Under this logic, altruism is beneficial to collective fitness in that the altruistic act will improve the status of the group while not substantially removing beneficial traits from the group as a whole.

Hamilton (1987) argues that altruistic traits are also conditional on some social object. Social object's pertain to both the environment and norms in which some group operates. A salient question remains though. Why do humans engage in altruistic behavior with non-kin individuals to the extent that they do? Non-kin altruism is a puzzle in the animal kingdom and biological theories still struggle with understanding this behavior (Bell, 2008). To explain this, theories of non-kin altruism have focused on the role of social norms, or the set of rules and traits that promote group boundaries, as drivers of altruistic trait selection in social groupings that extend beyond genetic kin (Sherman, 1980; Park, 2007).

Moving from altruistic behavior to violent punishment, there are two frames through which altruism manifests. In Fehr and Gächter's (2002) original conceptualization, altruistic punishment is described as an intra-group behavior. Potential violence is focused on in-group members that are perceived to be violating some collective norm concerning behavior. In contrast, altruistic punishment can also be observed in the inter-group context. Known as parochial altruistic punishment, the focus shifts towards out-group members who interact with the structures and norms held by one's in-group. Parochial altruism is thus the discriminatory allocation of altruistic behaviors in which the benefits of an altruistic act are intended for in-group members only (Rusch, 2014). Parochial altruistic punishment occurs when identifiable out-group actors engage in the violation or erosion of norms held by one's in-group, a behavior expected to have developed in the competitive environment in which human social groups found themselves operating (Bowles, 2006; Choi & Bowles, 2007; Abbink *et al.*, 2012; Rusch, 2013).

In terms of the mechanism behind altruistic punishment, anger is argued to be the prime candi-

date driving punishers. Emotions are intense short-term phenomena that have both physical and psychological consequences (LeDoux, 1995; Bechara *et al.*, 2000; LeDoux, 2003; Coan & Allen, 2007), that modulates belief and judgment formation and information acquisition. Specifically focusing on anger, empirical studies have found that anger increases third-party punishment behaviors (Nelissen & Zeelenberg, 2009), promotes competition between groups (Burton-Chellew *et al.*, 2010), depresses information seeking Parker & Isbell (2010), and promotes risk tolerance and underestimation (Lerner & Keltner, 2001; Druckman & McDermott, 2008; Campos-Vazquez & Cuijly, 2014).

When it comes to applying this theory to real-world choices, one must make a concession. It is not feasible to ask individuals if they would engage in violence against out-group individuals. Participants may be apt to hide their true feelings or may be experience some psychic cost due to this anxiety. Do address this potential problem, this study instead applies parochial altruistic punishment theory to endorsement. Instead of asking participants if they would engage in parochial altruistic punishment, it asks them if they would support such an individual who comes from their own in-group. This leads to the study hypothesis below:

*H1: Individuals who experience anger tied to out-group violations of in-group norms will be more likely to support costly punishment against out-group perpetrators.*

Because of the focus on support and not direct participation, this study makes two assumptions. First, it assumes that the role of anger is roughly analogous when it comes to professing support as it is for promoting engagement in violence. Second, while support can only provide evidence for this theory indirectly, it assumes that support and engagement are related in the context of real inter-group conflict and that support could be a precursor to engagement under the right circumstances. Because of these assumptions, this study argues that focusing on support is a fruitful direction for the study of a complex and difficult behavior such as parochial altruistic violence.



While this study takes on a different approach to endorsement, the logic behind why an endorsement study may be valuable is similar to Blair, Imai, and Lyall's work on endorsement experiments (2014). Their work found that endorsement experiments were useful in the context of Afghanistan in indirectly assessing support for contentious actors like the Taliban and ISAF (Lyall *et al.*, 2013). Asking participants what they think about a hypothetical actor may provide us insights that are closer to their true feelings about punishment of out-group perpetrators than directly asking them if they would travel to Syria to fight against Jihadist organizations. As a result, this study differs substantively from paper 2 in which participants were asked to directly donate to punishment. While this study may not capture information about direct participation in inter-group conflict, it can indirectly measure this through support and endorsement of an in-group actor who does engage in such an action.

### *Scope Conditions*

Before moving on to research design and results, it is necessary to frame the scoping conditions of the theoretical approach outlined above. First, the theory of parochial altruism applies to individuals and not groups. It cannot make claims about how the individual influences the social setting. It is likely that social dynamics and emotions can play a role in catalyzing support and engagement, but this study cannot speak to this phenomenon. The second scope concerns the object of support. While parochial altruism could very well explain favorable attitudes towards members of one's military, this is not the current scope of the study. High-level social units, such as states, have capabilities that can promote support and engagement through information diffusion strategies and public/private good allocation. Instead, this study seeks to understand how anger driven parochial altruism is supported on the sub-state level.

Finally, a focus on support for sub-state behaviors applies best to low-level violent activity be-

tween two distinct groups (in-group vs out-group). Communal violence and rioting, terrorism, and insurgency are all possible scenarios from which non-state organized conflict actors may harness the evolutionary power of parochial altruism to drum up support for their cause. The presence of parochially altruist motivations and support for costly punishment behaviors within low-level non-state conflicts is also expected to be strongest when out-group norm violators are substantially distant in terms of relatedness to a potential punisher. Additionally, where a potential support stands is likely to shape their judgments. Populations that are closer to violence and have experience with conflict are more likely to respond to not only emotion elicitation concerning violence against one's in-group, but may have a stronger connection to the hypothetical act of participating in violence. In essence, those closer to violence, even a hypothetical story may evoke a more realistic response.

### Research Methodology

The research design strategy used to test the above hypothesis utilizes a series of survey-experiments meant to prime the participant with anger in the context of inter-group violence. The unit of analysis is thus the individual. Samples are drawn from three difference groups. First, political science undergraduate students from the University of Central Florida (n = 121) are surveyed. Second, college students and adults from the Kurdish diaspora in Germany are sampled (n = 55). Finally, German adults (n = 49) are recruited from Mechanical Turk (MTurk). The use of a comparative sample is a strategy for generalizing any empirical results. The student and German samples represent two developed western populations, while the Kurdish diaspora population represents a refugee/migrant population that more closely inhabits an environment of political conflict.

The primary strength of this design lies in this comparative sample. If spatial and cultural proximity to violence indeed plays a role in how endorsement of parochially altruistic behaviors, then one

should anticipate some differences between these samples. The Kurdish diaspora is often directly linked to conflict in Kurdish regions, or separated by one or two generations. Kurds are a close-knit community within Europe and are distinctly involved in both political and cultural discourse surrounding Kurdish politics. Additionally, many Kurdish migrants return often to their place of Origin or have had experience in militant organizations such as the Kurdistan Workers Party (PKK) or the Peshmerga forces. For many Kurds, an existential threat to their community is a much more serious concern than most feel in the west. In contrast, the American and German samples are unlikely to feel this way on average. While it is possible for individuals within those populations to experience real existential fear, the vast majority of those living in either country are not actively discussing the potential genocide of their communities or the destruction of their nations. While it is expected that anger tied to out-group perpetrators of violence should manifest universally across samples, it is likely that this pattern will be stronger for the Kurdish migrant sample.

Overall, the survey experimental design utilizes images and vignettes to measure endorsement of parochially altruistic violence against out-group perpetrators. Each sample is given a set of images depicting the results of violence against their in-group and asked to read and evaluate a culturally-appropriate hypothetical story about an in-group member who travels to Syria to fight against the perpetrators.

### *Independent Variable*

The main independent variable is *anger* tied to acts of violence committed by out-group individuals against the subject's in-group. The strategy for eliciting anger is the use of images that depict the aftermath of violent attacks against each population's in-group. For the student population,

images of the aftermath of the September 11 attacks and the Pulse nightclub shooting are used.<sup>1</sup> For the German sample, images of the aftermath of the Islamic State attacks in Paris and the suicide bomb attack in Ansbach, Germany are used.<sup>2</sup> Based on the above, the main independent variable is operationalized as a dichotomous indicator for whether the participant was allocated to the anger condition or the control condition. For both populations, these images were used as they represented recent and well-known attacks that are the discussion of public discourse in their respective countries. Additionally, each of the images are tied to either Al-Qaeda or the Islamic State organization. Organizations that are almost universally despised in both populations.

For the Kurdish participants, images of violence or humiliation against Kurds are used. For Kurds coming from Turkish Kurdistan, two images depicting destruction by Turkish security forces in Diyarbakir and Sirnak are used. These images were used to evoke deep feelings within Kurdish participants who come from Turkey. The Turkish security forces made a point to demonstrate their ability to destroy Kurdish areas and to collectively humiliate Kurdish communities. Diyarbakir in particular may evoke these feelings as it is considered the cultural capital of the Kurds. Both images are notable in that they depict Turkish domination of the Kurdish areas and demonstrate the displacement that Turkish military force has caused. For Kurds coming from Iraq, images of Arab celebration in and Kurdish flight from Kirkuk in the aftermath of the independence referendum are used. This image is argued to evoke a similar feeling of humiliation as the images used for Turkish Kurds, even if it is less directly linked to violence. The Kurdish independence referendum was seen as a point of pride for Iraqi Kurds and a step towards more autonomy. The aftermath of the referendum has been characterized as a failure by the Kurdish regional authority and the seizure of Kirkuk and the flight of the Kurds north particularly humiliating. Even more so because of the capitulation by, and retreat of, Peshmerga forces following boastful rhetoric targeted against the

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<sup>1</sup>The Pulse nightclub event is used as an example because of the proximity of the attack to the University of Central Florida. Many students at the university are local and likely have gone to the nightclub, or know someone who has.

<sup>2</sup>Condition images and vignette text can be found in the appendix.

Iraqi central government.

Concerning the control condition, a neutral image is shown. The image depicts a number of indoor plants that help to purify air and is accompanied by a brief passage that explains the image. Images have been used systematically in studies that seek to elicit certain types of emotions (Coan & Allen, 2007). The use of images, especially in sets, have been found to be particularly efficacious as emotional stimuli and are especially effective for the stimulation of negative emotions Uhrig *et al.* (2016). Because the images are tied to recent examples of violence conducted against a participant's in-group, such an elicitation strategy should be potent for stimulating anger tied to violations against a participant.

Image vignettes are used over pure text for two reasons. First, there is evidence that pictures and images have a high degree of efficacy in eliciting emotional states when compared to both text and film alone (Joffe, 2008; Uhrig *et al.*, 2016). Second, this relationship between emotion elicitation and vignette imagery has been found to be especially salient for the elicitation of beliefs and attitudes towards injustice (Mikula *et al.*, 1998).

Anger is operationalized as a dichotomous indicator for whether the participant experienced the anger image (1) or the neutral image (0).

### *Dependent Variable*

The dependent variable of this study is *support for violent parochial altruism*. To operationalize this, a three question additive index is used. First, participants are asked to read a short passage depicting a hypothetical individual who belongs to their respective in-group. In the vignette, the individual struggles to come to terms with the acts of violence they see happening to their people. In the end, these individuals decide to find passage to Syria (American, German) or Turkey and

Iraq (Kurdish) to join groups that are in conflict with the out-group perpetrators of violence. Participants are then asked to answer three judgment questions concerning the in-group actor's behavior. First, they are asked if they approve of the action. Second, they are asked if the actor's behavior will make their in-group safer. Finally, they are asked if they believe the actor's behavior to be selfish. Each question is measured on a likert scale that ranges from -2 (completely negative perception) to 2 (completely positive perception), with neutral being rated as 0. Combined, the index of perception ranges from -6 (complete rejection of parochial altruistic act) to 6 (complete approval of parochial altruistic act).

The objective of this measure is to capture how a participant's perceptions match the conceptual underpinnings of altruistic punishment theory. The logic being that if an individual perceives the act with not only approval, but also with beneficial and non-selfish characteristics, then it is capturing support for violent altruistic acts on behalf of one's in-group. While not perfect, it is the first attempt to indirectly measure support for altruistic violence in a realistic conflict scenario.

### *Control Variables*

Alongside the variables of interest to this study, both demographic and psychometric factors are included as potential alternative explanations. Focusing on demographics, four participant characteristics are considered. First a 7-point scale for political ideology (1 = far-left, 7 = far-right) captures the potential for ideological drivers of support for violence against out-group members. It is expected that individuals with more leftist leanings are less likely to condone violence against out-group members when compared to their more right counter-parts. Additionally, participant age (interval), sex (dichotomous: 1 = male, 0 = female), and family income (interval: 1 - 14). Participant age may be an important modulator of feelings of anger, as there is empirical evidence that feelings of anger diminish and are experienced less as humans age (Schieman, 1999). In

terms of sex, males may have asymmetric responses to the anger prime when compared to their female counterparts. Empirical evidence suggests that males more intensely experience a range of emotions, especially negative emotions such as anger (Brebner, 2003).

In terms of psychometric controls, three constructs are used. All construct batteries were given to participants following the experimental conditions above. To prevent spill over effects from the anger manipulation, participants were given a one-minute puzzle as to distract participants from their previous anger priming. First, a measure of authoritarianism put forward by Feldman (1997; 2003) is given. This construct measures attitudes towards child rearing practices and seeks to measure authoritarian personality through preferences regarding social conformity. Such a measure is included because authoritarian personality has been observed to exacerbate hostile attributions and punishment (Milburn *et al.*, 2014). Second, a measure of retributive punitiveness is administered to participants (Kugler *et al.*, 2013). A participant's decision to punish may be influenced more by a general punitive disposition, a trait that has been documented well among individuals from the United States (Lieberman, 2006; Kugler *et al.*, 2013). Finally, the social dominance orientation scale (SDO-6) is administered. Social dominance has been found to have conditional influences on support for violence against out-group members (Henry *et al.*, 2005). In samples who are the dominant social group (American students, German adults), higher levels of social dominance is expected to increase support for the altruistic punisher. In populations that are not dominant, or hold a position of potential oppression (Kurdish diaspora), less social dominance is expected to increase support for the altruistic punishment. This is because those individuals that come from a place of subordination may see acts of violence as an act of counterdominance (Henry *et al.*, 2005).

## Results

Moving to the empirical results, two methods are used to analyze support for the anger hypothesis. First, visualizations of the mean level of support across experimental condition and population are examined. Second, a series of ordinary least squares regression models are specified as a formal test.

Figure 4.1 visualizes mean levels of support by both treatment and sample. The results are mixed in terms of support for the the anger hypothesis, but are interesting nonetheless. Starting with the student sample, the results indicate the opposite of expectations. Those in the control condition actually had a positive, albeit small, average level of support (0.19).<sup>3</sup> Counter-intuitively, those in the anger condition had a negative, but small, average level of support (-0.31). Turning to the German sample, both conditions had negative levels of support on average. Germans in the treatment condition had a slightly less negative judgment (-1.26) than their counter-parts in the control condition (-1.73). The most theoretically expected observation is that of the Kurdish sample. Both conditions had positive support on average and had a much higher overall average of positive support when compared to both the students and the German adults. In the control condition, Kurdish participants had a slightly positive support (0.61) while those in the anger condition had a moderately high level of support on average (2.47).

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<sup>3</sup>In terms of actual anger increase, all samples showed similar changes in anger from pre-measurement to post-measurement within the anger condition (6 points).



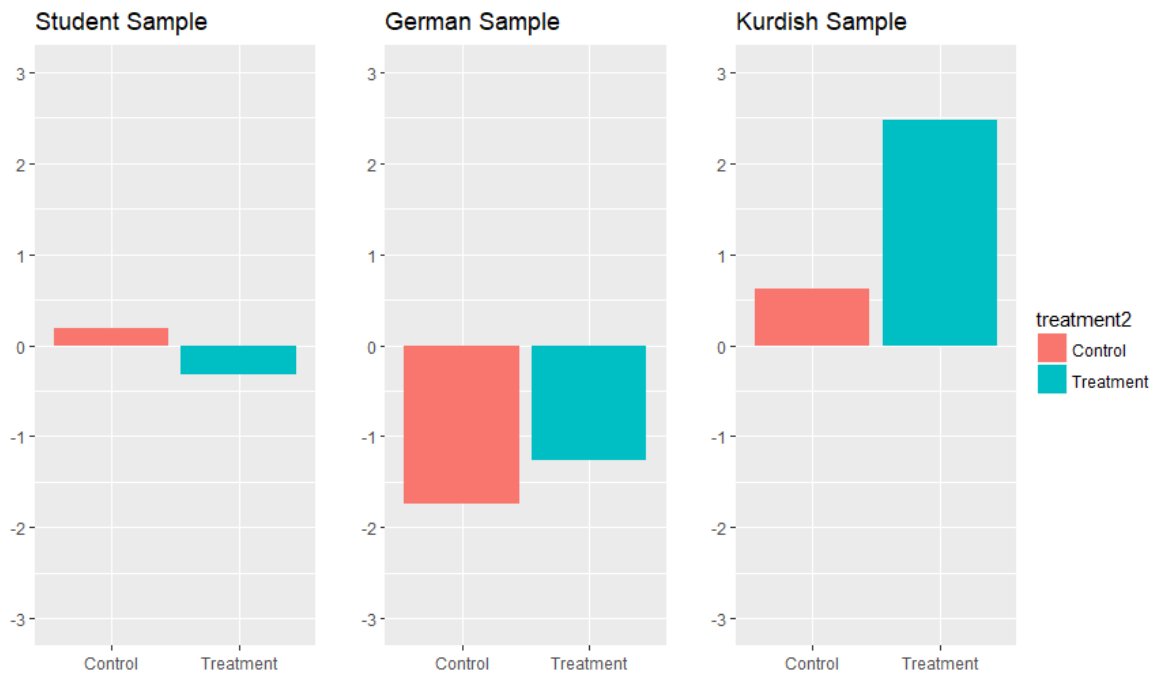


Figure 4.1: Support for Altruistic Violence by Condition and Sample

The results visualized in figure 4.1 are interesting in that the elicitation of anger tied to inter-group conflict appears to be sensitive to population context, but it is not entirely clear cut. The student sample is the most problematic in that there is a weak counter-intuitive finding. The German sample is the most problematic in that there is a weak counter-intuitive finding. The German sample, while entirely negative in support, does show a decrease in negative perceptions within the anger condition. While Germans may on the whole reject altruistic violence, German participants within the anger condition do express more support than those in the neutral condition. To dig more deeply into the data, table 1 displays six regression models that formally test the expectations of the anger hypothesis.

Table 4.1: Regression Models of Support

	Support for Parochial Altruistic Violence					
	Student 1	Student 2	Kurdish 1	Kurdish 2	German 1	German 2
Anger	-0.509*	-0.607*	1.855**	1.581*	0.474	0.809
	(0.392)	(0.406)	(0.943)	(0.973)	(0.945)	(0.879)
Male		-0.071		-0.167		1.313*
		(0.417)		(1.318)		(0.936)
Age		-0.009		0.024		-0.064
		(0.073)		(0.055)		(0.048)
Ideology		0.252*		-0.410		-0.533
		(0.161)		(0.360)		(0.535)
Authoritarian		0.036		-0.411		-0.291
		(0.217)		(0.530)		(0.513)
Punitiveness		0.009		0.280**		0.008
		(0.051)		(0.114)		(0.106)
Social Dominance		0.005		0.015		0.064**
		(0.014)		(0.044)		(0.031)
Constant	0.194	-0.825	0.615	-4.823	-1.737**	-1.643
	(0.262)	(2.002)	(0.710)	(4.271)	(0.668)	(3.297)
Observations	121	121	55	52	49	47

Note: One-Tailed Values

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

The results of the regression models displayed in table 4.1 are largely in line with the data presented in figure 4.1. The student sample has a negative coefficient for anger and is statistically significant at the 10% level. In the Kurdish sample, there is a strong positive relationship between anger and support for parochial altruistic violence. The coefficient is also statistically significant at the 5% and 10% levels respectively based on bivariate and multivariate specifications. Finally, while the

the anger coefficient for the German sample displays the hypothesized direction, it fails to reach statistical significance. The evidence thus far is mixed, with only the Kurdish sample providing empirical support for the study hypothesis.

Turning to the control variables, nothing shows a meaningful pattern across samples and in fact seems quite idiosyncratic. For the student sample, more conservative participants were statistically more likely to support parochial altruistic violence. For the Kurds, punitive attitudes was statistically significant and showed a positive relationship between more authoritarian attitudes and support for the altruist actor. In terms of the German sample, two controls show statistical significance. First, males showed more support for parochial altruistic violence compared to females. Second, social dominance orientation was also statistically informative. In terms of substantive direction, as social dominance attitudes increases so does support for parochial altruistic violence.

## Discussion and Conclusions

So what may explain the somewhat puzzling results above? It is possible that any theory concerning the engagement and support of anger driven altruistic violence requires a more nuanced theoretical focus. The most apparent explanation concerns the potential difference in how these samples interact with inter-group conflict. American and German participants, the most troublesome from an empirical standpoint, show little support the in-group punisher regardless of experimental condition. American university students may not be as in-tune with the reality of conflict and the threat perceptions conflict may promote. Because they are in the university setting, they may also be more apt to look at inter-group conflict events in a more abstract and distanced way. In terms of the German sample, it is possible that their historical and cultural pathways in the post World War II and Cold War era has ingrained a set of beliefs about conflict that promotes more pacifistic tendencies. As a result, they may be less likely to approve of a fellow German who

engages in violence against an out-group perpetrator

In terms of support, the Kurdish sample is the most supportive of theoretical expectations. This is likely due to their proximity both physically and cultural to violent disputes. While in Germany, my conversations with Kurdish migrants provide anecdotal evidence for this. One individual served in both the PKK and the Peshmerga, while multiple individuals retained active support of the PKK even with the threat of local law-enforcement operations against PKK networks within the Kurdish diaspora. Regardless, it is clear that the Kurdish sample may hold some special relationship with the broader Kurdish liberation movement. Such an argument is likely the strongest explanation for the results here, as Kurdish militancy is often close-knit and multi-generational (Tezcür, 2016). Additionally, the Kurdish community has been a fundamental actor within the Syrian civil war and the fight against the Islamic State and other trans-national militant Jihadist organizations.

A second potential explanation that does not rest on the unique characteristics of the Kurdish diaspora concerns where a group stands. It is possible that majority/minority status conditions both anger intensity and support for punishment of out-group perpetrators. In the Kurdish context, their relative minority status and encroachment by majority populations in their home areas may strengthen any relationship between anger and support for, or engagement in, inter-group conflict. Conversely, this may explain some of the counter-intuitive results found in the American context. The diverse nature of the university setting and American society may depress any general attempt to catalyze parochially altruistic motivations for supporting or engaging in conflict. Additionally, the progressive nature of the university may play a role as well. Progressive and liberal individuals may be pre-disposed to reject any type of western involvement within middle eastern affairs. Taken together, the results may suggest that we should expect qualitative differences in how parochial altruism may promote support for violent behavior.

Reaching back to the theoretical approach articulated in chapter 2, the discrepancy between the

Kurdish and western populations could also be explained by the expectations on the modulation of anger. The behavior of Kurdish migrants could be influenced by two factors. First, concepts such as tolerance towards political plurality and perceived self-efficacy in political participation may play a key role in explaining differences between western participants and Kurdish migrants. Civic culture is thought to promote stability within a societies political structure (Almond & Verba, 2015). Kurdish migrants may lack access to strong legal institutional mechanisms for conflict resolution and grievance restoration. Additionally, the nature of Kurdish identity could be inducing a catalyzing framing in the context of losses (Tezcür, 2016), similar to the existential threat argument made above. Both, or either, conditions may lower the threshold of anger needed to induce support for parochial altruistic punishment relative to their American and German counter-parts.

From a critical standpoint, these findings must be conditioned on the fact that samples come from different sources and that sample sizes vary across the three experiments. One should interpret at this work as a pilot study that provides preliminary and conditional evidence for the feasibility of a larger and more nuanced research program that seeks to connect altruistic punishment theory to individual behaviors surrounding inter-group violence. This leads to two questions that are of interest moving forward. First, what role does distance to sub-state violent politics and collective threat perception have on the expectations concerning parochial altruism and pro-social violence? It is necessary to integrate social and environmental factors into theories of altruism that seek to capture contemporary phenomenon such as communal violence and radicalization. Second, how can we produce more nuanced research designs that may further strengthen the arguments made here? It may be useful to begin focus on more nuanced categorizations of identity in terms of what delineates in-group and out-group. Are Americans less likely to condone such behavior, or is it incorrect to pool such a diverse population? Salient cleavages such as race, religion, and partisanship may prove to be catalyzing factors in promoting altruistic motivations for supporting or engaging in violent behaviors.

## CHAPTER 5: CONCLUSION

Taken together, this dissertation project has sought to achieve two objectives. First, it proposed a social theory of parochial altruism. Any attempt to utilize theories of altruistic punishment in explaining micro-level motivations for participating in inter-group conflict will most likely need to account for how an individual perceives their social surroundings. This theory received support in paper 2, in which egalitarian attitudes were found to condition the amount of money donated to punishment.

The second contribution was to engage in two pilot studies that seek to provide preliminary empirical evidence for more basic models of anger driven altruism and direct punishment of out-group perpetrators or support for said punishers. In terms of contribution, chapter 3 borrows from the theoretical approach of chapter 2 and finds preliminary evidence for the influence of social logic and plural rationality on engaging in altruistic punishment behaviors against out-group members. Chapter 4, while adhering to a more parsimonious approach, finds that anger tied to violence perpetrated by out-group members is sensitive to the population of study and finds indirect evidence for the propositions laid out in paper 1. Taken together, these pieces should make any supporter of an altruism-violence research program cautiously optimistic. They demonstrate that there are challenges to using experiments to study real-world reasons for engaging in violence. While the findings are far from clear-cut, they suggest that it would be a fruitful enterprise to continue with this research program and that it could be useful to produce more robust experimental studies with more nuanced conditions and larger samples.

Moving forward, what should any researcher interested in the role of altruistic motivations in promoting violence focus on? The results of this dissertation suggests two prospects. First, future experiments should seek to integrate social logic and structural conditions into their research de-

sign protocols. Like the findings surrounding altruistic punishment and income inequality (Dawes *et al.*, 2007; Johnson *et al.*, 2009), it is likely that social attitudes may condition costly behaviors or support for costly behaviors in the context of inter-group conflict. Knowing how an egalitarian mindset may pre-dispose individuals to greater support for punishment against out-group perpetrators may help the literature move into more nuanced territory when it comes to unpacking the motivations for participating in conflict. Second, comparative samples and methodological pluralism are key to producing more robust evidence for the theory outlined in paper 1. The strongest aspect of this study in particular comes from its comparative samples. The results strongly suggest heterogeneity across groups, something that be tied to both physical and cultural proximity to conflict and the structural conditions groups find themselves inhabiting.

Knowing what enables or depresses anger driven altruistic violence is likely to become more important as the planet becomes more globalized and societies more interconnected. It may not be enough to condemn violent behavior and to write it off as simple greed or even insanity. If certain types of institutions can promote societal integration and remove the root psychological causes of pro-social violence, then we must consider those as tools against potential radicalization and the proliferation of inter-group conflict. Relying on established tools such as profiling and military response are one part of the equation in a complex puzzle, and while they may have clear uses in the correct context, such approaches may inadvertently produce the very conditions that enable our evolutionary selves to lash out violently against those we perceive to violate our identities and our norms. Because of this, it is important that this social approach to parochial altruistic motivations for violent behaviors be considered in the already rich tool-kit of both the social sciences and the policy communities committed to mitigating and eliminating violent extremism and its place in driving inter-group conflict.

The implication of the above discussion and the results of this study is that liberal heuristics regarding the natural sources of human lethal violence may be misguided. Arguments made about

the normative roots of violence and the decline of violence through the use of western enlightenment ideals may not only fail to understand the biological and social roots of political violence, but may also inadvertently enable the conditions for more individuals to violently lash out at what they perceive as western liberal incursion into very different cultural systems. Arguments made by Steven Pinker come to mind in this context (Pinker, 2011, 2018). It is not enough to frame human con-specific violence as a product of purely ideological or structural conditions.

In many ways this is akin to blaming the symptom as the cause. Western economic and social development has made many positive changes, yet it has not made us immune to the siren call of partisan conflict and the rise of small, but determined, leftist and far-right groups calling for open violence against their enemies. Outside the west, the imposition of western political and economic systems may raise all boats without dealing considering how these changes may violate very real norms and identities across the developing world. Additionally, Pinker's call to adopt "enlightens" western norms and ideology fundamentally misunderstands the role of ideology in violence promotion. Ideologies, including violent exclusionary frameworks found in Nazism and Salafi Jihadism, are likely not the fundamental the cause of violence against our fellow species. If one buys the theory laid out in this dissertation, then the implication is that ideologies are the product of a group's constructed history and are actually used to shape and direct our evolutionary urge to lash out and punish those we perceive as violating the integrity and boundaries of our respective in-groups. In response, we should seek out policies that address the very natural reasons for why we may support or engage in violence against out-group members. To develop policies that are cognizant of the catalysts that may promote violence and to be more critical of our own good intentions. While such a discussion may be contentious in the current political climate, it is worth having given the findings here.

To end this concluding discussion, it is useful to point out some lessons that I learned during this process. The study of parochial altruism and how it shapes inter-group conflict participation is



difficult. Designing realistic studies that fit both within the behavioral laboratory literature and reasonably capture real-world conflict scenarios is an imperfect compromise. It loses precision in an attempt to be more realistic. It is useful to acknowledge this compromise in the hope that future research can better address this line of thought. In addition to this, the choice to conduct survey experiments was challenging. For American and German participants, it is less so, but designing measurements to capture complex manifestations of costly punishment proved to be the most difficult aspect of performing this research. In the end, it is important to ensure that experiments are systematic in structure even if they are imperfectly measuring a complex concept like punishment or support for a violent altruistic in-group member.

In terms of surveying a population like Kurdish migrants, these challenges become even more difficult. It is necessary to keep an objective distance from these subjects, but Kurds are not easily found on online survey platforms or in the American classroom. Engaging the Kurds required more direct interaction and the use of mobile technology. Many of these individuals live difficult lives and work busy schedules. Without the use of mobile phones, surveying them would have been impossible. When working with these types of populations, it is necessary to be flexible and open when it comes to data collection.

Finally, an unforeseen challenge with the Kurdish population arose from this necessity to more closely engage with Kurdish participants. In many ways, my position at a western academic institution insulates me from the very real anger and fears felt by Kurds. As a result, there is a type of unfair exchange. Their experience has helped me to strengthen my own research and to help me achieve one of the greatest accomplishments of my life. Yet, when the dust settles, these individuals remain in their political situations. Living away from their native lands, worrying about the status of loved ones and close friends in conflict zones. While it is difficult for me to reconcile this guilt with practical outcomes from my own research, it is necessary to acknowledge their contribution to it. As we attempt to understand the causes and outcomes of very real violence, it is

paramount that we as researchers acknowledge the imbalance between researcher and subject and to provide credit to those that may of experienced very real psychological pain to provide insight into the drivers of support of, and participation in, inter-group conflict.

## **APPENDIX A: CHAPTER 3 VIGNETTE**

## A.1 - Experimental Vignette Version I

# Ideology FRONT

This section of the study will ask you to answer questions concerning your broad political ideology, while reading a short hypothetical story and answering questions related to the story details.

Based on your personal political ideology, indicate how warmly you feel towards the following general political groupings. Your choice can range from 0 (very cold/unapprove) to 100 (very warm/approve), but your choice between the two must equal 100. For example, you could assign 50/50 for neutral between the two, or 100 to 0 for total approval for one grouping and total disapproval for the other.

	Low Approval					High Approval					
	0	10	20	30	40	50	60	70	80	90	100
Conservative											87
Progressive											
<b>Total:</b>											<b>87</b>

Please indicate your response using the scale provided.

To what extent do you currently experience these emotions? Use the following scale to record your answers:

1 = not at all, 2 = slightly, 3 = somewhat, 4 = moderately, 5 = quite a bit, 6 = very much, 7 = an extreme amount.

Anger

Sad

Rage

Grief

Lonely

Mad

Empty

Pissed off

## **Conservative Prompts**

### **Right-Wing Activist Dies After Street Attack**

A young right-wing activist from Seattle has died after sustaining injuries from a brutal attack. The activist fell to the ground after being physically assaulted by a group of left-wing extremists. Prosecutors have described the attack as politically motivated. The victim and suspects were seen exchanging "angry words" before the aggressors left to "fetch reinforcements". As the activist was leaving, they were attacked by the group, including one person wearing brass knuckles. Local conservative leaders have publicly blamed far-left organizations for condoning such acts of violence.

### **Kansallinen Kokomuu Activist Dies After Street Attack**

A young activist from the Kansallinen Kokomuu party has died after sustaining injuries from a brutal attack. The activist fell to the ground after being physically assaulted by a group rival partisans from the Vasemmistoliitto party. Prosecutors have described the attack as politically motivated. The victim and suspects were seen exchanging "angry words" before the aggressors left to "fetch reinforcements". As the activist was leaving, they were attacked by the group, including one person wearing brass knuckles. Local leaders have publicly blamed the Vasemmistoliitto party for condoning such acts of violence.

## **Progressive Prompts**

### **Left-Wing Activist Dies After Street Attack**

A young leftist activist from Seattle has died after sustaining injuries from a brutal attack. The activist fell to the ground after being physically assaulted by a group of right-wing extremists. Prosecutors have described the attack as politically motivated. The victim and suspects were seen exchanging "angry words" before the aggressors left to "fetch reinforcements". As the activist was leaving, they were attacked by the group, including one person wearing brass knuckles. Local leftist leaders have publicly blamed far-right organizations for condoning such acts of violence.

### **Kansallinen Kokomuu Activist Dies After Street Attack**

A young activist from the Kansallinen Kokomuu party has died after sustaining injuries from a brutal attack. The activist fell to the ground after being physically assaulted by a group rival partisans from the Vasemmistoliitto party. Prosecutors have described the attack as politically motivated. The victim and suspects were seen exchanging "angry words" before the aggressors left to "fetch reinforcements". As the activist was leaving, they were attacked by the group, including one person wearing brass knuckles. Local leaders have publicly blamed the Vasemmistoliitto party for condoning such acts of violence.

## Ideology BACK

Please indicate your response using the scale provided.

As you read the preceding prompt, to what extent did you feel these emotions? Use the following scale to record your answers:

1 = not at all, 2 = slightly, 3 = somewhat, 4 = moderately, 5 = quite a bit, 6 = very much, 7 = an extreme amount.

Anger

Sad

Rage

Grief

Lonely

Mad

Empty

Pissed off

Given the brutal nature of violence conducted by the perpetrators, please answer the following hypothetical question. If you were given 100 dollars, how much would you be willing to allocate towards making sure that the perpetrator(s) is (are) punished for their crimes? Please use the following scale to indicate how much you would donate versus keeping for yourself. The choice must sum to 100 total.

Keep for yourself

Punish Perpetrator

Total



## A.2 Experimental Vignette Version II

**Ideology FRONT**

This section of the study will ask you to answer questions concerning your broad political ideology, while reading a short hypothetical story and answering questions related to the story details.

Based on your personal political ideology, indicate how warmly you feel towards the following general political groupings. Your choice can range from 0 (very cold/unapprove) to 100 (very warm/approve), but your choice between the two must equal 100. For example, you could assign 50/50 for neutral between the two, or 100 to 0 for total approval for one grouping and total disapproval for the other.

	Low Approval					High Approval						
	0	10	20	30	40	50	60	70	80	90	100	
Conservative												87
Progressive												
<b>Total:</b>												<b>87</b>

Please indicate your response using the scale provided.

To what extent do you currently experience these emotions? Use the following scale to record your answers:

1 = not at all, 2 = slightly, 3 = somewhat, 4 = moderately, 5 = quite a bit, 6 = very much, 7 = an extreme amount.

Anger

Sad

Rage

Grief

Lonely

Mad

Empty

Pissed off

## **Conservative Prompts**

### **American Activist Dies After Street Attack**

A young right-wing activist from Seattle has died after sustaining injuries from a brutal attack. The activist fell to the ground after being physically assaulted by a group of left-wing extremists. Prosecutors have described the attack as politically motivated. The victim and suspects were seen exchanging "angry words" before the aggressors left to "fetch reinforcements". As the activist was leaving, they were attacked by the group, including one person wearing brass knuckles. Local conservative leaders have publicly blamed far-left organizations for condoning such acts of violence.

### **Moldovan Activist Dies After Street Attack**

A young right-wing activist from Moldova has died after sustaining injuries from a brutal attack. The activist fell to the ground after being physically assaulted by a group of left-wing extremists. Prosecutors have described the attack as politically motivated. The victim and suspects were seen exchanging "angry words" before the aggressors left to "fetch reinforcements". As the activist was leaving, they were attacked by the group, including one person wearing brass knuckles. Local conservative leaders have publicly blamed far-left organizations for condoning such acts of violence.

## **Progressive Prompts**

### **American Activist Dies After Street Attack**

A young leftist activist from Seattle has died after sustaining injuries from a brutal attack. The activist fell to the ground after being physically assaulted by a group of right-wing extremists. Prosecutors have described the attack as politically motivated. The victim and suspects were seen exchanging "angry words" before the aggressors left to "fetch reinforcements". As the activist was leaving, they were attacked by the group, including one person wearing brass knuckles. Local leftist leaders have publicly blamed far-right organizations for condoning such acts of violence.

### **Moldovan Activist Dies After Street Attack**

A young leftist activist from Moldova has died after sustaining injuries from a brutal attack. The activist fell to the ground after being physically assaulted by a group of right-wing extremists. Prosecutors have described the attack as politically motivated. The victim and suspects were seen exchanging "angry words" before the aggressors left to "fetch reinforcements". As the activist was leaving, they were attacked by the group, including one person wearing brass knuckles. Local leftist leaders have publicly blamed far-right organizations for condoning such acts of violence.

## Ideology BACK

Please indicate your response using the scale provided.

As you read the preceding prompt, to what extent did you feel these emotions? Use the following scale to record your answers:

1 = not at all, 2 = slightly, 3 = somewhat, 4 = moderately, 5 = quite a bit, 6 = very much, 7 = an extreme amount.

Anger

Sad

Rage

Grief

Lonely

Mad

Empty

Pissed off

Given the brutal nature of violence conducted by (perpetrator) against (victim), please answer the following hypothetical question. If you were given 100 dollars, how much would you be willing to allocate towards making sure that the (perpetrator) is punished for their crimes? Please use the following scale to indicate how much you would donate versus keeping for yourself. The choice must sum to 100 total.

Keep for yourself

Punish Perpetrator

Total

### A.3 Demographic Questionnaire

## Intro and Consent

### EXPLANATION OF RESEARCH

Title of Project: Political Attitudes and Beliefs concerning Conflict

Principal Investigator: Clayton Besaw

You are being invited to take part in a research study concerning political and social attitudes. This study is part of the researcher's doctoral dissertation project in the department of Political Science. Whether you take part is up to you and no personally identifiable information will be collected as part of this study.

- The overall purpose of this research is to investigate patterns concerning judgements of different social and political situations.
- Your active participation will take place online by clicking the Start button below. We will ask you to examine a series of texts and/or images and to record your response to them.
- Your active participation is expected to last no more than 10 to 20 minutes.
- You must be 18 years of age or older to take part in this research study.

**Study contact for questions about the study or to report a problem:** If you have questions, concerns, or complaints, contact Clayton Besaw, Department of Political Science, (407) 432-8325, or by email at [claybesaw@knights.ucf.edu](mailto:claybesaw@knights.ucf.edu).

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

### DEMOGRAPHICS

Please provide answers to the following demographic questions. This data will not be shared or used outside of the parameters given by the researcher(s) in the introductory statement. Your identity will remain anonymous to the researcher(s).

What is your year of birth?

What is your sex?

Male

Female

What is the highest level of school you have completed or the highest degree you have received?

Less than high school degree

High school graduate (high school diploma or equivalent including GED)

Some college but no degree

Associate degree in college (2-year)

Bachelor's degree in college (4-year)

Master's degree

Doctoral degree

Professional degree (JD, MD)



## A.4 Psychometric Questionnaire

Child-rearing is an important aspect of social development. Please choose your preferred traits for teaching children:

Which is more important?

Independence

Respect for Elders

Which is more important?

Curiosity

Good manners

Which is more important?

Self-reliance

Obedience

Which is more important?

Being considerate

Being Well-behaved

**SDO**

Please indicate your agreement with the following social questions:

Some groups of people are simply inferior to other groups.

- Strongly Disagree
- Disagree
- Somewhat Disagree
- Neutral
- Somewhat Agree
- Agree
- Strongly Agree

It would be good if groups could be equal.

- Strongly Disagree
- Disagree
- Somewhat Disagree
- Neutral
- Somewhat Agree
- Agree
- Strongly Agree

In getting what you want, it is sometimes necessary to use force against other groups.

Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
-------------------	----------	-------------------	---------	----------------	-------	----------------

We would have fewer problems if we treated people more equally.

Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
-------------------	----------	-------------------	---------	----------------	-------	----------------

It's OK if some groups have more of a chance in life than others.

Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
-------------------	----------	-------------------	---------	----------------	-------	----------------

Group equality should be our ideal.

Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
-------------------	----------	-------------------	---------	----------------	-------	----------------

To get ahead in life, it is sometimes necessary to step on other groups.

Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
-------------------	----------	-------------------	---------	----------------	-------	----------------

All groups should be given an equal chance in life.

Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
-------------------	----------	-------------------	---------	----------------	-------	----------------

If certain groups stayed in their place, we would have fewer problems.

Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
-------------------	----------	-------------------	---------	----------------	-------	----------------

We should do what we can to equalize conditions for different groups.

Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
-------------------	----------	-------------------	---------	----------------	-------	----------------

It's probably a good thing that certain groups are at the top and other groups are at the bottom.

Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
-------------------	----------	-------------------	---------	----------------	-------	----------------

Increased social equality is beneficial to society.

Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
-------------------	----------	-------------------	---------	----------------	-------	----------------

Inferior groups should stay in their place.

Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
-------------------	----------	-------------------	---------	----------------	-------	----------------

We should strive to make incomes as equal as possible.

Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
-------------------	----------	-------------------	---------	----------------	-------	----------------

Sometimes other groups must be kept in their place.

Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
-------------------	----------	-------------------	---------	----------------	-------	----------------

No group should dominate in society.

Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
-------------------	----------	-------------------	---------	----------------	-------	----------------

## Punish

Finally, please indicate your judgements concerning the following beliefs:

How much harm a crime caused should be the major factor that determines how long of a sentence a criminal receives.

Strongly agree	Agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Disagree	Strongly disagree
----------------	-------	----------------	----------------------------	-------------------	----------	-------------------

The primary purpose of our legal system is to make criminals pay for their offenses.

Strongly agree	Agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Disagree	Strongly disagree
----------------	-------	----------------	----------------------------	-------------------	----------	-------------------

Those that hurt others deserve to be hurt themselves.

Strongly agree	Agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Disagree	Strongly disagree
----------------	-------	----------------	----------------------------	-------------------	----------	-------------------

We have a moral obligation to punish those who break the law.

Strongly agree	Agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Disagree	Strongly disagree
----------------	-------	----------------	----------------------------	-------------------	----------	-------------------

## **APPENDIX B: CHAPTER 4 VIGNETTE**

## B.1 - Images and Vignette for American Sample

How often do you attend religious services?

Never

Sometimes

Regularly

Often

Daily

Please Answer



Are you a citizen of the United States?

Yes

No

### Manipulation Intro

The second part of this survey will ask you to view and evaluate an image. Please look at the image and respond to a series of follow up questions.

### Control Block (Neutral-All)

Indoor plants such as the ones shown here are helpful for improving indoor air quality. Botanist recommend plants such as the Spider Plant, the Snake Plant, and Bamboo.

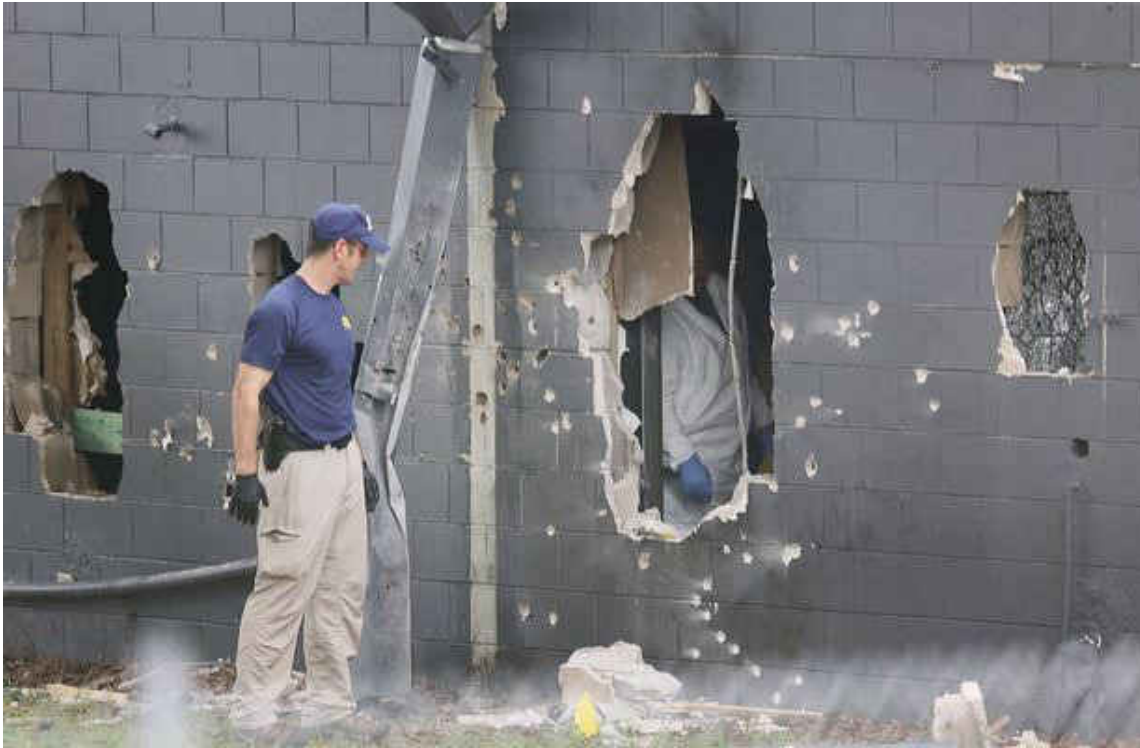




## Anger Block (American)

With the rise of radical Jihadi groups such as Al-Qaeda and the so-called Islamic State, the United States has become the target of radical organizations. The first picture shows the aftermath of the September 11th terrorist attacks, while the bottom picture shows the aftermath of the Pulse nightclub attack during the summer of 2016.





### **Manipulation Check treatment**

Please indicate your feelings concerning the following.

How angry do you feel after viewing the previous image?

Very not angry      Not angry      Neutral      Angry      Very angry

How sad do you feel after viewing the previous image?

Very not sad      Not sad      Neutral      Sad      Very sad

### **Manipulation Check control**

Please indicate your feelings concerning the following.

How angry do you feel after viewing the previous image?

Very not angry

Not angry

Neutral

Angry

Very angry

How sad do you feel after viewing the previous image?

Very not sad

Not sad

Neutral

Sad

Very sad

### **Vignette I (American)**

Modern conflicts around the globe have seen a shift from purely professional military engagements towards more internationalized movements. Often, recruits and volunteers to these battlefields come from far away at great personal risk and cost. Examples of such individuals include foreign volunteers for the Kurdish YPG, Islamic State, and pro-governmental militias in eastern Ukraine. This study is going to ask you to read the following passage concerning one such example. After reading, you will then be asked a series of reaction questions.

#### **Anti-ISIS sentiment**

Seeing both the attacks in the United States and the violence conducted in Syria by the so-called Islamic State, Jeremy has begun to think about possibly joining an anti ISIS militia in Syria. Interviewed at an anti ISIS rally, Jeremy stated, "Just seeing what ISIS was actually doing to the people here – it got me really mad, and it felt like I should have to do something." Following up on this thought, Jeremy also argued that joining the fight on the ground would be much better than sitting on Facebook and reading the news about Daesh (Islamic State).

**Being involved in demonstrations and social media networks at home, Jeremy has seriously begun to think about the idea of joining the fight against ISIS. After much thought, Jeremy uses social media contacts with an anti-ISIS rebel group to secure passage to Syria to gain training and deployment.**

Please answer the following judgement questions concerning Jeremy's actions

## B.2 - Images and Vignette for German Sample

How often do you attend religious services?

	Never	Sometimes	Regularly	Often	Daily
Please Answer	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**pre-check**

This question will help to gauge your current feelings.

To what extent do you currently experience these emotions? Use the following scale to record your answers:

1 = not at all, 2 = slightly, 3 = somewhat, 4 = moderately, 5 = quite a bit, 6 = very much, 7 = an extreme amount.

Anger	<input type="text"/>
Sad	<input type="text"/>
Rage	<input type="text"/>
Grief	<input type="text"/>
Lonely	<input type="text"/>
Mad	<input type="text"/>
Empty	<input type="text"/>
Pissed off	<input type="text"/>

**Manipulation Intro**

The second part of this survey will ask you to view and evaluate an image(s). Please look at the image and respond to a series of follow up questions.

## Control Block (Neutral-All)

This picture depicts various plants used to purify indoor air.



## Anger Block

With the rise of groups like Daesh (Islamic State), Europe has experienced multiple attacks by radicalized supporters of the Jihadi organization. The top picture shows the aftermath of the November 2015 attacks in Paris, France. The bottom picture shows emergency response vehicles on the scene of a suicide bomb attack in Ansbach, Germany.



post-check

After seeing the previous picture(s), please answer the following question again.

To what extent do you currently experience these emotions? Use the following scale to record your answers:

1 = not at all, 2 = slightly, 3 = somewhat, 4 = moderately, 5 = quite a bit, 6 = very much, 7 = an extreme amount.

Anger

Sad

Rage

Grief

Lonely

Mad

Empty

Pissed off

### **Vignette German - Mturk**

Please read the following hypothetical scenario and answer questions concerning its contents.

#### **Anti-Jihadist sentiment**

Seeing both the attacks in Europe and the violence conducted in Syria by various Jihadi organizations. Basti has begun to think about possibly joining and fighting with an anti-Jihadist militia in Syria. Interviewed after a recent anti-Jihadi demonstration, Basti was asked about his thoughts concerning the conflict with Jihadists in Syria. Basti noted that current Jihadist activities have made many, including himself, angry. Basti pointed to both attacks in Europe and atrocities committed in Syria by the group as being motivators for anti-Jihadist sentiment. Basti told reporters that, "The violence in Kobani, the enslavement



of women, and violence against westerners makes me want to do more to combat the Jihadist movement."

**Being involved in demonstrations at home, Basti has seriously begun to think about the idea of joining the fight against Jihadist groups in Syria. After much thought, Basti uses social media contacts with an anti-Jihadist rebel group to secure passage to Syria to gain training and deployment.**

Please answer the following judgment questions concerning Basti's actions.

How much do you approve of Basti's actions?

Strongly Not Approve	Not Approve	Neutral	Approve	Strongly Approve
----------------------	-------------	---------	---------	------------------

Basti's actions will make Germany safer.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
-------------------	----------	---------	-------	----------------

Do you think that Basti's motivations are selfish?

Very Selfish	Selfish	Neutral	Not-Selfish	Very Not-Selfish
--------------	---------	---------	-------------	------------------

## Control Battery

This final portion of the survey seeks to gauge public opinion concerning some social and political issues. You will probably find that you agree with some of the statements, and disagree with others, to varying extents. Please indicate your choice that is closest to how you feel.

## Authoritarian

### B.3 - Images and Vignettes for Kurdish Sample

How often do you attend religious services?

	Never	Sometimes	Regularly	Often	Daily
Please Answer	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**pre-check**

This question will help to gauge your current feelings.

To what extent do you currently experience these emotions? Use the following scale to record your answers:

1 = not at all, 2 = slightly, 3 = somewhat, 4 = moderately, 5 = quite a bit, 6 = very much, 7 = an extreme amount.

Anger	<input type="text"/>
Sad	<input type="text"/>
Rage	<input type="text"/>
Grief	<input type="text"/>
Lonely	<input type="text"/>
Mad	<input type="text"/>
Empty	<input type="text"/>
Pissed off	<input type="text"/>

**Manipulation Intro**

The second part of this survey will ask you to view and evaluate an image(s). Please look at the image and respond to a series of follow up questions.

## Control Block (Neutral-All)

This picture depicts various plants used to purify indoor air.



## Anger Block (Turkish Kurds)

These pictures depict the aftermath of Turkish military operations in *Bakurê Kurdistanê*. The first picture shows the commando pledge in Diyarbakir and the second shows destruction in Sirnak due to military operations.



## Anger Block (Iraqi Kurds)

These pictures depict the aftermath of the flight of Kurdish citizens of Iraq out of Kirkuk. The first picture depicts a line of cars from the Kurdish evacuation. The second picture shows crowds celebrating the return of Shia militias and federal forces into Kirkuk in the aftermath of the independence referendum.





post-check

After seeing the previous picture(s), please answer the following question again.

To what extent do you currently experience these emotions? Use the following scale to record your answers:

1 = not at all, 2 = slightly, 3 = somewhat, 4 = moderately, 5 = quite a bit, 6 = very much, 7 = an extreme amount.

Anger

Sad

Rage

Grief

Lonely

Mad

Empty

Pissed off

### **Vignette (Turkish Kurdish)**

Please read the following hypothetical scenario and answer questions concerning its contents.

#### **Pro-Kurdish Sentiment**

Observing attacks on Kurds from jihadi organizations and state governments, Shirvan has begun to think about returning to *Bakurê Kurdistanê* and joining a self-defense militia. Shirvan recently saw a news story about thousands of people who sought to volunteer for militia duty after reports of violence against civilians during the siege of Cizre. Talking with friends, Shirvan said: "It is difficult to remain a spectator when soldiers and civilians are being killed. I believe that it is important that we take active roles to combat those that would hurt the Kurdish people."



**Shirvan, feeling unable to stand by, has decided to return to Bakurê Kurdistanê in preparation for joining a self-defense militia.**

Please answer the following judgement questions concerning Shirvan's actions

How much do you approve of Shirvan's actions?

Strongly Not Approve      Not Approve      Neutral      Approve      Strongly Approve

Will Shirvan's actions will make Kurds safer?

Strongly Disagree      Disagree      Neutral      Agree      Strongly Agree

Do you think that Shirvan's motivations are selfish?

Very Selfish      Selfish      Neutral      Not-Selfish      Very Not-Selfish

**Vignette (Iraqi Kurdish)**

Please read the following hypothetical scenario and answer questions concerning its contents.

### **Pro-Kurdish Sentiment**

Observing attacks on Kurds from jihadi organizations and state governments, Shirvan has begun to think about returning to the *Başûrê Kurdistanê* and joining a self-defense militia. Shirvan recently saw a news story about thousands of people who sought to volunteer for militia duty after the seizure of Kirkuk. Talking with friends, Shirvan said: "It is difficult to remain a spectator when soldiers and civilians are being killed. I believe that it is important that we take active roles to combat those that would hurt the Kurdish people."

**Shirvan, feeling unable to stand by, has decided to return to the Başûrê Kurdistanê in preparation for joining a self-defense militia.**

Please answer the following judgement questions concerning Shirvan's actions

How much do you approve of Shirvan's actions?

Strongly Not Approve      Not Approve      Neutral      Approve      Strongly Approve

Will Shirvan's actions will make Kurds safer?

Strongly Disagree      Disagree      Neutral      Agree      Strongly Agree

Do you think that Shirvan's motivations are selfish?

Very Selfish      Selfish      Neutral      Not-Selfish      Very Not-Selfish

### **Control Battery**

This final portion of the survey seeks to gauge public opinion concerning some social and political issues. You will probably find

## B.4 Demographic Questionnaire

## Demo

Please provide answers to the following demographic questions. This data will not be shared or used outside of the parameters given by the researcher(s) in the introductory statement. Your identity will remain anonymous to the researcher(s).

What is your year of birth?

What is your sex?

Male

Female

What is the highest level of school you have completed or the highest degree you have received?

Less than high school degree

High school graduate (high school diploma or equivalent including GED)

Some college but no degree

Associate degree in college (2-year)

Bachelor's degree in college (4-year)

Master's degree

Doctoral degree

Professional degree (JD, MD)

Information about income is very important to understand. Would you please give your best guess?

Please indicate the answer that includes your entire household income in (previous year) before taxes.

Less than \$10,000

\$10,000 to \$19,999

\$20,000 to \$29,999

\$30,000 to \$39,999

\$40,000 to \$49,999

\$50,000 to \$59,999

\$60,000 to \$69,999

\$70,000 to \$79,999

\$80,000 to \$89,999

\$90,000 to \$99,999

\$100,000 to \$149,999

\$150,000 or more

How many languages do you speak? (Number only)

Please provide an estimate of your Political leanings on a seven-point scale ranging from 1 (Far Left) to 7 (Far Right)

	1 (Far Left)	2	3	4 (Independent)	5	6	7 (Far Right)
Please Answer	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## B.5 Psychometric Questionnaire

that you agree with some of the statements, and disagree with others, to varying extents. Please indicate your choice that is closest to how you feel.

## Authoritarian

Child-rearing is an important aspect of social development. Please choose your preferred traits for teaching children:

Which is more important?

Independence

Respect for Elders

Which is more important?

Curiosity

Good manners

Which is more important?

Self-reliance

Obedience

Which is more important?

Being considerate

Being Well-behaved

## SDO

Please indicate your agreement with the following social questions:

Some groups of people are simply inferior to other groups.

Strongly  
Disagree

Disagree

Somewhat  
Disagree

Neutral

Somewhat  
Agree

Agree

Strongly  
Agree

It would be good if groups could be equal.

Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
-------------------	----------	-------------------	---------	----------------	-------	----------------

In getting what you want, it is sometimes necessary to use force against other groups.

Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
-------------------	----------	-------------------	---------	----------------	-------	----------------

We would have fewer problems if we treated people more equally.

Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
-------------------	----------	-------------------	---------	----------------	-------	----------------

It's OK if some groups have more of a chance in life than others.

Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
-------------------	----------	-------------------	---------	----------------	-------	----------------

Group equality should be our ideal.

Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
-------------------	----------	-------------------	---------	----------------	-------	----------------

To get ahead in life, it is sometimes necessary to step on other groups.

Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
-------------------	----------	-------------------	---------	----------------	-------	----------------

All groups should be given an equal chance in life.

Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
-------------------	----------	-------------------	---------	----------------	-------	----------------



If certain groups stayed in their place, we would have fewer problems.

Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
-------------------	----------	-------------------	---------	----------------	-------	----------------

We should do what we can to equalize conditions for different groups.

Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
-------------------	----------	-------------------	---------	----------------	-------	----------------

It's probably a good thing that certain groups are at the top and other groups are at the bottom.

Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
-------------------	----------	-------------------	---------	----------------	-------	----------------

Increased social equality is beneficial to society.

Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
-------------------	----------	-------------------	---------	----------------	-------	----------------

Inferior groups should stay in their place.

Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
-------------------	----------	-------------------	---------	----------------	-------	----------------

We should strive to make incomes as equal as possible.

Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
-------------------	----------	-------------------	---------	----------------	-------	----------------

Sometimes other groups must be kept in their place.

Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
-------------------	----------	-------------------	---------	----------------	-------	----------------

No group should dominate in society.

Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
-------------------	----------	-------------------	---------	----------------	-------	----------------

**Punitiveness**

Finally, please indicate your judgements concerning the following beliefs:

How much harm a crime caused should be the major factor that determines how long of a sentence a criminal receives.

Strongly agree	Agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Disagree	Strongly disagree
----------------	-------	----------------	----------------------------	-------------------	----------	-------------------

The primary purpose of our legal system is to make criminals pay for their offenses.

Strongly agree	Agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Disagree	Strongly disagree
----------------	-------	----------------	----------------------------	-------------------	----------	-------------------

Those that hurt others deserve to be hurt themselves.

Strongly agree	Agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Disagree	Strongly disagree
----------------	-------	----------------	----------------------------	-------------------	----------	-------------------

We have a moral obligation to punish those who break the law.

Strongly agree	Agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Disagree	Strongly disagree
----------------	-------	----------------	----------------------------	-------------------	----------	-------------------

## **APPENDIX C: IRB HUMAN SUBJECTS APPROVAL**

## C.1 - IRB Approval Letters



University of Central Florida Institutional Review Board  
Office of Research & Commercialization  
12201 Research Parkway, Suite 501  
Orlando, Florida 32826-3246  
Telephone: 407-823-2901 or 407-882-2276  
[www.research.ucf.edu/compliance/irb.html](http://www.research.ucf.edu/compliance/irb.html)

## Approval of Exempt Human Research

From: **UCF Institutional Review Board #1  
FWA00000351, IRB00001138**

To: **Clayton T Besaw**

Date: **March 29, 2017**

Dear Researcher:

On 03/29/2017, the IRB approved the following activity as human participant research that is exempt from regulation:

Type of Review: Exempt Determination  
Project Title: Political Attitudes and Beliefs concerning Conflict  
Investigator: Clayton T Besaw  
IRB Number: SBE-16-12750  
Funding Agency: National Science Foundation  
Grant Title:  
Research ID: 1730308

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

In the conduct of this research, you are responsible to follow the requirements of the [Investigator Manual](#).

On behalf of Sophia Dziegielewski, Ph.D., L.C.S.W., UCF IRB Chair, this letter is signed by:

A handwritten signature in blue ink that reads "Renea Carver".

Signature applied by Renea C Carver on 03/29/2017 08:18:24 AM EDT

IRB Coordinator



University of Central Florida Institutional Review Board  
Office of Research & Commercialization  
12201 Research Parkway, Suite 501  
Orlando, Florida 32826-3246  
Telephone: 407-823-2901 or 407-882-2276  
[www.research.ucf.edu/compliance/irb.html](http://www.research.ucf.edu/compliance/irb.html)

## Approval of Exempt Human Research

From: **UCF Institutional Review Board #1  
FWA00000351, IRB00001138**

To: **Clayton T. Besaw**

Date: **July 13, 2017**

Dear Researcher:

On 07/13/2017, the IRB approved the following activity as minor modifications to human participant research that is exempt from regulation:

Type of Review: Exempt Determination  
Modification Type: Additional questions added to survey.  
Project Title: Perceptions of inter-group conflict and attitudes towards costly punishment.  
Investigator: Clayton T. Besaw  
IRB Number: SBE-16-12750  
Funding Agency: National Science Foundation  
Grant Title:  
Research ID: 1730308

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

In the conduct of this research, you are responsible to follow the requirements of the [Investigator Manual](#).

On behalf of Sophia Dziegielewska, Ph.D., L.C.S.W., UCF IRB Chair, this letter is signed by:

A handwritten signature in black ink that reads "Kamille Chaparro" with a horizontal line extending to the right.

Signature applied by Kamille Chaparro on 07/13/2017 11:49:21 AM EDT

IRB Coordinator

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