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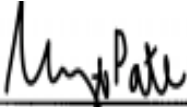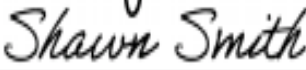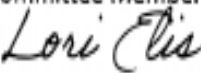
GENERAL STRAIN THEORY ON TERRORISM OUTCOMES

by

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ABSTRACT

This study adds to the gap in literature regarding criminology theory and terrorism outcomes. Specifically, this study applies social bond theory, social learning theory, and general strain theory to predict whether an extremist will be violent or nonviolent, the criminal severity of an extremist event, and whether an extremist will be a group leader or follower. Although a few studies have analyzed terrorism outcomes through the lens of social bond theory and social learning theory, this study is set apart with the addition of general strain theory, new predictor variables for social bond theory and social learning theory, new outcome variables, and approximately 700 new cases to analyze. Data was collected from the Profiles of Individual Radicalization in the United States (PIRUS) dataset. The dataset includes over 2,200 violent and nonviolent extremists that espouse or are affiliated with far-right, far-left, Islamist, or single-issue ideologies in the United States.

The datasets were analyzed through SPSS utilizing frequency tables, descriptive statistics, exploratory factor analyses, bivariate correlations, binary logistic regressions, and ordinary least square regressions. The results illustrated that the chosen social learning variables were unable to predict violent extremism and criminal severity but could predict whether an extremist would be a group leader or follower. The social bond variables partially predicted violent extremism and criminal severity; however, the results illustrated that the social bond variables predicted an extremist's role in their group in the unexpected direction. Lastly, the general strain variables partially predicted violent extremism, criminal severity, and an extremist's role in their group. Ultimately, this study provides empirical support and policy implications for the much-needed application of criminology theory to varying terrorism outcomes.

DEDICATION

To Mary Lou "Nannie" Houser Jett

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Chapter 1

Introduction

The majority of criminology theories focus on criminal activity ranging from theft to murder (and every crime in between) but are seldomly applied to extremist violence and terrorism (LaFree et al., 2018; Snipes et al., 2019). Although terrorism does not occur at the same rate as ordinary crime, it can be significantly more devastating to countries, communities, and victims regarding infrastructure damages and fatalities/casualties. To put the risks of terrorism in perspective, the largest non-terror mass shooting/killing in the United States took place in Las Vegas when a gunman opened fire on concertgoers in 2017 (Lombardo, 2018). Approximately 60 victims were killed in the incident or died from resulting complications, and over 500 other victims were injured. The second-largest non-terror shooting to occur in the United States was the Virginia Tech shooting in 2007, where 32 individuals were killed (Federal Bureau of Investigation, n.d.d).

Although the previously mentioned events are tragic losses of life, they do not compare to the devastation and destruction that terrorism can achieve. For example, the deadliest terror event in world history was 9/11 that killed over 3,000 individuals and injured over 6,000 more (Federal Bureau of Investigation, n.d.a). Following behind 9/11, the Oklahoma City Bombing in 1995 resulted in the deaths of 169 victims, with another 675 victims sustaining injuries (Federal Bureau of Investigation, n.d.c). Thus, the impact of one single terror event can easily eclipse the number of victims of several historically deadly mass shootings. Terrorism also has the ability to damage infrastructure at far higher rates compared to ordinary crime. The Oklahoma City Bombing of 1995 caused over 300 buildings to be damaged or destroyed and totaled over $500 million in infrastructure damages through the detonation of the 5,000 pounds of explosives

(Federal Bureau of Investigation, n.d.c). Additionally, under the far-left ideology umbrella, eco-terrorists cause millions of dollars of infrastructure damage a year in the United States through hundreds of bombings/arsons (Eagan, 1996). It is also important to note that terror events are not as uncommon as some would like to believe. In 2019 alone, the United States experienced 64 terror attacks on its soil and has experienced approximately 500 attacks since the beginning of the 21st century (National Consortium for the Study of Terrorism and Responses to Terrorism, n.d.b).

The previously mentioned terror events all comprise of attacks that took place within the United States' borders. Although this study is solely focused on United States extremists, it is worth noting that the rest of the world also suffers from catastrophic terror events and at much higher frequencies. In 2019, there were approximately 8,300 terror events worldwide that resulted in roughly 25,000 fatalities, and in 2018, approximately 33,000 victims perished in terror events around the world (Statista, 2021; Statista, 2020). Thus, any implications that can be taken from terrorism studies may not only aid in reducing terror events in the United States, but they will also help prevent terror fatalities around the world. Ultimately, past terror and extremist events lend this study its importance as the consequences and damages have the ability to be significantly more catastrophic than substantial amounts of violent crime combined.

Although the terrorists who commit the thousands of attacks each year come from various backgrounds, they all share one commonality: radicalization. At some point in their life, every terrorist experiences some type of radicalization before carrying out a terror attack. Whether it is from associating with a group of extremists or because one was vulnerable after losing a loved one, there will be a turning point in an individual's life that will contribute to their radical actions and beliefs (Federal Bureau of Investigation, n.d.c.; Mills et al., 2019). By

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understanding which radicalization pathways result in detrimental extremist outcomes, policy implications can be developed to reduce the chances of at-risk individuals becoming future extremists and to save countless lives in America and around the world.

The majority of previous studies applied the radicalization pathways of terrorists and extremists to political science or psychology theories (LaFree et al., 2018). Despite terrorism being a criminal act in all aspects of its definition, criminologists continue to neglect terrorism for criminology theory applications. Although there have been some scholarly, peer-reviewed criminology studies completed on the radicalization process of American terrorists (Holt et al., 2018; LaFree et al., 2018; Mills et al., 2019), it is still under-researched compared to other topics in criminology (Schmid & Price, 2011). Thus, this study aims to take common radicalization pathways and apply them to criminology theory to examine their outcomes on different dependent variables regarding extremism and add to an under-researched area of criminology.

This study not only contributes to the under-researched area of terrorism outcomes and radicalization pathways in general; it explicitly adds results regarding a new theory, predictors, dependent measures, and cases to the Profiles of Individual Radicalization in the United States (PIRUS) database. Although a few academically published studies have utilized the PIRUS database (Holt et al., 2018; LaFree et al., 2018; Mills et al., 2019), these studies were either limited by or focused on select theories, variables (independent and dependent), and the number of cases in the dataset. This study is also one of the few empirical studies to be completed utilizing the dataset, as Holt et al. (2018) and Mills et al. (2019) were both qualitative studies utilizing supplementary databases. Additionally, the previous studies mainly focused on social bond and social learning theory. Although this current study applies both social bond and social learning theory, it also analyzes the data through the lens of general strain theory.

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This study also supplements research regarding the dataset with the addition of new and more predictor variables. Additionally, since those studies were published, the dataset grew by over 700 new cases, which will allow the data to be more representative to extremists across the United States due to the larger sample size and its generalizability. Lastly, the current study also adds research regarding new outcome measures. The previous studies solely focused on whether an extremist was violent or nonviolent in their outcome measure. Not only will this study utilize the violent or nonviolent dependent measure, an extremist's role in group and criminal severity will also be utilized as outcome variables.

Therefore, this study utilizes data from the PIRUS database, which has compiled over 2,200 violent and nonviolent extremists in the United States from 1948 to 2018, to specifically test three different research hypotheses that correspond to social bond, social learning, and general strain theory. The expected results regarding social learning theory are that individuals who are a part of a clique, angry at the United States, and have radical beliefs will be more likely to be violent, be leaders of a group, and have a higher criminal severity (H_1). The expected results regarding social bond theory are that individuals who are not married, unemployed, and have low education attainment will be more likely to be violent, be leaders of a group, and have a higher criminal severity (H_2). Lastly, the expected results for general strain theory are that individuals who have failed to reach their aspirations, have experienced trauma, and that had a missing parent(s) will be more likely to be violent, be leaders of a group, and have a higher criminal severity (H_3).

Chapter 2

Literature Review

Social Bond Theory

Hirschi's social bond theory asserts that the more closely bonded a person is to conventional individuals, activities, and beliefs, the less likely they are to commit delinquency (Hirschi, 2002). According to Hirschi (2002), all humans have a criminal propensity, but certain controls and bonds will deter an individual from submitting to those impulses. The different controls and bonds that help eliminate the threat of criminality are attachment, commitment, involvement, and belief.

Hirschi defined attachment as any conventional bond to an individual's parents (or other family members), peers, school, or any other pro-social individuals (Hirschi, 2002). A conventional attachment will enable an individual to build sensitivity and empathy for others, thus making him or her less likely to commit crimes against individuals or harm individuals in some way. Additionally, Hirschi found attachment to be the most critical element of his theory to deter criminal activity. Hirschi extensively argued that the lack of attachment could lead individuals to become overly aggressive and possibly psychopathic, with no empathy for others. Ultimately, Hirschi asserts that the lack of attachments will cause an individual to become guiltless in their actions and have an absence of moral restraints. Thus, an individual that does not have the necessary attachments to others is more likely to carry out violence and delinquency without any moral or conscious restraint based upon how the behavior affects others.

The next element of Hirschi's social bond theory is commitment. The element of commitment is an individual's stake in conformity (Hirschi, 2002). Thus, if an individual has invested themself into society somehow, they will be less likely to commit criminal acts that

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could potentially jeopardize their investments. According to social bond theory, individuals who have invested months to years of their life to conventional commitments will be far less likely to commit delinquency than someone who has nothing to lose. Individuals recognize that their past actions have placed themselves into a position of status in their occupation or education and understand how delinquency can quickly tarnish the energy and effort they put into their prior investments. Social bond theory also clarifies that future ambitions and aspirations can affect a person's commitment. Thus, if an individual has aspirations for future employment or future status, they will be far less likely to risk their goals and ambitions by committing delinquency or other analogous behaviors. Ultimately, social bond theory claims that if an individual has nothing to lose, they will be far more likely to engage in violence than an individual who has much more to lose.

The third element of Hirschi's theory is involvement in conventional activities (Hirschi, 2002). The underlying premise of this variable is that the busier an individual is in conventional activities, the more likely they will be unable to commit criminal acts due to time constraints. Thus, if an individual is not involved in conventional activities and has ample free time, they may be more likely to become deviant with the extra time. Thus, social bond theory claims that individuals need to surround themselves with many opportunities and activities to consume their time and eliminate their idle hands.

The final element of the theory is belief (Hirschi, 2002). Hirschi essentially argued that an individual is more likely to obey the law and abstain from criminal behavior if they believe in the law or believe they should not disobey society's rules. Thus, if an individual believes less of the laws or believes that the laws do not have to be followed, they are more likely to break the law and commit delinquency.

Hirschi tested his social bond theory utilizing a self-report survey comprised of approximately 4,000 high school male students from California (Hirschi, 2002). The self-report survey included six different variables that were measured through different items relating to family, school, peers, and six items to measure delinquency. To help corroborate the self-report survey regarding delinquency, Hirschi also utilized school and police reports. The first three items measuring delinquency asked whether a participant had ever committed theft based on three different dollar amounts. The items measured whether a participant had stolen anything that was less than two dollars, between two and fifty dollars, and anything that costs more than fifty dollars. The other three items measuring delinquency surveyed participants on whether they had ever stolen someone else's car, intentionally caused damage to an item that did not belong to them, or intentionally harmed another person (which did not include brotherly or sisterly fights while growing up).

Hirschi found that participants who were more closely attached to their parents were less likely to be delinquent than participants who reported less attachment to their parents (Hirschi, 2002). Hirschi also found that individuals with a lesser or nonexistent attachment to their peers would be more likely to be delinquent than a participant with strong attachments to their peers. Hirschi claimed that attachment to delinquent peers would only cause delinquency if other bonds and controls have been weakened. Thus, an individual with a strong attachment to their parents or an individual committed to conventional society will be less likely to be delinquent even if they have delinquent peers. However, if an individual does not have a stake in conformity or other bonds to conventional family, peers, or society, they may be more suspectable to delinquency when they have delinquent peers.

Hirschi also found that those participants who had low school performance and showed acrimony towards their teachers, school administration, and the school as a whole were more likely to be delinquent (Hirschi, 2002). Thus, individuals who reported higher marks in their academic performance and overall positive feelings towards school were less likely to be delinquent. Additionally, Hirschi's study found that participants who had higher education and career goals were less likely to be delinquent when compared with a participant who had no goals for their future. The previous findings on academic performance and goals support the concept of commitment to conventional society and an individual's stake in conformity because the more a participant had to lose because of a delinquent act, the more likely they were to abstain from delinquency.

Hirschi found mixed results when testing the variable of involvement with his sample (Hirschi, 2002). Participants who reported spending more time at a job, dating, watching television, playing games, and reading were more likely to report some type of delinquency. Nevertheless, the study also yielded higher delinquency results for participants who reported that they were more likely to be bored, socialize with friends, ride around in cars with no destination, and spend less time doing schoolwork (or homework assignments).

To measure belief, Hirschi provided participants with a statement regarding whether they believed it was acceptable to break the law if they knew they would not be caught (Hirschi, 2002). The study yielded a strong correlation between agreeing with the previous statement and delinquency. Thus, if an individual believed that disobeying the law is acceptable, they were more likely to commit delinquency than an individual who believed that they should not break the law.

Like Hirschi (2002), when analyzing social bond theory, Costello and Vowell (1999) found strong support for two of the four variables. The authors reanalyzed the Richmond Youth Project, which utilized a self-report survey and included 4,075 juveniles in 1965. The bonds that were studied as independent variables were measured through different survey items, and the dependent variable was delinquency. The survey included items to measure belief, attachment, commitment, and involvement. The main findings specific to this literature review illustrate that the results strongly supported only attachment and commitment. The authors found that attachment to parents and peers and commitment to conventional goals were the strongest variables when influencing delinquency. Additionally, Hirschi's (2002) original study did not find much support for the variable of involvement. In regards to belief, Costello and Vowell (1999) argued that the variable was more related to social learning than to control. Snipes et al. (2018) also argued that the belief variable should be a part of a social learning theory compared to a control theory. Nevertheless, although there was no strong support for the bonds of belief and involvement, Costello and Vowell (1999) and Hirschi (2002) found strong support for attachment and commitment to reduce delinquency.

Social Learning Theory

Social learning theory asserts that crime is much more likely when individuals associate with others that break the law, have definitions favorable to breaking the law, have others to imitate the behavior for them, and believe that their delinquent behavior will be reinforced (Akers, 1999). Thus, the four main social learning theory concepts are differential association, differential reinforcement, definitions, and imitation. Differential association is at the core of Aker's social learning theory (Akers, 1999). Whom an individual associates with will likely be the main source of learning different criminal definitions and how to act on criminal definitions

through imitation or reinforcement. Thus, whom an individual associates with can likely determine the probability of the individual offending. Social learning theory finds that the main differential association groups are an individual's friends and family. The theory has also found that other groups or organizations an individual is a part of can influence their behavior through social learning.

The next concept of social learning theory is definitions. In the context of social learning theory, definitions are an individual's beliefs that are either favorable or unfavorable to conforming to the law (Akers, 1999). Social learning theory categorized definitions by either general or specific. General definitions constitute an individual's overall belief system regarding conforming to conventional values or the law; specific definitions focus on individual acts and situations. Thus, if an individual is a part of a group or has friends who believe it is okay to break the law and transmit the definitions to the individual, they will be much more likely to conform to those beliefs and break the law.

Differential reinforcement is the third element of the theory. Differential reinforcement includes the rewards and punishments an individual may receive from carrying out a delinquent act (Akers, 1999). Differential reinforcement could be gaining approval from family, friends, or a group. Punishments could include negative outlooks from family and friends, injury or death, and any other negative stimuli that adversely affects an individual.

The final concept that social learning focuses on is imitation. Imitation is simply the act of copying behaviors from others (Akers, 1999). Social learning theory clarifies that just because an individual sees an act completed, it does not mean they will imitate the act. Social learning theory asserts that individuals will consider whether the behavior was successful,

whether there was positive reinforcement, whether there were any negative consequences, or any other consequences that may encourage/discourage the behavior in the future.

Akers (1999) also developed a construct that explains how and when the learning of criminal behavior will happen. An individual learns criminal behavior when they differentially associate with others with definitions favorable to breaking the law, when those with favorable definitions model behavior to be imitated, and when those individuals provide reinforcement to encourage future offending. After the sequence of offending has been completed, criminal offending will persist or desist based on the type of reinforcement an individual receives. For example, if an individual is praised for an act, they will continue it, but if the individual is scolded for a criminal act, they may choose to desist from that crime.

Pratt et al. (2010) completed a meta-analysis testing the empirical status of social learning theory, which included 133 studies. All of the studies included measures for the four main variables of social learning theory. Measures of differential association included the beliefs a person's peers or family held, measures of definitions included the individual's definitions favorable or unfavorable to breaking the law, measures of differential reinforcement included how peers and parents reacted to a certain behaviors, and lastly, measures of imitation included how many times a behavior was modeled for an individual. The meta-analysis illustrated support for differential association and definitions being the strongest predictors of delinquency across all of the studies. The meta-analysis illustrated that differential reinforcement and modeling/imitation were relatively weak and (at times) insignificant predictors across the sample. Additionally, the meta-analysis illustrated that peer effects were greater predictors of delinquency than family members' effects. Ultimately, the meta-analysis strongly supported differential associations and definitions being significant predictors of delinquency.

General Strain Theory

According to general strain theory, individuals will engage in delinquency because of the strains they have experienced (Agnew, 1992). Agnew's general strain theory includes three central concepts that will influence whether an individual is delinquent: failure to achieve goals, removal of positively valued stimuli, and the existence of negative stimuli. Failing to achieve goals constitutes having specific aspirations but being unable to obtain them (i.e., applying for a job but not getting hired), removal of a positively valued stimulus could be losing a loved one, and the existence of a negative stimulus could be abuse or bullying. The theory posits that any negative strain can create negative emotions. The negative emotions can be relieved in two ways: conventional coping or criminal coping. If an individual experiences a strain, the individual could eliminate the strain through conventional activities like exercising, but the individual could also turn to delinquency. How an individual copes with their experienced strain will determine whether delinquency will occur.

Although strains experienced personally will most likely have the biggest impact on an individual, general strain theory has been expanded to include vicarious strains (Agnew, 2002). A vicarious strain is when an individual witnesses someone close to them experience different strains (i.e., seeing a sibling abused). Like a personal strain, vicarious strains can also lead to negative emotions and criminal coping. Anticipated strains have also been included in the general strain theory. Anticipated strains occur when individuals expect a strain to harm them in the future, leading to negative emotions and then to criminal coping.

Although strains can lead to criminal activity for various reasons, the main reasons strains can lead to criminal coping are negative emotions (Agnew, 2002). Strains can cause anger, frustration, depression, and fear (among several other negative emotions). For example, Agnew

(2006) found that violent crime can be (in part) explained by anger alone. Agnew et al. (2002) found that strains can also increase the likelihood of criminal coping if experienced by individuals with a negative emotionality makeup (those who are prone to be frustrated, angry, lack of empathy, etc.). Additionally, strains can deteriorate an individual's social control levels; thus, attachment to one's parents will almost certainly be weakened if they experience child abuse from their parents (Agnew, 2006). Finally, strains can cause individuals to develop negative peer (or other learning) associations where criminal coping/activity can be learned and carried out.

General strain theory also includes concepts to explain why some individuals criminally cope compared to conventional coping (Agnew, 2001). According to the theory, many individuals are less adept to coping in a legal manner, which could stem from having lower intelligence and being more physical in nature or not having the same amount of resources as others (i.e., ability to sue). Criminal coping can also bring relatively low risks or costs to some individuals compared to others. Many individuals will not commit crime because they have higher stakes in conformity (Hirschi, 2002), whereas others may not have as much to lose, or they may be in an environment where the risks of being caught are much lower (i.e., an unsupervised area). Finally, some individuals are simply predisposed to committing crime.

Agnew has also added four types of strains to his general strain theory that are expected to be the strongest predictors of delinquency (Agnew, 2001). The four types are strains high in magnitude, unjust strains (or perceived to be unjust), strains associated with lower levels of social control, and strains that pressure an individual into criminal coping. A severe or high magnitude strain is assumed to lead to more negative emotions than a less severe strain, which can make it much more difficult for an individual to cope conventionally. Strains that are

perceived as unjustified cause an individual to believe the strain is undeserved, causing an individual to cope criminally. Additionally, the theory posits that strains experienced by individuals with low social control will be more likely to cope criminally compared to individuals who have higher levels of social control. Finally, strains that are easily managed through criminal activity will have a higher likelihood of causing criminal coping. Ultimately, general strain theory holds that if individuals experience strains and negative emotions, they will either cope conventionally or criminally cope, which can lead to delinquency.

Baron (2019) analyzed general strain theory concerning violent offending among street youths (16 to 24 years old). The author interviewed 400 youths between June 2009 and August 2010 in Toronto, Canada. To be considered for an interview, each youth had to be in the age range, unemployed and not currently in school, and have no permanent addresses in the last year. The authors utilized three conditioning variables that will moderate the effects that strain has on delinquency. The conditioning variables were whether participants adhered to the street code, had violent peer associations, or had low self-control. The author's independent variables of strain included different types of childhood trauma (physical abuse, sexual abuse, and physical/emotional neglect), and other variables included homelessness and anger. The dependent variable was whether the participants engaged in violent crime.

Baron's (2019) results illustrated that physical and sexual abuse, emotional neglect, vicarious victimization, and personal victimization were related to anger. The findings also show that all of the before-mentioned variables (except for sexual abuse) were related to violent offending. Furthermore, after analyzing the variables and controlling the composite moderators, all types of childhood abuse, vicarious violent victimization, and homelessness were even stronger predictors of violent offending. The results also found that anger was associated with

violent offending after controlling for the conditioning variables. Ultimately, this study found support for general strain theory and violent offending.

Application of Criminological Theory to Terrorism

Social bond theory, social learning theory, and general strain theory have been analyzed extensively and have tested several different phenomena found in criminology (i.e., general delinquency), but they have not been tested as thoroughly regarding terror radicalization. The following literature illustrates that the theories cannot only explain how and why individuals engage in general delinquency, but the findings suggest that the theories have applications beyond their intended scope. Thus, the following literature provides support for their application in explaining terror radicalization.

Utilizing the same dataset as this project (PIRUS), researchers created a report to assess terror radicalization in the United States (Jenson et al., 2016). The database is comprised of 147 variables that measure different background, demographic, and other terror-related items pertaining to radicalization. At the time of Jenson et al.'s (2016) report, the database contained approximately 1,500 violent and nonviolent domestic terrorists (1,473). It is important to note that the database derived its information from open-source data, so there was a substantial amount of missing data that the authors combated with a range of missing data techniques.

The variables used to measure social control included marital status, employment history, and military experience (Jenson et al., 2016). The social bonding variable was child abuse, and the two social learning variables were whether the extremist came from a radical family and whether the extremist was involved in a clique (close-knit, insular, and exclusive group including two or more individuals). The authors controlled for past criminal history, demographic variables (including gender, age, and SES), and terror ideology (far-right, far-left, Islamist, and

single-issue). The dependent variable was whether a terrorist was violent or nonviolent. An extremist was considered violent if they "actively participated in ideological motivated operations/actions that resulted in casualties/injuries or clearly intended to result in casualties/injuries (but failed), or were charged with conspiracy to kill or injure but were interdicted in the plotting phase" (National Consortium for the Study of Terrorism and Responses of Terrorism, 2018).

The results illustrated that a terrorist's employment history had a strong, negative relationship with violence; thus, if a terrorist had stable employment, he or she was less likely to be violent (Jenson et al., 2016). The results also illustrated that marriage and military experience do not have a strong effect on whether a terrorist will be violent, concluding that an individual's employment history may be more important to predict violence or non-violence. The results then illustrated that when an individual is part of a small, intimate group (a clique), he or she will be more likely to be violent. Despite this, having radical family members was not a strong predictor of whether a terrorist was violent or nonviolent. Additionally, child abuse was not found to be a predictor of violent extremism. Ultimately, the authors only found support for clique membership (i.e., social learning theory) and employment (i.e., measured as social control theory) being strong predictors of violent extremism.

LaFree et al. (2018) studied whether variables specific to different criminology theories could influence an American terrorist's radicalization process. The authors utilized the PIRUSdatabase, and the final sample included 1,473 cases for measurement. To test self-control, the authors measured the variables of employment history, educational attainment, marital status, and military experience. To test social learning, the authors measured the variables of a terrorist's peers and family. In measuring the terrorist's peers and family, the

authors analyzed whether there were any radical extremists' associations. Thus, was a member

of the terrorist's family or a friend a radical extremist? Additionally, the authors measured the

effect that mental illness had on radicalization and the effect that rivaling groups had on

radicalization (measured as a dichotomous variable of either having a mental illness or not).

Finally, the authors measured the crime-related and background variables of past criminal record,

gender, and age. All of the previously mentioned variables were the independent variables in the

research, and the dependent variable was whether a terrorist was violent or nonviolent. It is also

important to note that the authors replaced missing data in their analyses with a range of different

procedures (expected maximization, regression-based multiple imputations, simple imputation

using subgroup means, and simple imputation using fixed values) meant to predict the likelihood

or probability of what the missing value could represent.

The bivariate results illustrate that many of the independent variables could predict

whether a terrorist was violent or nonviolent (LaFree et al., 2008). The bivariate results

illustrated that the control variables of stable employment history, educational attainment, and

stable marital status were statistically significant in predicting that a terrorist would be less likely

to be violent. Regarding social learning, the bivariate results illustrated that a terrorist would be

significantly more likely to engage in violent terrorism if he or she has radical peer groups or

family members. Variables regarding military experience and rival groups were not significant

in reducing violent terrorism.

After imputing the techniques for missing variables, the authors ran different regression

models and multivariate analyses, which produced several significant results regarding the

variables and violent/nonviolent offending (LaFree et al., 2018). Stable employment and radical

peers significantly predicted whether an offender would be violent; thus, if an individual had

stable employment or had non-radical peers, then he or she would be less likely to be violent. Additionally, individuals with a mental illness or that had a past criminal history were more likely to be violent. In the regression models, educational attainment, marital status, military experience, radical family, rival groups, gender, and age were not significant in predicting whether an offender would be violent or nonviolent. Ultimately, this study found the most support for employment, radical peers, mental illness, and past criminal behavior for predicting whether a terrorist will be violent or nonviolent.

Holt et al. (2018) studied the radicalization process of different terror ideologies utilizing four case studies of four different terrorists to understand why some terrorists are violent compared to nonviolent. The authors utilized the PIRUS database and the United States Extremist Crime Database to derive their four case studies for their sample. The sample includes two jihadist extremists and two far-right extremists. Each ideology is represented by two terrorists where one was violent, and one was nonviolent. The case study analysis utilized by the authors would measure different social learning and social bond variables.

The sample includes Robert Dear (violent far-right extremist), Russel Dean Landers (nonviolent far-right extremist), Mir Aimal Kasi (violent jihadist extremist), and Khalid Ouzzani (nonviolent jihadi extremist) (Holt et al., 2018). Dear's violent attack at a Planned Parenthood caused three deaths and nine injuries, and Landers was convicted for defrauding millions of dollars in support of We The People (a far-right group), mail fraud, threatening public officials, and transporting stolen goods. Mir Aimal Kasi's violent attack on the CIA caused two deaths and injured three CIA employees, and Khalid Ouzzani was convicted for several fraud crimes and money laundering in support of al-Qaeda.

The case studies illustrated that three out of four extremists had weak or unconventional social bonds before carrying out their attack or being convicted for their crimes (Holt et al., 2018). Both Dear and Landers and the violent jihadist extremist, Kasi, illustrated the inability to obtain and maintain conventional social ties while growing up and in adulthood. Landers, an insurance salesman, was indicted for different fraud crimes and lost his job. Landers came into contact with We The People, and he became the group's treasurer. Thus, losing the social bond of his job brought him into contact with a far-right extremist group. Dear was unable to maintain pro-social relationships with conventional members of society. Dear was married three times, and each wife reported some type of abuse against them; thus, Dear had a weak social bond to his spouses. Kasi demonstrated the inability to form social bonds with conventional peers throughout his childhood and upbringing. Ouazzani was the only extremist to have strong social bonds as he was married and had children.

The authors next analyzed their radicalization through a social learning construct (Holt et al., 2018). Before becoming an extremist, Dear was exposed to different far-right magazines, radio shows, and extreme anti-abortion views on social media. The different content eventually radicalized his beliefs to the far-right, where he attacked a Planned Parenthood in defense of the unborn. Landers was exposed only after being indicted for fraud crimes and losing his job as an insurance salesman. Thus, the weakening of the social bonds was more likely a significant cause of his extremism than social learning from the group. As Kasi was unable to maintain conventional bonds while growing up, he was exposed to different extremist ideologies while younger and was exposed to anti-western extremism through different trips to Afghanistan and anti-western rallies. Kasi even admitted to transporting different weapons to the Mujahedeen while he was younger. Different actors directly influenced Ouazzani into al-Qaeda. He was

introduced to al-Qaeda by two different current members, and after meeting with them, Ouzzani

swore his allegiance to al-Qaeda and began committing his financial crimes to support them.

Although the authors noted that some social learning was present in the radicalization of

the four cases, social bond was most likely a bigger facilitator in their radicalized beliefs (Holt et

al., 2018). There were messages conveyed, and meetings had with extremists, but the authors

could not find any evidence where these beliefs were reinforced and imitated for the case studies.

Thus, the authors theorized that the case studies were influenced by social learning (except for

the Dear case) only after showing interest in the extremist groups; thus, the individuals may have

become radicalized with or without social learning. Because of this, the authors asserted that

social bond served as a more clear predictor of radicalization as three-fourths of the cases

illustrated weakened social bonds.

Mills et al. (2019) utilized a qualitative case study to analyze four extremists and their

radicalization pathways. The authors utilized the PIRUS database and the United States

Extremist Crime Database to derive their sample. The sample includes two violent far-right

extremists and two violent jihadist extremists. The two jihadist extremists were El-Sayyid

Nosair and Abdulhakim Mujahid Muhammad, and the two far-right extremists were Benjamin

Nathaniel Smith and Jerad Miller. Nosair was involved in several violent acts, including the

bombing of a gay bar, an assassination of a far-right Zionist on American soil, and shooting and

wounding a federal law enforcement officer. Muhammad carried out a shooting outside of a

military recruiting station and killed two United States service members. Smith carried out

shooting sprees against Black, Asian, and Jewish people while driving from Illinois to Indiana.

Miller carried out a shooting spree and killed two police officers and another victim in Las

Vegas. The authors created a construct of questions to analyze how social control and social learning affected the radicalization pathways of the terrorists.

The authors found support for social control/bond and social learning when studying the terrorists' pathways to radicalization (Mills et al., 2019). Muhammad and Nosair both experienced weakened social bonds as their radicalization began. Muhammad began to spend less time with his family (effectively ruining his pro-social bond) as he became radicalized. Additionally, Nosair weakened his pro-social bond with his wife and children when he began his radicalization process. Contrarily, Smith and Miller's social bonds to their family were weak before their radicalization began, as both were no longer close to their family. All four terrorists either had non-conventional attachments to their partner/spouses or had weak attachments to their spouses. Muhammad had a relatively weak attachment to his wife and eventually divorced her, and Nosair eventually became estranged to his wife as he began his radicalization (note: neither wife shared their extremist views). Both Jerad and Miller's partner and spouse supported and shared their extremist beliefs; thus, they were non-conventional bonds. Smith's partner was a supporter of the same extremist group he was involved in, and Miller's wife carried out the attack with him.

The authors also found evidence of employment issues with the four extremists (Mills et al., 2019). Although the two jihadist extremists were employed at the time of their attacks, both jihadists experienced employment stability when they began their radicalization. Additionally, both far-right extremists were unemployed at the time of their attack. The authors also found that all four extremists had prior criminal histories. Miller and Muhammad's contact with the criminal justice system specifically fueled their radicalization as Miller developed a hatred for

the American government, and Muhammad turned to religion and was eventually radicalized as a violent jihadist.

The internet played a role in each of the far-right extremists' radicalization process (Mills et al., 2019). Smith's radicalization was reinforced from his utilization of the internet to converse and associate with other like-minded far-right extremists. Miller's radicalization is the direct result of the internet as he was radicalized through different social media, right-wing propaganda, and anti-government websites. Smith was also affected by offline radicalization as he was in direct contact with extremist leaders (note: Smith's radicalization began before the internet). The jihadi extremists' radicalization was affected more by face-to-face interactions. Both jihadi extremists met and were affiliated with radical Muslims that started the development of their radicalization. Nosair started to affiliate himself with violent extremists after losing his job, and Muhammad spent time in the Middle East and with a Somalian community in Tennessee. Despite the extremely small sample size, this study found that there may be different pathways to radicalization between jihadists and far-right extremists, and elements of social bond and social learning theory can differently affect them.

In analyzing the terror attack at Frankfurt Airport in 2011, Böckler et al. (2015) analyzed information regarding the attacker and his radicalization process. The authors conducted a qualitative case study analyzing court file testimonies of the terrorist and the terrorist's peers, family members, and schoolteachers. Investigation reports and psychological assessments were also analyzed in the qualitative case analysis, and the authors noted that over 8,000 pages were analyzed (8,200). The focal points of the case analysis included events regarding the attacker's biographical history, gaining insight into the psychological state and perceptions of the attacker,

different habits and actions of the attacker that might serve as a warning to the future behavior, and analyzing changing social network behaviors or social relationship behaviors.

The results illustrated many findings similar to the concepts of social bond theory (Böckler et al., 2015). Not only was the attacker never married, but the authors revealed he never had a romantic relationship of any kind. According to Hirschi (2002), had the attacker obtained and sustained a conventional bond to a spouse, the bond could have warded off the eventual violent attack. The authors also revealed that the attacker's commitment or stake in conformity was rather weak. The attacker battled through many bouts with depression, had failing grades, and had suicidal thoughts before eventually dropping out of high school. According to Hirschi (2002), had the attacker completed his high school education and even continued his education, his stakes in conformity would have been much higher, which could have prevented him from carrying out violent extremism. The weakened bonds found in the Frankfurt Airport's case analysis illustrates that social bond theory can help explain causes of terror radicalization.

In describing a general strain theory of terrorism, Agnew (2010) asserts that the presence of collective strains will cause individuals to commit terrorism. Collective strains are strains that have been experienced by a particular group as a whole; thus, a race or ethnicity group or even a religious group (any type of group can be applied). The collective strains that will most likely cause terrorism are strains high in magnitude or severity, strains that are unjustified (or perceived as unjustified), or strains caused by the more powerful whom the group has weak ties to. Strains high in magnitude cause some kind of high degree of harm to the individuals/group. Strains high in magnitude may include deaths, violent crime, or strains that cause livelihoods to be threatened. Unjust strains are most likely to cause terrorism when they violate universal norms

held across many different cultures, and when they are seen as underserved and not for the greater good. Strains by the more powerful occur when a group has more resources than another and inflicts some kind of strain to the suffering group. An example could be America's war in the Middle East, where America has more military resources than terror organizations.

Agnew (2010) illustrated that the before-mentioned collective strains are more likely to cause terrorism because they can create a substantial amount of negative emotions. If the negative emotions are unable to be coped with in a conventional and legal manner, coping with terrorism may occur. Agnew (2010) stated that individuals may cope with ordinary crimes at first, but as the negative emotions and strains persist, they may then turn to terrorism to alleviate their collective strain fully. The general theory of terrorism also incorporates other criminological theories that are said to be caused by the strains. The theory posits that strains reduce social control, promote favorable beliefs of terrorism, and can create differential reinforcement within terror groups (among other elements of criminology theories).

Agnew's (2010) general theory of terrorism also illustrates different factors that may condition the effect strain has on terrorism. Collective strains placed on groups with coping resources, skills, and opportunities may be less likely to resort to terrorism. This might include financial and legal resources to handle the issues in court and through lawsuits or even being able to cope with the strain through politics and handle it diplomatically. Social support and social control may also condition the likelihood of coping through terrorism if the group has support to cope conventionally and has social controls to help prevent terror coping. Additionally, the group members' individual traits, their associations with others, and their beliefs will help determine how the group will cope. If they are made up of individuals that do not have a negative emotionality makeup, associate with other pro-social individuals outside of the said

group, and have beliefs unfavorable to committing terrorism, then they will be more likely to cope in a way that does not involve terrorism. Finally, if the perceived risks or anticipated costs of a terror attack are too large compared to the potential benefits, then the terror attack may be less likely to happen, and other types of coping will occur. Ultimately, Agnew (2010) created a general theory of terrorism that can help explain why some groups (and individuals within groups) commit terrorism.

Although there have been past academic studies that specifically analyzed social bond and social learning theory on terrorism outcomes, general strain theory has not been thoroughly tested. Again, Agnew (2010) described a general strain theory of terrorism, but more focuses on the collective strains individuals may experience that can lead to terrorism. Thus, this will be the first to study to specifically analyze the three original components of general strain theory: failure to achieve aspirations, removal of a positively valued stimulus, or presence of a negative stimulus.

Chapter 3

Data and Methodology

Data

The data utilized in this study is the Profiles of Individual Radicalization in the United States (PIRUS) dataset (National Consortium for the Study of Terrorism and Responses to Terrorism [START], 2018). The dataset includes incidents from over 2,200 violent and nonviolent extremists in the United States between 1948 and 2018 and includes background, contextual, and ideological factors/variables that can help explain each extremist's radicalization. All of the violent and nonviolent extremists either espouse far-right, far-left, Islamist, or single-issue ideologies. Researchers and staff utilized publicly available, open-source information in creating the dataset, which included media articles/sources, court documents, government reports, and other terrorism datasets. Initially, researchers and staff compiled approximately 4,000 cases from open sources that included extremists from the specific time frame and extremists who espoused the specific ideologies. The researchers and staff then utilized random sampling and the criteria requirements (listed below) to increase the dataset's representativeness and reliability.

Researchers and staff created specific inclusion criteria to ensure reliability and validity of the cases included in the dataset (the following was taken directly from the dataset for accuracy):

First, the individual who committed the attack or was involved in a terror event must have been either arrested, indicted, killed (because of their terror activities), a part (or used to be) of a terror group/organization, or was involved with an extremist group where the leaders were indicted for violent terror events. Additionally, to be included in this

dataset, individuals must be motivated by either far-left, far-right, Islamist, or single-issue

ideologies. Then, each individual's radicalization must have taken place inside the

United States, individuals must support terror ideological motives, and it must be

evidential that their actions and motives were linked to their specific ideological beliefs.

(START, 2018, p. 5-7

Additionally, it is important to note how the researchers defined radicalization. The researchers

defined radicalization as the "psychological, emotional, and behavioral processes by which an

individual adopts an ideology that promotes the use of violence for the attainment of political,

economic, religious, or social goals" (START, n.d., para. 7).

The researchers used the following definitions to place extremists in a specific ideology.

Far-right extremists espouse beliefs typically involving social hierarchy or exclusivity, which

includes racial and religious superiority (START, 2018). Additionally, far-right extremists

typically espouse beliefs that are anti-liberal and anti-government. Far-left extremists typically

act in contempt of capitalism and espouse different forms of communism/socialism economic

systems. Environmental and animal rights extremists were also included under left-wing

extremism in this study as the majority espouse left-wing beliefs. Unlike the other ideologies, an

extremist that is considered single-issue is only motivated by a single issue. An example of a

single-issue extremist is an anti-abortion extremist. Finally, Islamist extremists were defined as

those who wish to defeat non-Muslim nations and regimes to help create martial power within

Islamist societies. Individuals were also considered Islamist extremists if they carried out violent

jihad in defense of Muslims (for injustices or perceived injustices).

Variables

Dependent Variables

Violent or Nonviolent. The violent variable is a dichotomous variable coded as either violent (1) or non-violent (0). An extremist was considered violent if they actively participated in operations/actions (that were ideologically motivated) that resulted in injury or death or if the operation/action had violent intentions but failed (START, 2018). Also, extremists were considered violent if they were charged with conspiracy to cause injury or death but were arrested before carrying out the attack. Some operations or attacks that were considered violent include homicide, assault, robbery, kidnapping, bombing, and arson. Nonviolent operations may include property offenses, illegal protests, financial crimes, and encouraging others to act violently. To determine variables that might predict whether an extremist is violent or nonviolent, a binary logistic regression was computed. Out of the entire sample, 42% of extremists were non-violent (N = 935), and 58% of the extremists were violent (N = 1291).

Criminal Severity. The criminal severity variable illustrates the severity of the extremists' activities (START, 2018). A non-criminal event was coded as 0, conspiracy to commit extremism after the fact was coded as 1, an illegal protest or criminal trespassing was coded as 2, white-collar crimes and vandalism were coded as 3, recruiting others for violent extremism or incitement was coded as 4, and training, seeking training, providing material support to a violent extremist group, and unlawful possession was coded as 5. Additionally, a misdemeanor threat to others was coded as 6, conspiring to kill or injure others is coded as 7, felony threats against persons is coded as 8, violent property offenses or arson is coded as 9, and violence against persons is coded as 10. Although the codebook identifies criminal severity as an ordinal level of measurement, this study will measure it as a continuous measurement level because the code numbers increase as the criminal severity of an extremist's event increases. Thus, an ordinary least squares regression was computed to identify the predictors of the

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criminal severity of an event. The mean criminal severity is 6.88 (SD = 3.11), which indicates

that a misdemeanor threat to others was the average event. The median criminal severity is 7,

indicating conspiring to kill or injure others. Additionally, the most often occurring event was

violence against persons (10), and the lowest was a non-criminal event (0).

  Role in Group. The role in group variable is categorical and measures the individual's

role in their group START, 2018). The variable includes whether an extremist was a loose

associate of a group, a follower of a group, a group leader, or it was not applicable (not a part of

a group). Because this variable has a nominal level of measurement, this variable was collapsed

into a dichotomous measure, and a binary logistic regression was computed. To collapse the

measurement into a dichotomous variable, it was recoded to whether an extremist was a group

leader (1) or the extremist was not a group leader (0). Out of the valid percentage of the sample,

76.7% of extremists were not a leader of a group (N = 1594), and 23.3% of extremists were a

leader of a group (N = 484).

Independent Variables

  The following variables constitute the independent variables of this study. Each variable

represents an element of either social bond theory, social learning theory, or general strain

theory. Each variable will be measured to illustrate their relationship between the three

dependent variables mentioned above and how well the theories can explain terror radicalization.

It is important to note that literature studying general delinquency will be included in supporting

the independent variables being predictive of the dependent variables. The literature review has

shown consistent support that criminological theory has applications to terrorism research.

  Additionally, this study is one of the few (if not the only one) to specifically analyze an

extremist's criminal severity and their role in an extremist group. Thus, research findings are

severely lacking to support their relationships with the independent variables. Since the

independent variables have been found to be predictive of general delinquency and violent

extremism, it seems reasonable to assume that they could be predictive in causing an extremist to

be a leader of a group (which is a more serious offense than a non-leader). Also, since the

research supports general delinquency and violent extremism, the findings should also support

the independent variables being predictive of a higher criminal severity.

Clique. The clique variable is dichotomous and measures whether an individual was a

part of a clique or not (START, 2018). If an extremist was a part of a clique, the case was coded

as 1, and if an extremist was not a part of a clique, the case was coded as 0. The researchers

defined a clique as a close-knit, insular group that contained at least two individuals. Cliques can

also be a part of much larger terror organizations. The clique variable will measure differential

association, which was supported for being a predictor of delinquency (Akers, 1999; Pratt et al.,

2010). Additionally, Jenson et al. (2016) explicitly tested the clique variable and found that

extremists were more likely to be violent if they belonged to a clique than extremists not a part of

a clique. Out of the valid percentage of the sample, 51.2% of extremists were not in a clique (N

= 785), and 48.8% of extremists were in a clique (N = 747).

Angry at United States. The angry at United States variable measures whether an

individual held anger (or not) towards America, or held contempt towards the American social

system (START, 2018). This variable is dichotomous and was coded as either having anger

towards the United States (1) or not having anger towards the United States (0). Angry at United

States will measure definitions favorable to breaking the law, which was supportive of being

predictive of delinquency (Akers, 1999; Pratt et al., 2010). Out of the valid percentage of the

sample, 30.5% of extremists held no anger towards the United States (N = 416), and 69.5% of

extremists held anger towards the United States (N = 946).

Radical Beliefs. The radical beliefs variable is ordinal and measures the extent to which

an individual espouses radical beliefs. No radical beliefs or no evidence of exposure to radical

ideologies was coded as 0, evidence of having been exposed to radical ideologies was coded as

1, evidence of pursuing further information on a radical ideology was coded as 2, evidence of

having full knowledge of a radical ideology was coded as 3, sharing many beliefs with a radical

ideology was coded as 4, and having a deep commitment to a radical ideology was coded as 5

(START, 2018). Radical beliefs will measure definitions favorable to breaking the law, which

was found to be predictive of general delinquency (Akers, 1999; Pratt et al., 2010). Out of the

valid percentage of the sample, 1.1% of extremists held no radical beliefs or were not exposed to

radical ideologies (N = 22), 14.5% of extremists showed evidence of being exposed to a radical

ideology (N = 289), and 8.8% of extremists pursued further information on a radical ideology (N

= 175). Additionally, 8.5% of extremists had full knowledge of a radical ideology (N = 170),

16.4% of extremists shared many beliefs of a radical ideology (N = 327), and 50.7% of

extremists had a deep commitment to a radical ideology (N = 1010).

Marital Status. Marital status measures an extremist's marital status at the time of

exposure (START, 2018). The variable was originally coded as an extremist being single (1),

married (2), divorced or separated (3), or a widower (4). This variable was collapsed into a

dichotomous level of measurement. If an extremist was married at the time of public exposure,

the case was coded as 1, and if an extremist was not married at the time of public exposure, the

case was coded as 0. Marital status will measure attachment. Hirschi (2002) found that pro-

social attachments are likely to deter delinquency. Additionally, research has found that not

being married is a predictor of violent extremism (LaFree et al., 2018; Mills et al., 2019). Out of

the valid percentage of the sample, 64.3% of extremists were not married (N = 879), and 35.7%

of extremists were married (N = 489).

Employment Status. Employment status measures whether an extremist was employed

at the time of their exposure (START, 2018). The variable was originally coded as employed

(1), self-employed (2), unemployed (looking for work) (3), unemployed (not looking for work)

(4), student (5), or retired (6). This variable was collapsed into a dichotomous level

measurement. An extremist who was currently employed at the time of public exposure was

coded as 1, and an extremist who was not employed at the time of public exposure was coded as

0. Employment status will measure commitment. Hirschi (2002) and Costello and Vowell

(1999) found that pro-social commitments to conventional society can deter criminal activity.

Additionally, research has specifically found that those who are not employed or have

employment issues are more likely to commit violent extremism (Holt et al., 2018; Jenson et al.,

2016; LaFree et al., 2018; Mills et al., 2019&). Out of the valid percentage of the sample, 33%

of extremists were unemployed (N = 353), and 67% of extremists were employed (N = 717).

Education. The education variable measures the individual's highest educational

attainment level at the time of public exposure and is of an ordinal level of measurement

(START, 2018). An extremist not attending high school was coded as 1, completing some high

school was coded as 2, graduating high school was coded as 3, completing some college was

coded as 4, and having a college degree was coded as 5. Additionally, an extremist completing

some vocational school was coded as 6, having a vocational school degree was coded as 7,

completing some of a master's degree was coded as 8, having a master's degree was coded as 9,

completing some of a doctoral or professional degree was coded as 10, and having a doctoral or

professional degree was coded as 11. Education will measure commitment. Hirschi (2002) and

Costello and Vowell (1999) found that commitment to conventional society can deter criminal

activity. Additionally, research has found that the less educational attainment an extremist has,

the more likely the extremist will be violent (Böckler et al., 2020; LaFree et al., 2018.). The

mean educational attainment was 4.44 (SD = 2.34), which indicates extremists completed some

college on average. Additionally, the median and mode were both 4; the lowest educational

attainment was not completing high school, and the highest educational attainment was

completing a doctoral/professional degree.

Aspirations. The aspirations variable measures whether an extremist had any career or

educational aspirations and is of an ordinal level of measurement (START, 2018). If an

extremist did not have aspirations, it was coded as 0, having aspirations but not attempting to

achieve them was coded as 1, having aspirations but failing to achieve them was coded as 2, and

having aspirations and achieving them was coded as 3. Aspirations will measure the concept of

failing to achieve one's goals. Although one's aspirations and extremism has yet to be studied in

available research, results are expected to find that failing to achieve one's goals will be

predictive in violent extremism, higher criminal severities, and being leaders of a group as it is

predictive in general delinquency (Agnew, 1992). Out of the valid percentage of the sample,

39.7% of extremists did not have aspirations (N = 156), 10.7% of extremists had aspirations but

did not attempt to achieve them (N = 42), 24.7% of the sample had aspirations but failed to

achieve them (N = 97), and 24.9% of the sample had aspirations and achieved them (N = 98).

Trauma. The traumatic experience variable measures whether an individual has

experienced or witnessed any traumatic events before their radicalization (START, 2018). The

variable was originally coded as no trauma (0), experiencing trauma but the timing of the trauma

was unknown (1), experiencing trauma but it occurred a long time before radicalization (2), and experiencing trauma shortly before radicalization (3). This variable was collapsed into a dichotomous level of measurement. An extremist that has experienced trauma was coded as 1, and an extremist who has not experienced trauma was coded as 0. Trauma will measure the presence of a negative stimulus, which has been found to be predictive of general delinquency (Agnew, 1992; Agnew, 2001; Agnew, 2002; Baron, 2019). Additionally, Agnew (2010) found that strains high in magnitude are more likely to cause terrorism, which it is reasonable to believe that a strain of trauma is high in magnitude. Out of the valid percentage of the sample, 63.9% of extremists did not experience any trauma (N = 343), and 36.1% of extremists experienced some type of trauma (N = 194).

Absent Parent. The absent parent variable measures whether the individual's parent(s) were absent during their childhood (START, 2018). The variable was originally coded as having no absent parents (0), having an absent mother (1), having an absent father (2), or having both parents absent (3). The variable was collapsed into a dichotomous level of measurement. An extremist with an absent parent(s) was coded as 1, and an extremist who did not have any missing parents was coded as 0. Absent parent will measure the removal of a positive stimulus, which was supportive in predicting general delinquency (Agnew, 1992; Agnew, 2001; Agnew, 2006). Out of the valid percentage of the sample, 68% of extremists had no absent parents while growing up (N = 366), and 32% of extremists had at least one absent parent while growing up (N = 172).

Control Variables

Ideology. There are four different variables that measure an extremist's ideology. The variables indicate whether an extremist espouses an Islamist or jihadist ideology, a right-wing

ideology, a left-wing ideology, or a single-issue ideology (START, 2018). The variables are dichotomous and were coded as either no (0) or yes (1). Out of the entire sample, 23% of extremists espoused an Islamist or jihadist ideology (N = 511), 43% of extremists espoused a right-wing ideology (N = 977), 16.8% of extremists espoused a left-wing ideology (N = 374), and 16.4% of extremists espoused a single-issue ideology (N = 364).

Age. Age indicates the age of an extremist at the time of public exposure and is of a continuous level of measurement (START, 2018). Descriptive statistics illustrate that the mean age of an extremist in the sample is 33.9 years old with a mean of 30, a mode of 26, and a standard deviation of 13.31. Descriptive statistics also show that the youngest extremist was 10 years old and the oldest was 88 years old at the time of public exposure.

Sex. Sex measures an extremist's gender and is of a dichotomous level of measurement (START, 2018). Sex was coded as female (1) or male (2). Out of the entire sample, males made up 89.9% of the sample, and females constituted 10.1% of the sample (N = 2,001 and N = 225).

Ethnicity. Ethnicity measures the race/ethnicity of an extremist (START, 2018). Ethnicity was originally coded as Hispanic/Latino (1), Black/African-American (2), White (3), Middle Eastern/North African (4), Native American (5), Asian (6), and other (7). Ethnicity was collapsed into a dichotomous level of measurement and is now coded as non-White (0) and White (1). Out of the valid percentage of the sample, 68.5% of extremists were White (N = 1393), and 31.5% were non-White (N = 640). Table 1 illustrates the descriptive statistics, frequency tables, coding, number of cases, and percentage of missing cases for each variable in the study.

Table 1. *Descriptive Statistics and Frequency Tables*

Variable	Code	Distribution/ Mean (SD)	N	% Missing Values
Violent	No (0)	42%	2226	0%
	Yes (1)	58%		
Criminal Severity	Scale (0-10)	6.88 (3.11)	2206	0.9%
Role in Group	Not a Leader (0)	76.7%	2078	6.6%
	Leader (1)	23.3%		
Clique	No (0)	51.2%	1532	31.2%
	Yes (1)	48.8%		
Angry at US	No (0)	30.5%	1362	38.8%
	Yes (1)	69.5%		
Radical Beliefs	No Radical Beliefs (0)	1.1%	1993	10.5%
	Exposed to Beliefs (1)	14.5%		
	Pursued Further Info. (2)	8.8%		
	Full Knowledge (3)	8.5%		
	Shared Identical Beliefs (4)	16.4%		
	Deep Commitment (5)	50.7%		
Marital Status	Not Married (0)	64.3%	1368	38.5%
	Married (1)	35.7%		
Employment Status	Unemployed (0)	33%	1070	51.9%
	Employed (1)	67%		
Education	Scale (1-10)	4.44 (2.34)	941	57.7%
Aspirations	No Aspirations (0)	39.7%	393	82.3%
	Aspirations/No Attempt to Achieve (1)	10.7%		
	Aspirations/Did not Achieve (2)	24.7%		
	Achieved Aspirations (3)	24.9%		
Trauma	No (0)	63.9%	537	75.9%
	Yes (0)	36.1%		
Absent Parent(s)	No (0)	68%	538	75.8%
	Yes (1)	32%		
Islamist Ideology	No (0)	77%	2226	0%
	Yes (1)	23%		
Far-Right Ideology	No (0)	56.1%	2226	0%
	Yes (1)	43.9%		
Far-Left Ideology	No (0)	83.2%	2226	0%
	Yes (1)	16.8%		
Single-Issue Ideology	No (0)	83.6%	2226	0%
	Yes (1)	16.4%		
Age	Continuous Scale	33.9 (13.31)	2143	3.7%
Sex	Female (1)	10.1%	2226	0%
	Male (2)	89.9%		
Ethnicity	Non-White (0)	31.5%	2033	8.7%
	White (1)	68.5%		

Analyses

Missing Data Techniques

Because the PIRUS dataset solely utilizes public, open-source information, some dataset variables contain a considerable amount of missing data. This study utilized two techniques to combat the missing data, expected maximization imputation method (EM) and simple imputation using subgroup medians. A missing at random (MAR) test was also computed to observe if data is genuinely missing at random. These methods were explicitly chosen because previous literature studying terror radicalization had used them successfully (Jenson et al., 2016; LaFree et al., 2018). In each model, correlation and regression analyses were conducted and utilized to describe the variables, note any relationship patterns between the variables, and to test the independent variables against the dependent variables specifically. After conducting the analyses for the different models, the results were compared for any differences and similarities.

EM utilizes an iterative algorithm that reflects a maximum likelihood estimation to replace missing data (Jenson et al., 2016). The EM method allows for different waves of iteration predictions that confound on the previous wave to produce maximum likelihood estimates. Eventually, the parameter estimates are reached, which will increase the reliability and validity of the results. The EM method was completed in SPSS and created a final sample of 2,173 cases. It is important to note that 54 cases contained missing data for the "Role in Group" dependent variable; thus, those cases were listwise deleted from the sample. The final sample for the EM dataset is 2,119 cases.

Simple imputation using subgroup medians replaces missing values with the other cases' medians in a given subgroup. Subgroup medians were created through filtering data by decade and ideology. For example, variables for far-right extremists in the 2000s have a different

subgroup median than variables for far-right extremists in the 1990s. It is important to note that

if a median was unacceptable for a given subgroup (i.e., not a whole number for a categorical

variable), then the mean was utilized. Additionally, if the mean was unacceptable for the given

subgroup, then the mode was utilized. Thirty-eight cases either contained missing data entirely

in certain subgroups, or the median, mean, and mode of a subgroup were all unacceptable.

Those cases were listwise deleted from the sample; thus, the final sample for the simple

imputation method is 2,173 cases.

A MAR test was also conducted to measure whether the data is actually missing at

random. MAR assumes data is missing for specific variables because of differences in values of

other variables; thus, the missing data is not related to the specific variable's missing values.

There should be no relationship between the missing data for a variable and the variable's values

after the influence of other variables are factored out of the analysis. Although the MAR test

illustrates whether the data are missing at random to the best of its ability, it is extremely difficult

to be certain the data is actually missing at random because we do not have all of the missing

values for a given variable. The MAR test illustrated that the data was not missing at random in

this study ($p < .001$). Thus, both models were utilized to determine any differing results.

Logistic Regression

A logistic regression is used to compute the relationship between binary dependent

variables and categorical or continuous independent variables (Oates, 2015). A logistic

regression will predict a specific event's probability based on the different independent variables

or predictors measured against the binary dependent variable. In this study, logistic regressions

were computed to measure the dependent variables of violence and role in group. To determine

whether an extremist is violent or nonviolent, a logistic regression was computed to analyze the

probability of different independent variables being predictive of violence. To determine whether an extremist was a group leader or not, a logistic regression was computed to analyze the probability of different independent variables being predictive of leadership.

To have a reliable and valid logistic regression, certain assumptions need to hold true of the analysis model (Oates, 2015). A logistic regression assumes that the analysis's logistic model is linearly correlated with the continuous independent predictors or variables in the model; however, this assumption does not have to be met for ordinal variables. Another assumption is that the dependent variable comprises categories that are both mutually exclusive and exhaustive. Because an extremist will either be violent or nonviolent, both of the exclusiveness and exhaustiveness rules are met. Additionally, because an extremist will either be a leader of a group or not a group leader, both of the exclusiveness and exhaustiveness rules are met. Certain limitations are often found in logistic regression models that are worth mentioning. Logistic regressions tend to be sensitive to analyses where multiple variables are correlated with each other, which causes a high degree of standard error in the model or skewed results (Oates, 2015). To combat variables with high amounts of correlation (multi-collinearity), Pearson correlation coefficients were computed, and it was determined that no variables reached the .70 threshold; thus, the assumption was not violated.

Ordinary Least Squares Regression

An ordinary least square regression (OLS) is used to measure and estimate the parameters of a linear regression model (Bandreddy, 2019). An OLS minimizes the squares' sums of the differences between the dependent variable and the independent variables. After minimizing the sums of the squares of the differences between variables, an OLS will configure the data in a linear function or straight line. An OLS regression can be used to estimate the parameters of one

dependent variable and one independent variable, but this study utilized multiple independent variables making the analyses a multivariate OLS regression. A multivariate OLS regression was utilized to measure the criminal severity dependent variable.

There are multiple assumptions that are associated with a linear regression model (Li, 2010). The first assumption of a linear regression model is that there is a linear relationship between the dependent and independent variables. However, the assumption was violated in this study as no variables are truly continuous (except age). The second assumption is that the error terms are dependent and are not correlated with one another, and the independent variables do not provide information regarding the error terms and their expected values. This assumption was not violated as the Durbin-Watson statistic was 1.68.

The third assumption is that heteroscedasticity must be established where there are different values of error terms present in the independent variables. This assumption was violated and is discussed in the limitations section. Additionally, observations took place to ensure that there were no outliers in the error terms and that there was a normal distribution of the error terms. Lastly, multicollinearity does not exist in the linear models as both models' VIF scores are below 10 and there are no variables that reach the .70 correlation coefficient threshold.

Chapter 4

Results

Exploratory Factor Analyses

Exploratory factor analyses were completed for each model to determine whether the variables align with their respective theory. The exploratory factor analyses illustrated three components in each model, indicating that there are three underlying factors within the dataset. It can be assumed that each component represents either social bond, social learning, or general strain theory. Although the exploratory factor analyses identified three components within the data, each model showed differing results in how the variables loaded into the components.

EM Rotated Component Matrix

The rotated component matrix indicates that four variables loaded into component one: education, aspirations, marital status, and employment status. It appears that component one represents social bond theory as education, marital status, and employment were all loaded within it. Although aspirations was initially thought of as a general strain theory variable, an argument can be made for its application in social bond theory (having stakes in conformity).

Additionally, the rotated component matrix indicates that four variables were loaded into component two: absent parent, trauma, marital status, and employment. Because their extraction values were not as high in component two, marital status and employment were considered to be loaded into component one. Despite aspirations loading into component one, it appears that component two illustrates general strain theory with its inclusion of absent parent and trauma. The third component of the rotated component matrix includes four variables loaded within it: angry at United States, radical beliefs, trauma, and clique. Although trauma was loaded into component three, it was included in component two because of a higher extraction value.

Component three appears to illustrate social learning theory as all of its respective variables are included. Table 2 illustrates the rotated component matrix for the EM dataset.

Table 2. *EM Rotated Component Matrix*

Variable	Component 1	Component 2	Component 3
Education	**.827**		
Marital Status	**.590**	.437	
Employment	**.548**	.400	
Aspirations	**.799**		
Trauma		**.836**	.448
Absent Parent		**.709**	
Clique			**.685**
Angry at U.S.			**.668**
Radical Beliefs			**.590**

Simple Imputation Rotated Component Matrix

Although the simple imputation model also loaded the variables into three components, the patterns were not as consistent as the EM model. Component one contained five variables loaded within it: angry at United States, radical beliefs, marital status, aspirations, and clique. Although aspirations and marital status loaded into component one, their extraction values were higher for other components; thus, they were not considered for this component. It appears that component one illustrates social learning theory as all of its respective variables had the highest extraction values within it.

Component two contained three variables loaded within it: education, aspirations, and absent parent. Although not as clear, it could be argued that component two measures general strain theory because of the inclusion of aspirations and absent parent. Finally, five variables were included in component three: marital status, employment status, trauma, clique, and absent parent. Although clique and absent parent illustrated extraction values in component three, their values were higher in other components; hence, they were not considered for component three. Table 3 illustrates the rotated component matrix for the simple imputation dataset.

Table 3. *Simple Imputation Rotated Component Matrix*

Variable	Component 1	Component 2	Component 3
Education		**.720**	
Marital Status	.386		**.436**
Employment			**.521**
Aspirations	.427	**.676**	
Trauma			**-.678**
Absent Parent		**-.629**	-.361
Clique	**.452**		.399
Angry at U.S.	**.752**		
Radical Beliefs	**.595**		

Bivariate Correlation Analyses

Bivariate correlation analyses were completed for all independent, dependent, and control variables in the study. The analyses illustrate the association between each predictor variable and the three dependent variables to determine if the relationships are significant. Additionally, the bivariate correlation analyses illustrated no multicollinearity issues between the predictor variables as none reached the .70 correlation threshold.

EM Bivariate Correlation - Violent

The bivariate correlation results between the social learning variables (clique, anger towards United States, and radical beliefs) and violent extremism all illustrated insignificant relationships. However, all social bond variables (marital status, employment status, and educational attainment) illustrated a significant correlation with violent extremism in the expected direction (indirect). Extremists who were not married were more likely to engage in violent extremism than married extremists ($\phi = -0.138$, $p < .001$). Those extremists who were unemployed were also more likely to engage in violent extremism than extremists that were employed ($\phi = -0.096$, $p < .001$). Additionally, extremists who had lower educational attainment levels were associated with engaging in violent extremism compared to extremists with higher levels of educational attainment ($r_{rb} = -0.18$, $p < .001$).

Out of the general strain variables, only aspirations had a significant relationship (in the expected direction) with violent extremism, whereas absent parent and trauma were both insignificantly correlated with violent extremism. The results indicate that those extremists who had no aspirations or did not reach their aspirations were more likely to carry out violent extremism than extremists who achieved their aspirations (r_{rb} = -0.237, p < .001).

All control variables were significantly predicting of violent extremism. Extremists who espoused Islamist and far-right ideologies were more likely to engage in violent extremism than those who did not espouse those beliefs (ϕ = 0.171, p < .001; ϕ = 0.063, p < .001). Additionally, extremists who espoused far-left and single-issue ideologies were more likely to be non-violent than extremists who did not espouse those beliefs (ϕ = -0.225, p < .001; ϕ = -0.053, p < .05). Age and ethnicity were both indirectly correlated with lower levels of violent extremism (r_{pb} = -0.117, p < .001; ϕ = -0.168, p < .001). Thus, younger and non-White extremists were less likely to engage in violent extremism than older and White extremists. Additionally, males were more likely to engaged in violent extremism than females (ϕ = 0.135, p < .001).

EM Bivariate Correlation – Criminal Severity

Similar to the violent correlation coefficients, the results illustrate that neither clique, anger towards United States, nor radical beliefs were significantly correlated with criminal severity. However, marital status, employment status, and education were all significantly correlated with criminal severity. Those extremists who were married committed events with lower criminal severity levels than extremists who were not married (r_{pb} = -0.181, p < .001). Additionally, extremists that were employed committed events with lower levels of criminal severity than extremists who were unemployed (r_{pb} = -0.090, p < .001). Lastly, extremists who

had higher educational attainment levels committed events with lower levels of criminal severity than extremists with lower levels of educational attainment ($r = $ -0.217, p < .001).

Unlike their correlation patterns to violence, all strain variables were significantly correlated to criminal severity and in the expected directions. Extremists who did not have or achieve aspirations were more likely to commit extremist events with higher levels of criminal severity ($r = $ -0.319, p < .001). Additionally, trauma and absent parent were directly correlated to criminal severity ($r_{pb} = $ 0.057, p < .01; $r_{pb} = $ 0.059, p < .01). Thus, extremists who have experienced trauma and extremists who had an absent parent while growing up were more likely to commit extremist events with higher criminal severities than extremists who have not experienced trauma or did not have an absent parent while growing up.

All control variables were significantly correlated to criminal severity except far-left, single-issue, and ethnicity. Extremists that espoused a far-right ideology were more likely to commit events with a higher criminal severity than those who did not espouse a far-right ideology ($r_{pb} = $ 0.108, p < .001). Additionally, the radical Islamist ideology was indirectly correlated to criminal severity ($r_{pb} = $ -0.067, p < .01;); thus, extremists who espouse a radical Islamist ideology are more likely to commit events with lower criminal severities than extremists who do not espouse a radical Islamist ideology. Older extremists were more likely to commit events with lower criminal severities than younger extremists ($r = $ -0.121, p < .001), and males were more likely to commit extremist events with a higher criminal severity than females ($r_{pb} = $ 0.076, p < .001).

EM Bivariate Correlation – Role in Group

Unlike both the violence and criminal severity correlations, all social learning variables were significantly correlated to role in group. Extremists who were in a clique and extremists

who held anger towards the United States were more likely to be leaders of a group than those not in a clique and those that did not hold anger towards the United States ($\phi = 0.191$, p < .001; $\phi = 0.106$, p < .001). Additionally, extremists with stronger radical beliefs were more likely to be leaders of a group than extremists with weaker radical beliefs ($r_{rb} = 0.269$, p < .001).

Just as the social learning variables, all social bond variables were significantly correlated to role in group. However, the correlation patterns were all in opposite directions when compared to the violence and criminal severity correlations. Extremists that were married were more likely to be leaders of a group than extremists that were not married ($\phi = 0.175$, p < .001). Additionally, employed extremists were more likely to be leaders of a group than extremists who were unemployed ($\phi = 0.091$, p < .001). Finally, extremists who obtained higher educational attainment levels were more likely to be leaders of a group than extremists who obtained lower levels of educational attainment ($r_{rb} = 0.148$, p < .001).

Although aspirations and trauma were significantly correlated to role in group, absent parent had an insignificant correlation to role in group. It is also important to note that aspirations' pattern occurred in the unexpected direction, whereas trauma was significantly related in the expected direction. Extremists that achieved their aspirations were more likely to be leaders of a group than extremists who did not achieve or did not have aspirations ($r_{rb} = 0.061$, p < .001). Additionally, extremists who experienced a traumatic incident were more likely to be leaders of a group than those who have not experienced a traumatic incident ($\phi = 0.061$, p < .01).

All control variables were significantly correlated to role in group except for single-issue and gender. Extremists that espoused a radical Islamist ideology were less likely to be leaders of a group than extremists who did not espouse a radical Islamist ideology ($\phi = -0.147$, p < .001). In contrast, extremists who espoused either a far-right or far-left ideology were more likely to be

leaders of a group than those who did not espouse either ideology ($\phi = .073$, p $< .01$; $\phi = .049$, p $< .05$). Additionally, extremists who were older or White were more likely to be leaders of a group than extremists who were younger or non-White ($r_{pb} = 0.163$, p $< .001$; $\phi = 0.070$, p $< .01$).

Simple Imputation Bivariate Correlations – Violent

Neither clique, angry at United States, nor radical beliefs were significantly correlated to violent extremism. The relationships align with the EM dataset as all variables share the same directional pattern and are insignificant. Additionally, employment status and education were significantly correlated to violent extremism, but an extremist's marital status was not significantly related to violent extremism. These results differ to the EM dataset as marital status was significantly correlated to violence in the EM analyses. Extremists who were employed were more likely to engage in non-violent extremism than extremists who were not employed ($\phi = -0.047$, p $< .05$). Additionally, extremists who obtained higher educational attainment levels were less likely to be violent than extremists with lower educational attainment levels ($r_{rb} = -0.117$, p $< .001$).

Out of the strain variables, only aspirations was significantly correlated to violent extremism, whereas trauma and absent parent were not. Although both datasets share some significant correlations for strain and violence, trauma was indirectly (and insignificantly) correlated to violence in the EM dataset and directly correlated to violence in the present dataset. Extremists who did not achieve or did not have aspirations were more likely to engage in violent extremism than extremists who did achieve their aspirations ($r_{rb} = -0.164$, p $< .001$).

All terror ideologies, age, gender, and ethnicity were significantly correlated to violent extremism. Additionally, all significance and directional patterns were similar to the EM dataset

for the control variables. Islamist and far-right extremists were more likely to engage in violent extremism than extremists who did not espouse either ideology ($\phi = 0.165$, p < .001; $\phi = 0.058$, p < .01). However, far-left and single-issue extremists were more likely to engage in non-violent extremism than extremists that did not espouse either ideology ($\phi = -0.209$, p < .001; $\phi = -0.061$, p < .01). Additionally, extremists that were younger, male, and non-White were more likely to carry out violent events than extremists that were older, female, and White ($r_{pb} = -0.109$, p < .001; $\phi = 0.137$, p < .001; $\phi = -0.163$, p < .001).

Simple Imputation Bivariate Correlations – Criminal Severity

Out of the social learning variables, only angry at United States was significantly correlated with criminal severity, whereas clique and radical beliefs were not. However, in the EM dataset, no social learning variables were significantly correlated to criminal severity. Interestingly, extremists that held no anger towards the United States were more likely to commit extremist events with higher a higher criminal severity than extremists who held anger towards the United States ($r_{pb} = -0.062$, p < .01).

Marital status and education were both significantly correlated to criminal severity, whereas employment status was not significantly correlated to the dependent variable. Although the directional patterns are similar, these results differ from the EM dataset as all social bond variables were significantly correlated to criminal severity. Those extremists that were married were more likely to commit extremist events with lower criminal severities than extremists that were not married ($r_{pb} = -0.094$, p < .001). Extremists who obtained higher educational attainment levels were more likely to commit extremist events with lower criminal severities than extremists with lower levels of educational attainment ($r = -0.114$, p < .001).

Out of the strain variables, only aspirations was significantly related to criminal severity, whereas trauma and absent parent both had an insignificant relationship with the dependent variable. Although the patterns are correlated in the same direction, all strain variables were significantly correlated to criminal severity in the EM dataset. Extremists that achieved their aspirations were more likely to commit events with lower criminal severities than extremists that did not have or achieve their aspirations ($r = -0.124$, $p < .001$).

Out of all control variables, only far-left, single-issue, and ethnicity were not significantly correlated to criminal severity. All significant correlations and relationship patterns are similar to the EM dataset analyses for the control variables and criminal severity. Extremists that were motivated by Islamist ideologies were more likely to commit events with lower criminal severities than extremists that were not motivated by an Islamist ideology ($r_{pb} = -0.072$, $p < .01$). However, far-right extremists were more likely to carry out events with higher criminal severities than those who are not motivated by far-right ideologies ($r_{pb} = 0.106$, $p < .001$). Additionally, extremists that are younger or male were more likely to commit events with higher criminal severities than extremists that are older or female ($r = -0.110$, $p < .001$; $r_{pb} = 0.084$, $p < .001$).

Simple Imputation Bivariate Correlations – Role in Group

Clique, angry at United States, and radical beliefs were all significantly related to role in group, and the correlations for the social learning variables and role in group were similar to the EM dataset (both in significance and direction). Extremists who were a part of a clique were more likely to be a group leader than extremists not a part of a clique ($\phi = 0.068$, $p < .01$). Additionally, extremists who held anger towards the United States were more likely to be a group leader than extremists that did not hold anger towards the United States ($\phi = 0.105$, $p <$

.001). Lastly, extremists with higher levels of radical beliefs were more likely to be leaders of a group than extremists with lower levels of radical beliefs ($r_{rb} = 0.232$, $p < .001$).

Marital status and education were significantly correlated to role in group, whereas employment status was insignificantly related to the dependent variable. Although the directional patterns for the social bond variables and role in group were similar to the EM dataset, employment status was significantly correlated to role in group in the EM dataset. Extremists that were married were more likely to be leaders of a group than those extremists that were not married ($\phi = 0.125$, $p < .001$). Additionally, extremists who obtained higher educational attainment levels were more likely to be leaders of a group than extremists with lower educational attainment levels ($r_{rb} = 0.062$, $p < .01$).

Aspirations, trauma, and absent parent were all significantly correlated to role in group. Although all directional patterns were consistent, absent parent had an insignificant correlation to role in group in the EM dataset. Extremists that achieved their aspirations were more likely to be leaders of a group than extremists who did not achieve or did not have aspirations ($r_{rb} = 0.061$, $p < .05$). Additionally, extremists that experienced a traumatic incident or that had at least one absent parent while growing up were more likely to be leaders of a group than extremists that never experienced a traumatic incident or that did not have any absent parents while growing up ($\phi = 0.045$, $p < .05$; $\phi = 0.080$, $p < .001$).

Out of the different control variables, only Islamist, far-right, age, and ethnicity were significantly correlated to role in group, which differs from the EM dataset as far-left was significantly correlated to role in group. Extremists who espoused an Islamist ideology were less likely to be leaders of a group than extremists who espoused other ideologies ($\phi = -0.142$, $p < .001$). However, extremists that are motivated by a far-right ideology were more likely to be

leaders of a group than extremists who do not espouse a far-right ideology ($\phi = 0.078$, $p < .001$).

Lastly, extremists who were older or White were more likely to be leaders of a group than

extremists who were younger or non-White ($r_{pb} = 0.151$, $p < .001$; $\phi = 0.074$, $p < .01$). Table 4

illustrates the bivariate correlation coefficients for the two datasets.

Table 4. *EM & Simple Imputation Correlation Coefficients*

Variable	Violent EM	Violent Simple Imputation	Criminal Severity EM	Criminal Severity Simple Imputation	Role in Group EM	Role in Group Simple Imputation
Clique	.033	.557	.035	.018	.191***	.068**
Angry at U.S.	-.011	-.006	-.036	-.062**	.106***	.105***
Radical Beliefs	-.012	-.018	-.005	-.014	.269***	.232***
Marital Status	-.138***	-.037	-.181***	-.094***	.175***	.125***
Employment Status	-.096***	-.047*	-.090***	-.038	.091***	.016
Education	-.180***	-.117***	-.217***	-.114***	.148***	.062**
Aspirations	-.237***	-.164***	-.319***	-.124***	.144***	.061**
Trauma	-.001	.019	.057**	.027	.061**	.045*
Absent Parent	-.003	-.035	.059**	.030	.031	.080***
Islamist	.171***	.165***	-.067**	-.072**	-.147***	-.142***
Far-Right	.063**	.058**	.108***	.106***	.073**	.078***
Far-Left	-.225***	-.209***	-.036	-.022	.049*	.040
Single-Issue	-.053*	-.061**	-.032	-.038	.021	.019
Age	-.117***	-.109***	-.121***	-.110***	.163***	.151***
Gender	.135***	.137***	.076***	.084***	.036	.034
Ethnicity	-.168***	-.163***	.020	.028	.070**	.074**

Notes. p < .05*, p < .01**, p < .001***

Violent Dependent Variable Regression Models

EM Model

The logistic regression model predicting violence was statistically significant, $\chi^2 (10) =$ 336.443, p < .001. The model explained 19.3% (Nagelkerke R^2) of the variance in violence and correctly classified 68.2% of cases. However, education, employment status, and age were not significant predictors of violence. Extremists who were married were 0.632 times less likely to be violent than extremists who were not married (p < .001). Additionally, extremists that did not achieve their aspirations were 0.549 times more likely to be violent than extremists who were more likely to achieve their aspirations (p < .001). Those extremists who were either motivated by Islamist, far-right, or single-issue ideologies were more likely to be violent than extremists motivated by far-left ideologies ($b = 1.226$, p < .001; $b = 1.356$, p < .001; $b = 0.811$, p < .001). Lastly, males were 1.716 times more likely to be violent than females (p < .01), and non-Whites were 0.422 times more likely to be violent than Whites (p < .001).

Simple Imputation Model

The logistic regression model predicting violence was statistically significant, $\chi^2 (10) =$ 233.272, p < .001. The model explained 13.6% (Nagelkerke R^2) of the variance in violence and correctly classified 66.5% of cases. Interestingly, no main predictor variables were significant in predicting violence, whereas all control variables were significant predictors. Additionally, there were differences and similarities between the two datasets regarding individual predictor significance and directional patterns. Marital status and aspirations were significant in the EM model but insignificant in this model. However, employment status and education were insignificant in both models. Age was also found to be insignificant in the EM model but

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significant in the present model. Although insignificant in both models, employment status was directly predicting of violence in the EM model but indirectly predicting in the present model.

The far-left ideology was left out of the regression model to act as a reference because it was assumed to be the least violent out of all ideologies. The model illustrates that Islamist, far-right, and single-issue extremists were more likely to be violent than far-left extremists ($b = 1.068$, p < .001; $b = 1.197$, p < .001; $b = 0.759$, p < .001). The model also predicted that for each unit increase in an extremist's age, an extremist is 0.983 times less likely to be violent than younger extremists (p < .001). Additionally, males were 1.689 times more likely to be violent than females (p < .01), and non-Whites were 0.452 times more likely to be violent than Whites (p < .001). Table 5 illustrates the logistic regression models used to predict whether an extremist was violent or nonviolent.

Table 5. *Violent Regression Models*

Variable	Expected Maximization Method		Simple Imputation Method	
	B	**SE**	**B**	**SE**
Marital Status	-.459***	(.111)	-.135	(.102)
Employment Status	.056	(.125)	-.082	(.132)
Education	-.002	(.039)	-.061	(.031)
Aspirations	-.600***	(.087)	-.081	(.060)
Islamist	1.226***	(.169)	1.068***	(.184)
Far-Right	1.356***	(.149)	1.197***	(.184)
Single-Issue	.811***	(.167)	.759***	(.166)
Age	-.001	(.005)	-.017***	(.004)
Gender	.540**	(.164)	.524**	(.159)
Ethnicity	-.862***	(.135)	-.794***	(.133)
Notes. $p < .05^{*}$, $p < .01^{**}$, $p < .001^{***}$				

Criminal Severity Dependent Variable Regression Models

EM Model

The regression model predicting criminal severity is statistically significant, $F(12, 2160)$ = 30.472. The adjusted-R^2 of .140 indicates a large effect size, and this set of predictors accounts for approximately 14% of the variance in criminal severity. Additionally, there are no issues with multicollinearity, as all VIF scores are below 10. Interestingly, employment, education, angry at United States, single-issue, and age did not significantly predict criminal severity. However, the model illustrates that extremists who were unmarried were more likely to commit events with a higher criminal severity than extremists who were married (b = -0.907, p < .001).

The model also illustrates that individuals who had lower aspirations (or failed to achieve their aspirations), experienced a traumatic event, or did not have an absent parent were more likely to commit events with a higher criminal severity than extremists who obtained their aspirations, did not experience a traumatic event, or that had absent parents (b = -1.398, p < .001; b = 0.942, p < .001; b = -0.612, p < .01). Additionally, it is important to note that aspirations had the most considerable effect on criminal severity (β = -0.334). Interestingly, radical Islamist extremists were more likely to commit events with a lower criminal severity than far-left extremists (b = -0.456, p < .05). However, far-right extremists were more likely to commit events with a higher criminal severity than far-left extremists (b = 0.424, p < .05). Lastly, males were more likely to commit extremist events with a higher criminal severity than females (b = 0.690, p < .01).

Simple Imputation Model

The regression model predicting criminal severity is statistically significant, $F(12, 2176)$ = 92.489. The adjusted-R^2 of .048 indicates a small to medium effect size, and this set of predictors accounts for approximately 4.8% of the variance in criminal severity. Additionally, there are no issues with multicollinearity, as all VIF scores are below 10. However, it is important to note that marital status, employment status, trauma, absent parent, angry at United States, single-issue, and far-right were all insignificant predictors of criminal severity in the simple imputation model. Whereas in the EM linear model, marital status, trauma, absent parent, and far-right were significant predictors. Additionally, age and education were significant predictors in this model and were insignificant in the EM dataset model.

There were also some differences in the predictors' directional patterns between the two datasets. Despite not being significant in either dataset, employment status illustrated an indirect relationship in the simple imputation model and a direct relationship in the EM model. Additionally, education and age have an indirect relationship with criminal severity in the simple imputation model but direct relationships in the EM model. Absent parent illustrated an indirect relationship to criminal severity in the EM model but was directly related to the dependent variable in the simple imputation model. Although not significant in either model, single-issue was indirectly predicting of criminal severity in the simple imputation model but was directly predicting in the EM model.

Nonetheless, for every unit increase in criminal severity, there is a decrease in an extremist's educational attainment of 0.094 (p < .05). Additionally, individuals who were less likely to achieve their aspirations (or did not have aspirations) were more likely to commit events with a higher criminal severity (b = -0.293, p < .01). Extremists who espouse a radical Islamist

ideology were more likely to commit events with a lower criminal severity than extremists who

espouse far-left ideologies (b = -0.796, p < .01). The model also illustrates that for every unit

increase in criminal severity, there is a decrease in age of 0.028 (p < .001). Unlike the EM

model, age had the greatest impact on criminal severity in the simple imputation model (β = -

0.120). Lastly, males were more likely to commit extremist events with a higher criminal

severity than females (b = 0.730, p < .01). Table 6 illustrates the OLS regression models used to

predict the criminal severity of the extremists' events.

Table 6. *Criminal Severity Regression Models*

Variable	Expected Maximization Method		Simple Imputation Method	
	B	SE	*B*	SE
Marital Status	-.907***	(.147)	-.249	(.146)
Employment Status	.158	(.163)	-.188	(.182)
Education	.018	(.051)	-.094*	(.044)
Aspirations	-1.398***	(.114)	-.293**	(.087)
Trauma	.942***	(.186)	.307	(.187)
Absent Parent	-.612**	(.180)	.047	(.093)
Angry at U.S.	-.118	(.166)	-.122	(.159)
Islamist	-.456*	(.205)	-.796**	(.244)
Far-Right	.424*	(.191)	.036	(.258)
Single-Issue	.024	(.222)	-.071	(.240)
Age	.007	(.006)	-.028***	(.005)
Gender	.690**	(.212)	.730**	(.222)
Notes. $p < .05$*, $p < .01$**, $p < .001$***				

Role in Group Dependent Variable Regression Models

EM Model Predicting Role in Group

The logistic regression model predicting role in group was statistically significant, χ^2 (14) = 392.514, p < .001. The model explained 25.3% (Nagelkerke R^2) of the variance in role in group and correctly classified 78.9% of cases. However, angry at United States, employment status, aspirations, absent parent, far-right, far-left, and ethnicity were all found to be insignificant predictors of role in group. Extremists who were in a clique were more likely to be a leader of a group than those not in a clique, and extremists with stronger radical beliefs were more likely to be leaders of a group than extremists with weaker radical beliefs *(b* = 1.337, p < .001; *b* = 0.547, p < .001). Extremists that were married were 1.658 times more likely to be leaders of a group than extremists who were not married (p < .001). The results also illustrated that extremists were 1.49 times more likely to be leaders of a group for every one-unit increase in education than extremists with lower educational attainment levels (p < .01).

Additionally, the model illustrates that extremists who had not experienced a traumatic event were 0.534 times more likely to be a leader of a group than extremists who had experienced a traumatic event (p < .01). It is important to note that the single-issue ideology was left out of the regression model to act a reference because it was not significantly correlated to role in group. Extremists that espoused an Islamist ideology were 0.451 times less likely to be leaders of a group than extremists who espoused single-issue ideologies (p < .001). Lastly, the results illustrate that for every unit increase in age, an extremist is 1.020 times more likely to be a leader of a group (p < .001).

Simple Imputation Model Predicting Role in Group

The logistic regression model predicting role in group was statistically significant, χ^2 (14)
= 245.265, p < .001. The model explained 16.4% (Nagelkerke R^2) of the variance in role in
group and correctly classified 78.5% of cases. The model also illustrates similarities and
differences when compared to the EM model predicting role in group. Both models illustrated
significance for clique, radical beliefs, marital status, education, trauma, Islamist, and age.
Additionally, aspirations, far-right, far-left, and ethnicity were found to be insignificant in both
models. However, the models illustrated different directional patterns for aspirations and
trauma, as both were directly predicting in the simple imputation model but indirectly predicting
in the EM model.

The model illustrates that extremists who were in a clique, held anger towards the United
States, and possessed higher radical beliefs were more likely to be leaders of a group than
extremists who were not in a clique, did not hold anger towards the United States, or possessed
lower levels of radical beliefs ($b = 0.297$, p < .05; $b = 0.313$, p < .05; $b = 0.403$, p < .001).
Additionally, married extremists were more likely to be leaders of a group than non-married
extremists ($b = 0.326$, p < .01). The results also illustrate that extremists are 1.096 times more
likely to be leaders of a group for every one-unit increase in education than extremists with lower
educational attainment levels (p < .01).

Extremists that had experienced a traumatic event were 1.369 times more likely to be
leaders of a group than extremists that had not experienced a traumatic event (p < .05).
Similarly, extremists that had an absent parent(s) while growing up were 1.486 times more likely
to be leaders of a group than extremists that did not have an absent parent(s) in childhood (p <
.01). It is important to note that the single-issue ideology was left out of the model to act as a
reference variable because it was not significantly correlated to role in group. Islamist extremists

were 0.542 times less likely to be leaders of a group than single-issue extremists (p < .01).

Lastly, for every unit increase in age, an extremist is 1.019 times more likely to be leaders of a

group than younger extremists (p < .001). Table 7 illustrates the logistic regression models used

to predict an extremist's role in their group.

Table 7. *Role in Group Regression Models*

Variable	Expected Maximization Method		Simple Imputation Method	
	B	**SE**	**B**	**SE**
Clique	1.337***	(.136)	.297*	(.120)
Angry at U.S.	.129	(.174)	.313*	(.150)
Radical Beliefs	.547***	(.055)	.403***	(.050)
Marital Status	.506***	(.134)	.326**	(.124)
Employment Status	-.228	(.166)	-.282	(.161)
Education	.139**	(.045)	.092**	(.034)
Aspirations	-.039	(.110)	.050	(.071)
Absent Parent	.280	(.180)	.396**	(.148)
Trauma	-.628**	(.194)	.314*	(.152)
Islamist	-.797***	(.225)	-.613**	(.230)
Far-Right	.112	(.170)	.329	(.198)
Far-Left	.034	(.193)	.102	(.196)
Age	.020***	(.005)	.019***	(.004)
Ethnicity	-.093	(.169)	-.115	(.165)

Notes. $p < .05^{*}$, $p < .01^{**}$, $p < .001^{***}$

Chapter 5

Discussion, Limitations, and Implications

Discussion of Results

Discussion of Exploratory Factor Analyses

The EM model's exploratory factor analysis illustrated that the selected variables seem to load into their respective theories. Component one included education, marital status, and employment, which appears to illustrate social bond theory. However, aspirations was also loaded into component one. Aspirations may be considered a social bond variable regarding an individual's stakes in conformity (Hirschi, 2002). For example, if an individual has conventional aspirations to obtain employment or continue their education, the aspirations are technically commitment bonds. Component two appears to illustrate general strain theory as the included variables were trauma and absent parent. Additionally, component three appears to represent social learning theory as all expected variables loaded into the component.

The simple imputation factor analysis was not as consistent as the EM's model. Component one appears to measure social learning theory as clique, angry at United States, and radical beliefs were all loaded within it. Component two appears to measure general strain theory as absent parent, aspirations, and education were loaded within it. It could be theorized that having lower educational attainment levels was a strain placed on extremists; thus, education could be a strain variable in some cases. However, this study cannot be certain due to the missing data limitations. Component three included marital status, employment status, and trauma, perhaps illustrating social bond theory. It could also be theorized that trauma weakened attachment bonds for some extremists, but again, this study cannot be certain due to missing data

limitations. Although there are slight differences between the models, it appears that the matrixes lend support for the chosen variables for each theory.

Discussion of Bivariate Results

Despite Jensen et al.'s (2016) report on the PIRUS dataset finding clique involvement to be a significant predictor of violence, the results for the current study illustrated that there were no significant correlations between the social learning variables and violence for either dataset. Interestingly, LaFree et al.'s (2018) bivariate correlation analyses illustrated that radical peer and family associations were related to violence; thus, it may be assumed that one's friends or family will have a greater effect on them than a clique. There was also not much support in the current study's findings for the social learning variables and criminal severity. None of the social learning variables in both datasets were significantly related to criminal severity, except for angry at United States (only significant in the simple imputation dataset); however, it was in an unexpected direction. Thus, having no anger towards the United States was related to a higher criminal severity.

The bivariate correlations did reveal that social learning theory may be more applicable when analyzing an extremist's role in a group. Extremists that were in a clique, held anger towards the United States, and possessed higher radical beliefs were more likely to be leaders of a group. Thus, the differential association of being in a clique and definitions favorable to radical beliefs may cause an extremist to become a group leader instead of a group follower (Akers, 1996).

The majority of social bond variables were significantly related to violence, except for marital status (in the simple imputation dataset). The EM data illustrates that those who were married, employed, and had higher education levels were more likely to be nonviolent than

extremists who were not married, unemployed, and had lower education levels. Additionally, extremists who were employed and had a higher educational attainment level were also more likely to be nonviolent in the simple imputation data. These results mirror LaFree et al.'s (2018) bivariate correlations as stable employment history, higher educational attainment, and being married were all significantly related to nonviolence. Additionally, the bivariate results support Hirschi's (2002) social bond theory as attachment and stakes in conformity helped prevent extremists from becoming violent.

As for the relationships between the social bond variables and criminal severity, all variables in both datasets were significantly correlated to the dependent variable except for employment status in the simple imputation data. In the EM data, extremists who were employed, had higher education levels, and were married were more likely to commit events with lower criminal severities than those who were unemployed, had lower education levels, or were unmarried. The results are similar to Mills et al.'s (2019) results as unmarried extremists (or those who had marital issues) were more likely to commit events with higher criminal severities. Additionally, past research has also illustrated that extremists who have job struggles and lower education attainment levels were more likely to commit violent events, which are events with higher criminal severities (Böckler et al., 2020; Holt et al., 2018; LaFree et al., 2018; Mills et al., 2019).

Lastly, the bivariate correlations for role in group illustrated that all social bond variables were significantly related to the dependent variable except for employment status (in the simple imputation dataset), but they all occurred in the unexpected direction. In the EM data, extremists who were married, employed, and had higher education levels were more likely to be leaders of a group than extremists who were not married, unemployed, and had lower education levels. The

directional patterns are identical in the simple imputation data, but employment status was not significantly related to role in group. It appears that the more successful an extremist is, the more likely the extremist will be a leader of a group instead of a follower (discussed further in the regression discussions).

Because there has been no previous empirical literature on aspirations, trauma, and absent parent and violent extremism, this study had to rely upon standard criminology research regarding general strain theory. The variable measuring aspirations was the only strain measure significantly related to violence, which occurred in both datasets. Extremists who failed to achieve their aspirations or did not have aspirations were more likely to be violent, which is similar to Agnew's (1992) expectations regarding delinquency. However, all three general strain variables were significantly related to criminal severity in the EM dataset. Those that did not achieve their aspirations, experienced trauma, or had an absent parent committed events that had a higher criminal severity. Agnew's (2010) terrorism theory posits that strains high in magnitude are more likely to lead to terrorism; thus, if an extremist's traumatic incident was severe enough, their terror outcome is more likely to have a higher criminal severity than extremists who experienced strains that are not high in magnitude.

It appears that general strain theory has more applicability when analyzing an extremist's role in their group. All general strain variables (except for absent parent in the EM dataset) were significantly related to role in group. However, it appears that the results partially follow the social bond bivariate correlations to role in group as more successful extremists tend to be leaders instead of followers. For example, extremists who achieved their aspirations were more likely to be leaders of a group than extremists who did not achieve their aspirations. Thus, those extremists' aspirations may have been leading an extremist group or organization. Nonetheless,

those that experienced a traumatic event and had an absent parent were also more likely to be leaders; thus, being successful and experiencing strain can lead an extremist to be a leader.

The bivariate results in both datasets were virtually identical for the different ideologies and violence as all were significant and followed the same directional pattern. The results illustrate Islamist and far-right extremists were more likely to be violent, and far-left and single-issue extremists were more likely to be nonviolent. Although the single-issue ideology was not significantly related to violence in LaFree et al.'s (2018) study, all other variables were significantly related to violence, and all shared the same directional pattern. Additionally, in the present study, the remaining control variables were also significantly related to violence as younger, male, and non-White extremists were more likely to be violent than older, female, and White extremists. These results are also similar to LaFree et al.'s (2018) as their correlations found significant relationships for males and younger extremists being violent.

Similar to the control variables' correlations to violence, both datasets illustrated identical relationships for the control variables and criminal severity. The Islamist ideology, far-right ideology, age, and gender were significantly correlated to criminal severity in both groups. Although radical Islamists were more likely to be violent, they are more likely to commit events with a lower criminal severity. Additionally, far-right, younger individuals, and males were more likely to be involved in events with higher criminal severities.

The control variables' correlations to role in group were also similar in both datasets, except far-left was significant in the EM dataset and not in the simple imputation dataset. The bivariate results illustrate that only extremists who espouse Islam are more likely to be followers in a group than leaders. Additionally, older extremists were more likely to leaders of a group; thus, extremist organizations appear to operate under a seniority "promotional" system. Lastly,

Whites were more likely to be leaders of a group than non-Whites. Because Whites and all other

ideologies (compared to radical Islamists) were more likely to be leaders of a group, it could be

theorized that domestically influenced groups have more opportunities to become leaders than

Muslim influenced groups.

Discussion of Regression Models

The logistic and linear regression models illustrated that several predictors significantly

affected the three dependent variables in each dataset. The EM model predicting violence

illustrated that marital status, aspirations, Islamist, far-right, single-issue, males, and ethnicity all

significantly predicted violence. However, in the simple imputation model predicting violence,

none of the main predictor variables were significant, but all control variables significantly

predicted the dependent variable. The EM results illustrate that marital status has a significant

effect on whether extremists will be violent or nonviolent, as extremists who were married were

more likely to be violent than extremists who were not married. Although not significant, the

simple imputation model predicting violence illustrated the same relationship pattern. LaFree et

al. (2018) illustrated the same relationship pattern in each of their regression models, but their

results were all nonsignificant. Additionally, other prior literature has also shown that marital

status can be predicting of violent extremism (Mills et al., 2019). Despite only the EM model

providing significant results for marital status, it appears that Hirschi's (2002) attachment

component of social bond theory can apply to extremism and help predict an extremism event's

outcome.

The EM model also found that aspirations was significantly predicting of violence as

extremists with no aspirations or those that failed to reach their aspirations were significantly

more likely to be violent than those that were able to achieve their aspirations. Although not

significant, the simple imputation model also illustrated the same indirect relationship pattern.

Thus, it appears that Agnew's general strain theory may apply to helping predict violent

extremism (Agnew, 1992).

Both missing data technique models illustrated similar results for the ideology control

variables as they found that Islamist, far-right, and single-issue extremists were all significantly

more likely to be violent than far-left extremists. LaFree et al. (2018) also found similar results

regarding the different ideologies and violence. Additionally, both regression models illustrated

that males and non-Whites were significantly more likely to be violent than females and Whites.

Although LaFree et al. (2018) did not include ethnicity in their regression models, the

relationship pattern for gender is identical, but the authors did not find a significant relationship.

Thus, future research should further explore the effect that gender (and ethnicity) has on

extremism to determine why the results differ. Additionally, the results appear to fall in line with

previous criminology research expecting males to be more violent than females (Snipes et al.,

2019). Lastly, the simple imputation model predicting violence found that younger extremists

were significantly more likely to be violent than older extremists. Although the EM model and

all of LaFree et al.'s (2018) regression models illustrated the same pattern, the results were

insignificant. Age and crime theories may apply to the simple imputation model's results as it

appears that extremists "age" out of violent extremism (Snipes et al., 2019).

Both models illustrated that most of the social learning variables were significantly

predicting (and in the expected direction) of role in group (anger towards United States was only

insignificant in the EM model). Thus, Akers' (1996) social learning theory appears to be

applicable in predicting an extremist's role in group. The more negative differential associations

an individual is exposed to (clique involvement) and the more definitions favorable to extremism

an individual possesses (anger towards the United States and radical beliefs), the more likely that individual will lead an extremist group rather than follow.

Although two of the social bond variables were significantly predicting of role in group, education and marital status were both predicting in the opposite direction. These results are at odds with Hirschi's (2002) social bond theory as the theory posits that those who have prosocial attachments and have higher stakes in conformity will be less likely to engage in delinquency. Both models illustrated that the more successful an extremist is in conventional goals, the more likely that extremist will be a leader. However, the results are not completely surprising after analyzing past terror leaders. For example, Osama bin Laden was able to complete a college degree and was married (Biography, 2020). Thus, it appears that terror group leaders may be more successful in conventional goals compared to group followers. Future research should continue to explore social bond's relationship to an extremist's role in their group to better understand why more conventionally successful individuals tend to be terror group leaders.

Only three total general strain variables were found to be significantly predicting of role in group in the two models: trauma (in both models) and absent parent (simple imputation model). However, the directional patterns for trauma were different in each model; thus, future research should further explore the effects that trauma has on an extremist's role in their group to determine which model is more accurate. Although only significant in the simple imputation model, both techniques illustrated that those who have an absent parent(s) in childhood were more likely to be leaders of a group; thus, Agnew's removal of a positively valued stimulus appears to be applicable in predicting whether an extremist will lead or be a follower in an extremist group (Agnew, 1992; Agnew, 2001; Agnew, 2006).

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The models also illustrated that the only significant difference for the ideologies in predicting role in group was for the Islamist extremists. The results showed that Islamist extremists were significantly less likely to be leaders of a group than single-issue extremists (all other ideologies were insignificantly more likely to be leaders than single-issue extremists); thus, future research should explore why it is more challenging to obtain leadership status for Islamist extremists. Lastly, both models found that older extremists were more likely to be group leaders than younger extremists. These results are similar to past research that has explored the organizational structure of terror groups. For example, Gunaratna and Oreg (2010) illustrated that al-Qaeda is comprised of a defined structure and hierarchy system. Thus, it can be assumed that the more senior an individual is in that organization structure, the more likely that individual is in some type of leadership capacity. Because this is the first known study to analyze criminology theory's effects on an extremist's role in group, future research should continue to explore the topic to determine what other theories may be applicable in the predictions.

Despite both models being statistically significant, the linear regressions predicting criminal severity illustrated varying results among the two models. The only shared significant predictors in the models were aspirations, Islamist, and gender. In congruence with general strain theory, the models predicted that extremists who had no aspirations or failed to achieve their aspirations were more likely to have a higher criminal severity than those extremists who achieved their aspirations (Agnew, 1992; Agnew, 2001; Agnew, 2006). Interestingly, both models also predicted Islamists to have a lesser criminal severity than left-wing extremists. These findings contradict prior research as left-wing terrorists in the 21st century are largely made up of environmental and animal rights extremists (LaFree et al., 2018). Environmental and animal rights extremists typically do not harm humans in their attacks as they target buildings or

structures that endanger the environment or animals (Eagan, 1996). However, because of how the criminal severity scale is measured, violent property offenses are coded as 9 (out of 10). Thus, the continued use of arson and bombings by environmental and animal rights extremists will cause their criminal severity scored to be skewed regardless if they are targeting humans. Thus, future research should attempt to mend the criminal severity score to determine whether humans were targeted in attacks to better understand each ideology's true criminal severity. Lastly, males were significantly more likely to have a higher criminal severity in each model than females, which is similar to past research regarding gender studies in criminology (Snipes et al., 2019).

Marital status, trauma, absent parent, and far-right were also significantly predicting in the EM model. The EM model illustrated that Hirschi's (2002) attachment bond might be applicable to predicting extremism as married extremists were more likely to commit events with lower criminal severities. Additionally, the presence of a negative stimulus (trauma) also appears to predict higher criminal severities in extremist attacks (Agnew, 1992; Agnew, 2001; Agnew, 2006). However, the EM model predicts that those who did not have an absent parent were more likely to have higher criminal severities, which is in opposition to Agnew's general strain theory. It is important to note that the simple imputation model predicting absent parent occurred in the opposite direction (although not significant). Additionally, far-right extremists were found to have higher criminal severities than far-left extremists, which is similar to past research (LaFree et al., 2018).

In addition to the shared significant predictors between the models, education and age also significantly predicted criminal severity in the simple imputation model. Extremists with lower levels of education were more likely to engage in extremism with higher criminal

severities than extremists who had higher educational attainment levels; thus, stakes in conformity appeared to cause extremists to commit events with lesser criminal severities and potentially lesser consequences (Hirschi, 2002). However, it must be noted that education's prediction in the EM model occurred in the opposite direction (although not significant). Additionally, the simple imputation's linear regression model is similar to crime and age theories as younger individuals were more likely to commit events with higher criminal severities (Snipes et al., 2019). However, the directional pattern was opposite in the EM model. It is also important to note that aspirations had the largest effect in the EM model, and age had the largest effect in the simple imputation model. Because of the differences between the two datasets when predicting criminal severity, future research should devote considerable efforts to determine which variables actually predict higher and lower criminal severities.

Support for the Hypotheses

The regression models predicting the three dependent variables all illustrated partial support for the three hypotheses presented in the study. Because no social learning variables were found to be significantly correlated to the violent dependent variable, they were left out of the violent regression models; thus, social learning was found to be unsupportive of hypothesis one. Additionally, the social learning variables were unsupportive of hypothesis one as the included variables in the regression models were either insignificantly predicting of criminal severity or were predicting in the unexpected direction. However, the social learning variables supported hypothesis one when predicting an extremist's role in group. The EM model illustrated support as clique involvement and possessing radical beliefs significantly predicted that extremists would be a group leader rather than a follower. Additionally, the simple

imputation model illustrated that all three social learning variables significantly predicted that an extremist would be a group leader instead of a follower.

The EM regression models predicting violence and criminal severity partially supported hypothesis two as married extremists were significantly more likely to be nonviolent and commit events with lower criminal severities than extremists who were not married. Additionally, the simple imputation regression model predicting criminal severity illustrated that extremists with lower educational attainment levels were more likely to commit events with higher criminal severities than extremists with higher educational attainment levels. However, it is worth mentioning again that the social bond variables seem to predict that the more conventionally successful an extremist is (married or high levels of educational attainment), the more likely that extremist will be a leader of a group; thus, there was no support for hypothesis two in predicting role in group with social bond theory.

Hypothesis three also received partial support from the different regression models. The EM model predicting violence and the EM and simple imputation models predicting criminal severity all illustrated that extremists with failed aspirations were significantly more likely to be violent or commit events with higher criminal severities than extremists who achieved their aspirations. Additionally, the EM model predicting criminal severity and the simple imputation model predicting role in group supported hypothesis three as they illustrated that extremists who experienced trauma were more likely to commit events with higher criminal severities or were more likely to be leaders of a group than extremists who had not experienced trauma. Lastly, the simple imputation regression model predicting role in group supported hypothesis three as it showed that extremists who had at least one absent parent while growing up were more likely to be group leaders than extremists with no absent parents while growing up. Ultimately, although

no hypotheses were fully supported, the different regression models all lent partial support to the hypotheses, illustrating this study's use in policy implications and future research.

Limitations

One of the greatest limitations of this study was the missing data in the Profiles of Individual Radicalization in the United States dataset. Because the dataset was compiled solely using public-source information, there are limitations to what information the researchers could find and include regarding each case. For example, if there are background characteristics for a case that are sealed in court documents or that were never released to the public through media sources, then the creators and researchers would not have been able to include that information in the dataset. However, by utilizing the two missing data techniques, this study was able to mitigate the missing data's limitations to the best of its ability.

Future research should devote its efforts to improving the missing data analyses, utilizing different missing data techniques, or supplementing this dataset with other data. Although IBM's guidance suggests that the EM method should be utilized when data is not missing at random (IBM, n.d.), some of the variables illustrate different significance values and directional patterns in each model; thus, unless there is prior research to compare it to, it can be challenging to determine which model is more accurate. Thus, some of the results will have to be taken conservatively until more research is conducted with the different variables. It is also important to note some limitations with the missing data techniques. After conducting the expected maximization methodology in SPSS, 54 cases were still left missing. Those cases were listwise deleted from the EM sample. Additionally, when computing the simple imputation method, the primary imputation value utilized for the cases was their medians. However, if the medians were unacceptable, their mean was utilized, and if their mean was unacceptable, their mode was

utilized. There were 38 cases that either had missing data for all subgroups or had unacceptable

means, medians, and modes; thus, those cases were listwise deleted from the simple imputation

sample.

Another limitation in the study was the violation of the heteroscedasticity assumption in

the linear regressions. By violating the assumption, there is a chance that the coefficient

estimates for the linear regressions are less precise (Frost, n.d.). Additionally, there are also risks

that some p-values are smaller than they should be; thus, some predictor or model results may

illustrate a significant relationship, when in actuality, they are not significant. The study

attempted to mitigate the assumption by transforming the criminal severity dependent variable.

Criminal severity was converted by taking its square root and utilizing a log transformation.

However, after computing two more linear regression models utilizing the newly transformed

dependent variables, the assumption was still violated. Additionally, because the criminal

severity dependent variable is not truly continuous, the linear correlation assumption was also

violated. However, it does make sense to treat it as continuous because as the codes increase, so

does the criminal severity. Ultimately, due to the violation of assumptions, the linear regression

models' results will have to be interpreted conservatively.

Policy Implications

This study's results can aid researchers and practitioners in developing and amending

countering violent extremism (CVE) policies. Because both regression models predicting

violence illustrated the same results regarding the different ideologies and these results were

similar to past research by LaFree et al. (2018), it can be assumed that implications can be drawn

to disrupt certain influences of violent extremism. Islamic, far-right, and single-issue extremists

were all more likely to be violent when compared to far-left extremists; thus, any CVE policies

looking to prevent violent extremism should focus on the three mentioned ideologies. However, if a CVE policy attempts to prevent violent property offenses that do not specifically target humans, then the policy should target far-left groups (Eagan, 1996).

CVE policies should also consider gender when attempting to prevent individuals from either carrying out extremist events or being radicalized in the first place. Both models predicting violence and criminal severity found that males were more likely to be violent and commit events with higher criminal severities than females. Thus, CVE policies should target males in investigations/disruptions of extremist groups or target males when attempting to prevent at-risk individuals from being radicalized into extremism. In addition to gender, the regression models also illustrated that younger individuals are significantly more likely to be violent than older individuals; thus, CVE policies based on disruption or investigations of terror groups should focus their efforts on younger extremists to prevent violence.

The results also illustrated that non-Whites were more likely to be violent than Whites in both models predicting violence. Although policies can utilize this information, it is imperative that the policies do not only target minority communities. For example, practitioners and researchers have criticized past CVE policies because the majority of their funds and efforts were spent on Muslim communities (Brennan Center of Justice, 2019). However, this study has shown that other domestic influences can be and are just as violent as jihadists; thus, CVE policies must spread resources to all threats that can harm the United States.

Multiple models also illustrated that marital status could affect whether extremists are violent or nonviolent and their criminal severity outcomes. Both EM models predicting violence and criminal severity found that those extremists who were married were less likely to be violent or committed events with lower criminal severities than extremists who were not married (both

simple imputation models followed the same directional patterns but were not significant). Thus, CVE policies that include efforts to improve and develop at-risk individuals' social skills may be beneficial. For example, Congress awarded the Department of Homeland Security with $10 million for their CVE grant program (Department of Homeland Security, n.d.). The grants can be awarded to varying local and state agencies, non-profit organizations, or different educational institutions. The results of this study illustrate the importance of placing funding in programs that help nurture the social skills development of at-risk juveniles (i.e., after-school programs). If those local programs could aid in improving the social skills of at-risk juveniles, then that may allow them to sustain a conventional relationship later in life.

The simple imputation model predicting criminal severity also illustrated that individuals who experience trauma are significantly more likely to commit extremist events with a higher criminal severity than those who have not experienced trauma (the EM model followed the same pattern). The Department of Homeland Security's CVE grant program could place a greater emphasis on funding counseling services for at-risk youths as those programs could help alleviate the strain of trauma found in this study (or educate the youths on how to cope with their strain) (Department of Homeland Security, n.d.).

Additionally, CVE policies that aid individuals in educational attainment and developing job skills to achieve their personal aspirations may also help curb violent extremism. The EM model predicting violence and the EM and simple imputation models predicting criminal severity found that individuals who did not achieve or did not have aspirations were more likely to be violent or commit events with higher criminal severities than extremists who achieved their aspirations. Thus, if at-risk individuals can be given the education and job skills they need to achieve conventional aspirations, they may be less likely to be violent. The Department of

Homeland Security's CVE policy includes programs for tutoring and career services; thus, more funds could be instilled in the programs after understanding how important achieving aspirations can be to ward off violent extremism (Department of Homeland Security, n.d.).

The regression model results also provide CVE policies with possible implications for preventing individuals from becoming leaders of an extremist group. Extremists that were in a clique, held radical beliefs, or held anger towards the United States were more likely to be leaders than followers. Thus, CVE policies could utilize law enforcement to disrupt extremist cliques to prevent individuals from becoming leaders of a group. Additionally, CVE policies could utilize programs that support prosocial peer involvement (i.e., Homeland's after-school group programs). By reinforcing positive peer associations, individuals will be less likely to join a clique and ultimately be less likely to become leaders of an extremist group.

CVE policies should also reinforce positive images regarding the United States. If individuals are exposed to more positive ideas regarding the United States, they may be less likely to develop radical beliefs or anger towards the United States, lowering their chances of becoming a leader of an extremist group. Some CVE policies also train frontline workers (i.e., social workers, teachers) to report at-risk individuals that display possible signs of radicalization or future extremism (Nguyen, 2019). Thus, if a frontline worker learns of an at-risk individual holding strong radical beliefs, that frontline worker can report the individual. Additionally, when attempting to disrupt an extremist group, it may be beneficial for law enforcement to target more senior members as older extremists are more likely to be leaders than younger extremists. Thus, by targeting older extremists, there is a higher likelihood that a group leader will be ousted instead of a lower-ranking member.

This study set out to extend criminology theory's reach and further expand it to violent extremism. Although no hypotheses were fully supported by the chosen theories and variables, the results lend further encouragement that criminological theory can help explain different radicalization pathways and extremist outcomes. Additionally, this study is set apart from past research as it includes over 700 new cases, a new theory, different predictor variables, and two more outcome variables. Thus, researchers and practitioners are able to utilize this study for new research directions and implications for policy to disrupt radicalization pathways or prevent severe extremist outcomes. Ultimately, this study hopes to continue the much-needed application of criminology theory to extremism and terrorism.

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