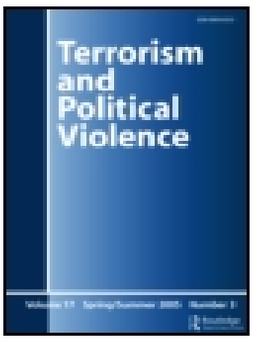

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Radicalization to Violence: A Pathway Approach to Studying Extremism

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ABSTRACT

Prior research on extremism has identified a host of psychological, emotional, material, and group-based mechanisms that are potentially important drivers of individual radicalization. However, taken on their own, none of these factors have been shown to lead to extremist behaviors. Instead, radicalization is best understood as a set of complex causal processes in which multiple factors work together to produce extremist outcomes. This paper builds on prior research by showing how radicalization mechanisms drawn from five prominent research traditions combine to form multiple sufficient pathways to extremist violence. We identify these pathways by applying fuzzy-set/Qualitative Comparative Analysis (fs/QCA) to a sample of life-course narratives that includes violent and nonviolent extremists in the United States. We find that both a sense of community victimization and a fundamental shift in individuals' cognitive frames are present in all pathways and act as necessary conditions for radicalization to violence. These conditions combine with a set of psychological, emotional, group, and material variables to produce eight pathways that are sufficient for explaining violent outcomes. Of these, the pathways that combine psychological rewards and group biases account for the radicalization processes of the majority of the cases in our sample.

KEYWORDS

Radicalization; Extremism; fs/QCA

Understanding why individuals engage in extremist behaviors is a key to successful counterterrorism and violence prevention efforts. It is not surprising, therefore, that research on radicalization—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—has proliferated in recent years. Along the way, scholars have identified a diverse set of structural,[1] group-based,[2] and individual-level[3] mechanisms as potential drivers of political extremism. While these mechanisms are undoubtedly important for understanding radicalization, on their own they do not provide sufficient causal explanations for most cases of extremism. In response, radicalization scholars have suggested that the phenomenon of extremism be treated as a set of complex causal processes in which multiple factors work together to produce extremist outcomes.[4] However, efforts to advance empirical research in this direction have been hampered by three notable ontological and methodological shortcomings.

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First, rather than conceiving of radicalization in terms of complex pathways, research on extremism continues to treat the phenomenon as one that can be understood through the development of simple linear process models or through the identification of small sets of cognitive, emotional, and behavioral traits that are believed to be common to extremists.[5] Research shows that these models struggle to account for the radicalization trajectories of many extremists while also contributing to the proliferation of misleading radicalization profiles.[6]

Second, radicalization research has not focused on the rigorous empirical testing of key theoretical propositions, making it difficult to judge how well the theories work as general explanations of radicalization processes.[7] Instead, most theories are supported by limited case evidence and many researchers do not reference case selection criteria or the logic of inference that is being employed in their studies. For some time, data limitations made it difficult to rigorously appraise arguments about radicalization. However, as the research area has developed, the data gap has closed considerably. Several datasets[8] on extremism now exist, while access to court documents, interview transcripts, and other important sources of information has improved. However, despite these advances, a large portion of radicalization research has remained theoretical and the field has produced relatively few robust conclusions on which to base policy recommendations or new research.[9]

Finally, sample bias stemming from the over-representation of violent individuals in radicalization research potentially undermines many of the most well-known explanations of extremism.[10] For example, the "quest for personal significance" theory of radicalization examines individuals that committed, or intended to commit, suicide attacks and explains those outcomes by highlighting the subjects' shared need for status in their respective communities.[11] However, without assessing whether the need for personal significance is less prevalent in the pool of nonviolent radicals, it is difficult to say what causal role, if any, it has in the progression from violent beliefs to violent behaviors.[12] Moreover, studies that only examine violent extremists as a sample tend to downplay the complex relationship between beliefs and behaviors by assuming that one naturally produces the other.[13] Yet, it is generally agreed that most individuals who harbor violence-justifying views will not act on them.[14] Studies that only look at violent extremists are unable to fully explain why beliefs line up with behaviors in some cases but not others.

This article seeks to address these shortcomings and advance radicalization research by aligning ontology and methodology in the study of extremism. We conceive of radicalization as a set of intricate pathways—unique configurations of causal mechanisms that lead to multiple outcomes. Using fuzzy-set/Qualitative Comparative Analysis (fs/QCA), which is a method that explores the necessary and sufficient causes of outcomes of interest, and a sample that consists of violent and nonviolent extremists, we show how mechanisms drawn from five prominent radicalization research traditions combine to form different pathways to violent extremism.[15]

Our results show that both a sense of community victimization and a shift in individuals' cognitive frames are present in most pathways and act as near necessary conditions for violent extremism. These conditions combine with a host of psychological, emotional, material, and group-based mechanisms to produce eight sufficient pathways to violence. Of these, the pathways that combine mechanisms related to individual-level psychological vulnerability, the intense need for recognition by particular communities or groups, and group biases account for the majority of cases of violent extremism in our sample.

Our arguments are laid out in five sections. First, we review five prominent radicalization research programs—individual-level psychological models, group-level social identity models, recruitment models, social movement models, and cost/benefit models—in order to identify the set of radicalization mechanisms that may combine to produce unique radicalization pathways. Second, we outline ten conceptual constructs that represent the key mechanisms illuminated by the literature and form the basis of our fs/QCA analysis. Third, we detail the data and fs/QCA techniques that we use to identify unique pathways to violent extremism. Fourth, we discuss the pathway results, including our tests for necessary and sufficient causation. Finally, we conclude with the implications of our analyses for both theory and practice.

Pathways to violent extremism

In order to identify the complex pathways that lead to extremist violence, we first group extant theories of radicalization into their respective research programs and identify the causal mechanisms—the links in causal processes that connect independent to dependent variables[16]—that are emphasized by each perspective. Below, we briefly review five research programs—individual-level psychological models of radicalization, group-level social identity models, group-based recruitment theory, social movement theory, and cost/benefit models—before moving on to descriptions of the causal mechanisms which were derived from each perspective.

Individual-level psychological models

Psychological models of radicalization emphasize the complex cognitive and emotional processes that motivate individuals' involvement in extremism.[17] In particular, psychologists who study extremism highlight the importance of cognitive and emotional vulnerabilities, which are often the products of identity-seeking behavior in adolescence or early adulthood.[18] In order to fulfill a search for personal identity, or to overcome a sense of vulnerability or diminished personal self-worth, individuals derive meaning and value through community membership or identification with a cause greater than themselves.[19]

Prominent among psychological models of extremism is the quest for personal significance theory, which argues that extremists are motivated by the activation of the significance quest, defined as the "fundamental desire to matter, to be someone, to have respect."[20] While arguably all humans are similarly motivated, Kruglanski et al. posit the presence of an ideological component that identifies involvement in terrorism as an appropriate means to gain (or regain) a lost sense of significance, followed by a process of socialization and implementation.[21] While personal circumstances, such as blocked ambitions or job loss, can lead to the loss of significance, quite often traumatic experiences in childhood, such as experiencing abuse or parental abandonment, play a role in fostering a sense of insignificance.[22]

Social identity models

Social identity models of radicalization emphasize how people's membership in identity groups (e.g., race, gender, religion) influences how they perceive the social world, see, think, and feel about themselves, and, perhaps most important, behave.[23] Particularly important to social identity theory is the idea that identity groups provide members with norms and values that distinguish the group from other social categories and provide cues

about how to think and act in particular social communities or situations.[24] Leaders within identity groups are an important part of the construction of norms and values because they often define which characteristics are needed for group membership, as well as which behaviors constitute acceptable practice.[25]

While at all times individuals maintain membership in multiple identity groups, social identity theory suggests that a particular identity association can rise in salience for an individual if the group faces a real or perceived threat.[26] During these times, individuals look to defend the group by following the directions of influential group members and by strictly adhering to group norms. However, social identity theories of radicalization suggest that increased group cohesion can produce dangerous group biases, such as group polarization;[27] groupthink;[28] in-group/out-group bias;[29] diffusion of responsibility;[30] and rule compliance;[31] that lead members to adopt increasingly extreme beliefs or engage in extremist behaviors.

Group-based recruitment theory

Recruitment approaches focus on extremist organizations or radical social networks and their efforts to draw recruits to support their political ambitions. For example, Gerwehr and Daly posit that radicalization is primarily driven by extremist groups' recruitment processes and communication strategies, which can be bounded within a two-by-two grid.[32] The first dimension is public/private, where the interactions between extremists and their recruits can occur via one-on-one interactions or public forums. The second dimension—proximate/mediated—identifies the myriad ways in which extremists and recruits can be connected, from physical interactions to anonymous communications online.

It is important to note that for recruitment to be effective, messages need to be tailored to an audience's cultural, social, and personal circumstances. For this reason, the recruitment perspective draws heavily from approaches that emphasize psychological and physical vulnerabilities (e.g., mental trauma associated with personal and community crises). In particular, recruitment models emphasize how groups or networks "pull" individuals toward extremism by offering positive rewards, such as strong social bonds, status within a community, and an improved sense of self-worth.[33]

Social movement theory

Recent attempts to apply social movement theory to the study of radicalization have emphasized how the construction of extremist narratives and perceptions of shared grievances can mobilize certain individuals to engage in extremist behaviors.[34] Key to social movement explanations of radicalization are the roles that extremist groups and their leaders play in the construction of the collective action frames that give meaning to events, help form collective expectations, and guide actions.[35]

For instance, Quintan Wiktorowicz's work on Islamist radicalization in the United Kingdom suggests that individuals who are troubled by religious uncertainty or who are the victims of discrimination are at a greater risk of adopting the collective action frames disseminated by extremist groups. These frames, which are often rooted in religion or

shared history, influence how individuals interpret grievances, including the assignment of blame and the prescription of corrective actions.[36]

Cost/benefit models

These models are based on the assumptions that extremists are not different from non-extremists in terms of decision-making processes and that individual radicalization is the product of rational (though perhaps bounded) choices where the costs and benefits of alternative strategies are weighed prior to action. Extremist behaviors are determined to maximize potential benefits while minimizing costs.[37] Martha Crenshaw, for example, argues that material or non-material gains may play an important role in the radicalization process by convincing individuals that the benefits from extremist activities outweigh the heavy costs (e.g., death, imprisonment, isolation from society).[38] The social environment also plays a role in the way incentives might function through the adoption of group-based rules and norms.[39]

Conceptual constructs

Through the careful review of these research programs, we identified 71 causal mechanisms-[40] that have been proposed as conditions that drive radicalization.[41] Rather than attempting to directly test each mechanism, we opted to organize them according to their conceptual similarities and to treat the top-level conceptual constructs as critical junctures along radicalization pathways. There are two primary reasons for this approach. First, there is considerable thematic overlap in the mechanisms that are detailed by radicalization theories, making it difficult to judge the theories' relative strengths and weaknesses. Many of the mechanisms proposed by the different perspectives seek to capture similar psychological, emotional, and behavioral aspects of radicalization, meaning that evidence in support of one mechanism is likely evidence in support of others. Second, this approach allows us to capture the inherent complexity of radicalization processes while maintaining logical consistency and an appropriate level of parsimony.

The causal mechanisms that constitute each of the ten constructs that we identified are listed in Table 1. The conceptual constructs are distinct in terms of their constitutive attributes, but they are also deeply inter-connected and contain some overlapping mechanisms.[42] For example, the personal crisis and psychological vulnerability constructs are closely related, as crises often produce the vulnerabilities that make individuals more receptive to extremist narratives. However, we treat them as different constructs, or unique points along radicalization pathways, because they reflect different parts of the radicalization process. Personal crisis captures the lived experiences of individuals, whereas psychological vulnerability reflects the cognitive state of individuals early on in the radicalization process. Below, we briefly review each of the ten conceptual categories.

Personal crisis

Personal crises refer to events experienced by individuals that are characterized by intense trouble, difficulty, or danger leading to personal instability. Several prominent radicalization perspectives surmise that the instability stemming from personal crises makes some individuals vulnerable to radicalization.[43] Specifically, recruitment models argue that while there is

Table 1. Conceptual constructs.

Psychological rewards	Material Rewards	Personal Crisis	Community Crisis	Recruitment
A.1: Significance restoration	B.1: Paradise	C.1: Economic crisis	D.1: Collective crisis situation	E.1: Public-proximate
A.2:Individual significance gain	B.2: Status	C.2: Socio-cultural crisis	D.2: External threat	E.2: Public-mediated
A.3: Social significance gain	B.3: Material Reward	C.3: Personal crisis	D.3: Political crisis	E.3: Private-proximate
A.4: Group prestige		C.4: Crisis-driven cognitive opening	D.4: Cognitive opening	E.4: Private-mediated
A.5: Uncertainty relief		C.5: Emotional distress	D.5: Imminent existential threat	
A.6: Heroism				
A.7: Individual recognition				
A.8: Emotional rewards				
A.9: Moral rewards				
Cognitive Frame Alignment	**Psychological Vulnerability**	**Physical Vulnerability**	**Group Norms**	**Group Biases**
F.1: Frame alignment	G.1: Humiliation	H.1: Physical distress	I.1: Leadership prototypicality	J.1: Group influence
F.2: Indoctrination	G.2: Helplessness	H.2: Material distress	I.2: Leadership importance	J.2: Groupthink
F.3: Authority of frame articulator	G.3: Socially based significance loss	H.3: Family dysfunctionality	I.3: Leadership norms	J.3: External threat
F.4: Empirical evidence	G.4: Group boundaries	H.4: Community dysfunctionality	I.4: Black sheeping	J.4: Typicality threat
F.5: Universal truth	G.5: Uncertainty	H.5: Economic crisis	I.5: Rule compliance	J.5: In-group/out-group bias
F.6: Incremental learning	G.6: Emotional distress		I.6: Leader legitimacy	J.6: Dehumanizing rhetoric
F.7: Individual learning	G.7: Cultural disillusionment		I.7: Uncertainty relief	J.7: Diffusion of responsibility
F.8: Forming interpretive frames	G.8: Anomie			J.8: Social isolation
F.9: Framework exclusivising	G.9: Broken family			J.9: Interpretative frameworks
F.10: Rules directed redesigning	G.10: Loose family			
	G.11: Lack of affection from parents			
	G.12: Loose community relations			
	G.13: Dependent personality			
	G.14: Socio-cultural crisis			

no "one-size-fits-all" recruitment strategy, those who experienced personal crises may be particularly vulnerable to recruitment pitches that are framed as social advancement.[44] Additionally, social movement models suggest that the instability that follows personal crises allows for a cognitive opening wherein the person's belief system can change to align with more extremist narratives.[45]

Community crisis

Similar to personal crisis, community crisis refers to collective feelings of intense trouble, difficulty, or danger that often produce instability within a community.[46] However, unlike personal crises, community crises are broadly shared by community members, which can evoke psychological and communicative processes related to group dynamics (see group biases and norms below). All theories reviewed above indicate that community crises are an important precursor to radicalization, including quest for significance,[47] social identity models,[48] recruitment models,[49] social movement models,[50] and cost/benefit models.[51]

Psychological vulnerability

Psychological vulnerability refers to cognitive and emotional characteristics that threaten a person's sense of self and create uncertainty over issues of identity or community membership. In turn, psychological vulnerabilities can make individuals more receptive to extremist narratives.[52] While psychological perspectives have paid the most attention to the causal role of vulnerabilities in radicalization processes,[53] the mechanism is also present in social identity models,[54] recruitment models,[55] and social movement models.[56]

Psychological rewards

Psychological rewards refer to cognitive and emotional benefits that are received, or are believed will be received, from adopting radical beliefs and/or engaging in radical behaviors.[57] These cognitive and emotional benefits are thought to positively influence a person's sense of self.[58] Three of the perspectives reviewed above propose that psychological rewards are important drivers in the radicalization process, including quest for significance,[59] social identity models,[60] and (bounded) cost/benefit models.[61]

Physical vulnerability

Recruitment models, such as those that arise when an individual is unemployed or lacks food and shelter, may improve the recruitment efforts of extremist groups, especially if those groups advance a narrative that offers material rewards as a benefit of group membership.[62] Both group-based recruitment and cost/benefit models suggest that physical vulnerabilities can be an important component of radicalization processes.

Material rewards

Material rewards refer to incentive or benefits that are physical or real, or perceived to be physical or real by the individual. Recruitment,[63] cost/benefit,[64] and social movement[65]

perspectives assert that some individuals are driven to engage in radical behaviors because they believe they will receive material rewards, achieve a form of status that will allow them to receive future material rewards, or go to paradise (i.e., an other-worldly place where individuals will go if they martyr themselves).

Recruitment

Recruitment models suggest that many individuals need access to extremist groups to solidify their radical beliefs and have the resources needed to engage in radical behaviors.[66] This construct includes recruitment into extremist groups or networks that occurs through personal and proximate relationships, as well as more anonymous forms of communication, such as participation in online communities.

Group biases

Group biases refer to a pattern of cognitions (e.g., beliefs, values) wherein a person favors social groups (e.g., racial/ethnic groups, extremist groups) that they are a part of, or wish to be a part of (termed in-groups) over groups that they are not a part of (termed out-groups). As in-groups become more insular, common biasing mechanisms, such as group-think and diffusion of responsibility, set in, leading to an extreme shift in individual beliefs that justify the use of violence against out-groups. Given that many radical behaviors are committed by, or on behalf of, extremist groups, group biases are believed to be a driving force in promoting radical behaviors.[67] Group biases play a central role in the explanations of radicalization that are offered by social identity and psychological perspectives.

Communicating group norms

Social identity perspectives claim that exposure to communication endorsing the need to hold radical beliefs and engage in radical behaviors is part of the radicalization process. Specifically, the social identity model of leadership argues that many of these messages about group beliefs, values, and subsequent actions are likely to come from group leaders, and group leaders that are prototypical members of the group are more likely to be persuasive.[68] Similarly, recruitment models suggest that the perceived legitimacy of the message articulator likely influences a person's willingness to hold extremist beliefs and engage in radical behaviors.

Cognitive frame alignment

Drawing from social movement perspectives, cognitive frame alignment refers to the learning processes an individual undergoes in forming radical beliefs.[69] This notion is rooted in both theory and evidence in social psychology that cognitions (e.g., attitudes and beliefs) are predictive of human behavior.[70] The realignment of cognitive frames that occurs as a part of the radicalization process fundamentally alters the way people view the world, making them less receptive to disconfirming evidence and more convinced that violent actions are useful, and perhaps necessary, for achieving political goals. Cognitive frame alignments are often closely related to the communication of group norms by influential group members.

However, the constructs are distinct since one captures the dissemination of messages by a group and the other reflects an individual's adoption of those collective action frames.

Methodology

In order to identify unique pathways to violent extremism, we used process-tracing techniques to write life-course narratives for a sample of United States-based extremists.[71] Because our goal is to establish how the mechanisms from five prominent research programs combine to produce violent outcomes, we attempted to limit the causal influence of cross-contextual and cross-cultural factors, which are outside of the theories that we reviewed, by focusing our analysis on U.S.-based extremists. Moreover, we chose to analyze individuals from the United States because of greater access to detailed information about their radicalization processes in open-source materials. However, as we note below, future research efforts may gain useful insights into radicalization processes by conducting a similar cross-national study. The case studies were then coded for the presence of the 71 mechanisms that were extracted from the five research programs. These codes were used to determine case membership in the ten conceptual constructs that are detailed above. Finally, we used fs/QCA to test for causal necessity and to show how the proposed causal mechanisms combine to form causal conjunctions that are sufficient for membership in the set of violent extremists.

Case selection

Relying on publicly available sources, we compiled life-course narratives for 56 (31 violent and 25 nonviolent) individuals who radicalized in the United States between 1960 and 2013. We chose these sample characteristics for two primary reasons. First, since this study is one of the first attempts to identify and provide empirical support for general radicalization pathways—those that are common across time and belief systems—we chose to include cases covering a wide time frame and a broad ideological spectrum. Second, given our focus on U.S.-based extremists, we chose to extend the time period back to 1960 in order to capture the radicalization influences on the extremist far-left, which was far more active in U.S. politics in the 1960s and 1970s than it is today. In addition to these concerns, we selected individuals for the study based on the availability of information related to their backgrounds and activities in public sources. Finally, we took efforts to ensure that our sample of cases is demographically representative of the larger population of extremists in the United States. Research has shown that extremists in the United States are overwhelmingly male (approximately 90%), are typically around 28–32 years of age at the time of their involvement in extremist activities, and are well educated.[72] Our sample is 91% male, has an average age of 31 years at the point of involvement in extremist acts, and is predominated (52%) by individuals who attended or completed college.

Case coding

Using MAXQDA data analysis software, trained coders evaluated the life-course histories and applied the relevant codes to instances in the text where the mechanisms were apparent. All life-course histories were double-coded to ensure reliability and then cleaned

Table 2. Descriptive statistics of conceptual constructs.

Condition	Mean	Std. Dev.	Cases
Personal Crisis	0.69642	0.43227	56
Community Crisis	0.83482	0.32485	56
Psychological Vulnerability	0.70535	0.37233	56
Psychological Rewards	0.66964	0.33108	56
Physical Vulnerability	0.49553	0.41640	56
Material Rewards	0.13839	0.30222	56
Recruitment	0.44196	0.47946	56
Group Norms	0.49553	0.46649	56
Group Biases	0.78125	0.34738	56
Cognitive Frame Alignment	0.95982	0.15509	56
Violent Extremism	0.67857	0.35265	56

and reviewed by senior project researchers. Table 2 shows the descriptive statistics of the conceptual construct coding.

Fuzzy-set/qualitative comparative analysis (fs/QCA)

The coded case studies were analyzed using fs/QCA techniques. Fs/QCA was chosen for its ability to identify combinations of causal mechanisms that constitute pathways to particular outcomes.[73] Given that our goal is to identify the various radicalization pathways that lead to violent extremism, we argue that fs/QCA is a more appropriate method than traditional statistical methods, such as linear regression, which are less useful for identifying the characteristics of causally complex phenomena. Instead of attempting to isolate the net-effects of independent variables upon dependent variables, an approach common in traditional quantitative approaches, fs/QCA establishes causal relationships by comparing sets—defined collections of objects or entities—and identifying their shared characteristics.[74] For example, proponents of the democratic peace theory might use fs/QCA to show that all countries that are members of the set of non-warring dyads are also members of the set of countries with democratic institutions, thus demonstrating that democracy is a potentially important cause of inter-state peace.[75] While fs/QCA can be used to identify simple relationships between sets, like the one in the previous example, it is more commonly used to show how case membership in an outcome set is driven by the combination of multiple causal factors.[76]

In fs/QCA, the causal conditions that produce case membership in an outcome set can be one of three archetypes. First, a condition can be necessary for the outcome, meaning that it must be present in a case for it to be a member of the outcome set.[77] Second, a causal condition can be sufficient for the outcome, meaning that when the condition is present in a case, the case will be a member of the outcome set (although the outcome can still be caused by other, conceptually unrelated, conditions).[78] Finally, causal conditions can combine to produce unique configurations of causal mechanisms that are jointly sufficient for producing an outcome of interest.[79] On their own, the individual causal conditions that make up causal conjunctions are neither necessary nor sufficient for an outcome to occur. Rather, it is when these conditions combine in a case that the case will be a member of the outcome set. Together, necessary conditions, sufficient conditions, and causal conjunctions describe the different pathways that a case can travel to become a member of an outcome set.

In fs/QCA, researchers identify the pathways to a particular outcome through the logical minimization of a truth table. The rows of a truth table represent all of the possible present/absent combinations of the causal conditions that are included in a study.[80] Rows are then eliminated from the truth table when they fail to account for at least one case that displays the outcome, leaving behind the combinations of causal conditions that appear to be sufficient explanations of the phenomenon under investigation.[81] Empirical support for these pathways is generally derived from two descriptive measures: consistency and coverage. For necessary conditions, consistency measures the extent to which cases displaying the outcome also display the causal condition, while for sufficient relationships, consistency measures the extent to which cases displaying the causal condition also display the outcome.[82] These scores range from 0 (i.e., not consistent with the set-theoretical claim) to 1 (i.e., completely consistent with the set-theoretical claim). In tests for necessity, conditions with a consistency score of 0.90 or higher can be considered necessary for the outcome, while in tests of sufficiency, consistency scores of 0.80 and higher signal that the cause is "mostly" sufficient for the outcome to occur.[83]

Coverage measures the proportion of cases displaying an outcome of interest that are explained by a particular solution pathway. Since solution pathways often contain one or more of the same causal conditions, coverage can be thought of as the total proportion of cases covered by a solution pathway (raw coverage) or the unique portion of cases that are covered by that pathway alone (unique coverage).[84] Coverage can also be calculated for all of the solution pathways combined (solution coverage), which in effect measures the proportion of cases that are explained by the fs/QCA analysis.[85]

The 56 cases included in our sample were calibrated for membership in the ten causal conditions and the outcome set using a theoretical approach. We used the causal logic proposed by the theoretical perspectives described above to determine which combinations of causal conditions constitute full membership in a conceptual set (a score of 1), which combinations are indicative of a case being more in than out of the set (a score of 0.75), which mechanisms are associated with full ambiguity (a score of 0.5), the combinations that suggest that a case is more out than in the set (a score of 0.25), and the requirements for exclusion from the set (a score of 0). For example, psychological theories of radicalization stress the critical role that uncertainty over identity or one's role in particular communities plays in producing the psychological vulnerabilities that make an individual more receptive to extremist narratives and recruitment. When calibrating membership in the "psychological vulnerability" set, we treated identity uncertainty as a necessary condition for membership in the set. Thus, a case could only receive a membership score greater than 0.5 in the psychological vulnerability set if there was clear evidence that it was also a member of the set of cases displaying identity uncertainty. We chose this type of theory-driven calibration scheme because of our use of non-numerical data and for the particular analytical benefits it provides. In particular, this scheme forces researchers to use theory and substantive case knowledge to determine what mechanisms, or combinations of mechanisms, constitute necessary or sufficient conditions for set membership, thus allowing for a more theory driven analysis than a calibration scheme based on regularities found in the data.

Table 3 shows how the 71 mechanisms that were drawn from the various research programs were weighted to establish membership in the conceptual sets.[86] For example, a case was treated as fully out of the set of "personal crisis" if it failed to show evidence of the presence of any of the mechanisms that were identified as belonging to that conceptual

Table 3. fs/QCA calibration scheme.

Condition	0	.25	.5	.75	1
Psychological Rewards	No codes	Any single "A" code	Any two "A" codes	Any three "A" codes	Any four "A" codes
Material Rewards	No codes	B.1 + B.3 only	B.1*B.3 only	–	*B.2* only
Personal Crisis	No codes	C.1 + C.2 only	C.1*C.2 only	C.4 only	*C.3* + *C.5*+(C.4*(C.1 + C.2))
Community Crisis	No codes	D.3 only	D.4 only	D.1+(D.3*D.4)	*D.2* + *D.5*+(D.1*D.3)+(D.1*D.4)
Recruitment	No codes	E.2 only	-	E.1 + E.4 only	*E.3* only
Cognitive Frame Alignment	No codes	(~F.1*~F.2*~F.9)*(any one remaining "F" code)	(~F.1*~F.2*~F.9)*(any two remaining "F" codes)	F.1 + F.2 + F.9+(any three remaining "F" codes)	(F.1 + F.2 + F.9)*(any single remaining "F" code) +(~F.1*+~F.2+~F.9)*(any four remaining "F" codes)
Psychological Vulnerability	No codes	~**G.5***(any remaining "G" codes)	**G.5** only	**G.5***(any single remaining "G" code)	**G.5***(any two remaining "G" codes)
Physical Vulnerability	No codes	H.1 + H.4 only	H.1*H.4 only	H.3*(H.1 + H.4)	*H.2* + *H.5*+(H.3*H.1*H.4)
Group Norms	No codes	I.4 + I.5 + I.7	(I.4*I.5)+(I.4*I.7)+(I.5*I.7)	I.1 + I.2 + I.6 + I.3	(I.1 + I.2 + I.6 + I.3)*(I.4 + I.5 + I.7)+ (I.1*I.2) +(I.6*I.3)+(I.1*I.3)
Group Biases	No codes	~**J.1***(any remaining "J" codes)	**J.1** only	**J.1***(any single remaining "J" code	**J.1***(any two remaining "J" codes)
Violent Extremism	Renunciation of the use of violence for political goals	Property damage but no violence against person(s)	Support for, but no direct participation in, violence	Intent to perpetrate violent act(s) against person(s)	Actual or attempted violence against person(s)

Legend: + = logical OR; * = logical AND; **Bold =** necessary condition; *Italics* = sufficient condition; ~ = Absence of condition;—= Score not applicable

category. A case was deemed to be more out than in the set (i.e., a 0.25) if it showed evidence of the presence of either, but not both, an economic crisis or socio-cultural crisis. When both were present, the case was deemed to be neither in nor out of the set (i.e., a 0.5). A case was determined to be mostly in the set (i.e., 0.75) when there was evidence that the individual experienced a crisis-driven cognitive opening. Finally, a case was deemed to be a full member of the set (i.e., a score of 1) if it showed evidence that the individual experienced a personal, non-material crisis or severe emotional distress, or if a crisis-driven cognitive opening combined with either an economic crisis or a socio-cultural crisis.

The outcome set—violent extremist—was calibrated according to the following scheme: individuals who engaged in acts meant to cause injury or death were considered to be fully in the set (i.e., a score of 1); individuals who intended to participate in acts meant to cause injury or death, but nevertheless failed to do so because of law enforcement intervention, were coded as mostly in the set (i.e., a score of 0.75); individuals who materially supported the violent actions of others, but showed no intention to personally engage in violent acts, were coded as fully ambiguous (i.e., a score of 0.50); individuals who engaged in illegal acts that were not intended to cause death or injury (e.g., vandalism, property destruction, etc.) were scored as mostly out of the set (i.e., a score of 0.25); and individuals who denounced acts meant to kill or injure were scored as fully out of the set (i.e., a score of 0).[87]

Results

Tests for necessity

We measured the set relations of the ten causal conditions described above in relation to the outcome (violent extremism) to determine if any cross the 0.90 consistency threshold for necessity. The results, which are reported in Table 4, show that two conditions—cognitive frame alignment and community crisis—pass this threshold and can be viewed as "near" necessary causes of violent extremism. It is important to note, however, that cognitive frame

Table 4. Tests for necessity.

Condition	Consistency	Coverage
Personal Crisis	0.736842	0.717949
~Personal Crisis	0.289474	0.647059
Community Crisis	0.901316	0.732620
~Community Crisis	0.138158	0.567568
Psychological Vulnerability	0.782895	0.753165
~Psychological Vulnerability	0.309211	0.712121
Psychological Rewards	0.782895	0.793333
~Psychological Rewards	0.328947	0.675676
Physical Vulnerability	0.348684	0.854839
~Physical Vulnerability	0.664474	0.623457
Material Rewards	0.182411	0.903226
~Material Rewards	0.835526	0.658031
Recruitment	0.460526	0.707071
~Recruitment	0.565789	0.688000
Group Norms	0.513158	0.702703
~Group Norms	0.506679	0.681416
Group Biases	0.802632	0.697143
~Group Biases	0.236842	0.734694
Cognitive Frame Alignment	0.960526	0.679070
~Cognitive Frame Alignment	0.046053	0.777778

Note: ~ = Negation of condition. Threshold for a necessary condition is 0.90.

alignment shows a high level of "trivialness"; that is, the condition is present in a high percentage of the cases where the outcome is absent.[88] This finding is not surprising, as one of the main contentions of this and other studies is that there is often incongruity between extremist beliefs, which are commonly violence-justifying, and extremist behaviors, which are less commonly violent.[89] Cognitive frame alignment, therefore, helps explains the psychological changes that make violent extremism possible, but it is less useful as a contributing explanation for why some extremists engage in violence, while others do not.

Community crisis, on the other hand, displays far less trivialness than cognitive frame alignment. This suggests that the presence of community crises not only make violent extremism possible, but that they partially drive case membership in the violent extremist set. However, the outcome was present in two cases where community crisis was absent, suggesting that violent extremism can occur in the absence of perceptions of collective victimization. Community crisis is thus best viewed as a "near" necessary condition for violent extremism.

Tests for sufficiency

To identify the causal combinations that constitute sufficient pathways to the outcome set, we generated a truth table containing 512 rows representing all of the logically possible combinations of the causal constructs described above.[90] We removed all rows from the truth table that failed to be sufficient explanations for at least one of the 35 cases of violent extremism included in the study, leaving 19 rows for final logical minimization. We used the 0.80 raw consistency cutoff for determining which rows constitute sufficient conditions for violent extremism. This decision was made after the careful examination of the truth table revealed no natural breaks in raw consistency scores.[91]

The results of the logical minimization of the truth table are reported in Table 5. The analysis has an overall coverage score of 0.55 and a consistency score of 0.91, indicating that a substantial proportion of cases exhibiting violent extremism are covered by the sufficient pathways, and that the claims of sufficiency are strongly supported. The procedure yielded eight pathways that are sufficient explanations for violent extremism. However, five of the paths share the same root conditions—community crisis, psychological vulnerability, and psychological rewards—and can be viewed as variations of the same pathway.

Paths 1a-1e

Of the 20 cases of violent extremism that are fully explained by our analysis, 17 (85%) are accounted for by pathways 1a-1e, which share the root conditions of community crisis, psychological vulnerability, and psychological rewards. These pathways reflect the radicalization processes that have been proposed by individual psychology and social identity scholars. It is important to note that the base conditions must combine with either personal crisis or group biases to produce membership in the violent extremist set. Three conditions—physical vulnerability, group norms, and recruitment—vary in terms of presence, absence, or relevance across the five paths and can be considered non-essential for producing membership in the set of violent extremists.[92]

What is important about these paths is understanding how the base conditions interact with either personal crises or group biases to drive membership in the violent extremist set.

Table 5. Results of truth table.

Path	P. Crisis	C. Crisis	P. Vuln.	P. Rew.	Phy. Vul.	M. Rew.	Recruit.	G. Norms	G. Biases	C. Frame	Raw Coverage	Unique Coverage	Consist.	Cases
Path 1a	●	●	●	●	●			○	●	●	.118421	.039474	1.00000	5
Path 1b	●	●	●	●	●	○			●	●	.184211	.032895	.965517	8
Path 1c	●	●	●	●	○		○	○		●	.105263	.052632	.842105	3
Path 1d		●	●	●		○	○	○	●	●	.085526	.026316	.812500	4
Path 1e	●	●	●	●		○	●	●	●	●	.164474	.085526	.892857	7
Path 2	○	●	○	○	○		○	○	○	●	.039474	.032895	1.00000	1
Path 3	●	○	●	○	●	●	○	○	○	●	.019737	.019737	1.00000	1
Path 4	○	●	○	○	○	○	●	●	●	●	.065789	.065789	.833333	2

Solution Coverage: .552632
Solution Consistency: .913043
● = Presence of condition
○ = Absence of condition
Note: Blank cells equal "Don't Care." Cognitive Frame Alignment is a necessary condition and, thus, was not included in the fuzzy truth table. It is included here as a reminder that its presence is necessary in each path.

Along these paths, personal vulnerabilities exert causal influence by fueling identity-seeking behaviors in individuals, who then find direction in extremist narratives and meaning in camaraderie with like-minded individuals. It is clear that individual-level psychological variables do not act in isolation, however. Mechanisms from social identity models of radicalization are important to understanding how psychological and emotional vulnerabilities are translated into violent action. Social identity perspectives show how biasing dynamics convince individuals that their personal deficits are largely the result of their membership in a community that has been collectively victimized or threatened. As individuals and groups become more insular, mechanisms of cognitive bias, such as groupthink, in-group/out-group bias, and diffusion of responsibility, set in, convincing individuals that the alleviation of community grievances and the amelioration of threats to community survival will only occur through violent action. It is also important to note that in three of the paths (1b, 1d, and 1e) material rewards are absent. This suggests that, in contrast to some cost/benefit models, individuals that travel on these paths are not motivated by wealth or other forms of personal material gain.

Path 2

This path represents the conjunction of the two conditions—community crisis and cognitive frame alignment—that were found to be necessary conditions for the outcome. All other conditions are absent, or not relevant, meaning that violent extremism can occur when only a sense of community crisis and a shift in perceptual frames are present. This closely models social movement perspectives on radicalization which suggest that cognitive awakenings surrounding community grievances lead to a dramatic shift in individual perceptions, where violence is viewed to be necessary to achieve political goals.[93] It should be noted, however, that this pathway is exceptionally rare, as indicated by its low coverage score.

Path 3

In this path, psychological vulnerability, physical vulnerability, material reward, personal crisis, and cognitive frame alignment combine to produce membership in the outcome.

This path represents the only solution where it is possible for a case to be a member of the violent extremist set but not a member of the community crisis set. This pathway resembles the identity-seeking and material gain models proposed by some psychologists and cost/benefit scholars.[94] Here, individuals do not attach their emotional struggles to those of a larger community, but instead seek to satisfy an identity quest by gaining status and praise through acts of extremism. For these individuals, extremist narratives do not resonate because they spotlight community grievances, but rather because they glorify the individuals that carry out acts of extremist violence. While quest for significance theory and cost/benefit perspectives suggest that this type of personal prestige gain is a common motivator for violent extremists, this path is comparatively rare, with a coverage score of less than 2%.

Path 4

In this path, community crisis combines with the full range of group conditions (recruitment, biases, and norms) to produce membership in the outcome set. It is important to notice that this path only leads to violence when personal psychological and material motivators are absent. In other words, this solution represents a group-led pathway similar to the radicalization models proposed by recruitment scholars.[95] This pathway has relatively high unique coverage (6.5%), suggesting that it may be an important explanation of violent extremism in cases where the other pathways do not appear to be at play.[96]

Discussion

The results of the fs/QCA analysis reveal that radicalization processes are inherently complex, commonly combining individual-level psychology, community grievances, group biases, and material rewards to produce violent outcomes. There are several implications of this analysis for radicalization research. First, while researchers often frame key variables as necessary for radicalization to violence, our findings show that only two conditions—shifts in individual cognitive frames and community crises—are necessary conditions for violent outcomes. While cognitive frame realignment appears to be a trivial necessary condition, community crisis is not, suggesting that perceptions of community victimization may separate violent from nonviolent radicals. This finding supports the views of social movement models of radicalization and grievance-based explanations of terrorism, which emphasize that extremist violence is often intimately tied to real or perceived discrimination in particular communities.[97]

It is important to note, however, that as necessary conditions, neither shifts in perceptual frames nor perceptions of community crises appear to be sufficient for explaining violence among extremists. In fact, only one of the 35 cases of violent extremism included in this study appears to be driven solely by the conjunction of the two conditions (path 2). Rather, it is through the combination of these conditions and the broader range of psychological, group, and material factors that pathways to violence form.

Second, our findings reveal that pathways that combine individual-level psychological vulnerabilities with perceptions of community victimization are important for explaining shifts to violence. The majority of cases that are explained by our fs/QCA analysis are members of paths 1a-1e, which are driven by the shared conditions of community crisis,

psychological vulnerability, and psychological rewards. While this lends empirical support to psychological and social identity perspectives of radicalization, it is only through the combination of mechanisms from the two perspectives that we can arrive at a comprehensive explanation of the radicalization trajectories of many extremists. These results support our arguments that advancements in radicalization research can only be made by closely aligning ontology and methodology in the study of extremism.

Finally, the results of the fs/QCA analysis demonstrate the incredible complexity of the processes that lead to violent extremism. Despite including over 70 causal mechanisms in our coding scheme, constructing a truth table with more than 500 rows, and identifying eight unique pathways to violence, our analysis does not account for the pathways of 15 of the 35 (42.9%) violent individuals in our sample. This reaffirms our beliefs that we are only beginning to uncover the range of pathways that lead to violent extremism and that extant models of radicalization are limited in their ability to understand the phenomenon. Future research should continue to discover additional mechanisms relevant to radicalization pathways while also embracing research designs and methods that can account for causal complexity. This is not to discount the utility of traditional quantitative methods. Rather, it indicates that future efforts to explain radicalization are only likely to succeed if they embrace methodological diversity and look to leverage the comparative strengths of the full range of quantitative and qualitative methods.

Future research

While one of the goals of this study is to identify the radicalization pathways that are common across time periods and ideological milieus, future studies using fs/QCA may benefit by focusing on a particular ideology (e.g., far-right extremists)[98] or by comparing radicalization pathways between different time periods (e.g., pre- and post-9/11). Such an approach might lead to a discovery of whether certain radicalization pathways are more prevalent within certain subgroups (e.g., a far-right, anti-government pathway) or have evolved over time. Moreover, our sample of 56 case studies was limited solely to U.S.-based extremists and, thus, our findings may not be generalizable beyond the United States. A cross-national study that incorporates a similar methodology and research design would be a valuable contribution to the field and would potentially allow researchers to better understand how cultural differences influence pathways to radicalization. Future researchers would also benefit from drawing on mechanisms that help explain parallel processes that drive similar extreme or deviant behaviors, such as membership in non-ideological street gangs,[99] recruitment into religious cults,[100] or participation in organized crime.[101] Finally, analysis will need to move beyond the individual-level to show how individual, group, community, national, and international level factors combine to produce unique pathways to extremist violence.

Conclusion

Research suggests that a number of psychological, emotional, material, and group-based mechanisms can drive radicalization to violent extremism. However, scholars have not shown how these variables logically combine to produce pathways to violence, nor have they shown what causal roles these conditions have in relationship to violent extremism. It is our contention that radicalization to violence can only be understood if it is viewed as a set of

causal processes that are inherently complex. This article has sought to fill the gaps in extant research by showing how mechanisms from various radicalization research programs combine to produce pathways to violent extremism and to show what roles—necessity or sufficiency—that those conditions play in relation to violence.

Treating radicalization to violence as a set of complex pathways, as opposed to simple linear processes or indicators, is important not only for researchers interested in the phenomenon, but also for those who seek to prevent violent extremism through civil society programs or law enforcement actions. Simple models of radicalization distort the complex reality of extremism in the United States and can provide misguided solutions to a problem that is multifaceted, contextually driven, and constantly evolving.

Domestic law enforcement and violence prevention programs can draw a number of lessons from a complex view of radicalization that may otherwise go unnoticed. For instance, our finding that perceptions of collective crisis play a critical role in violent radicalization processes suggests that law enforcement practices and violence prevention programs must be designed to address community grievances without inadvertently exacerbating them. One way to achieve this may be to encourage policing and violence prevention strategies that are broad-based and not limited to a particular ideological milieu (e.g., radical Islamists). Focusing efforts on a particular community may contribute to the perception that the community is being collectively targeted. In such instances, practices meant to combat violent extremism may actually be counter-productive, increasing alienation rather than alleviating it.

Unfortunately, there is evidence to suggest that this may already be the case in many Muslim communities throughout the United States. Domestic law enforcement and intelligence agencies have focused their attention on threats emanating from those who adhere to an extremist interpretation of Islam while paying considerably less attention to threats originating from the extreme far-right or far-left. Similarly, some recent extremism prevention efforts have singled out Muslim-American communities as the ones most in need of prevention programming.[102] A heightened focus on Muslim-American communities, combined with the lack of alternatives to incarceration for at-risk individuals, has contributed to feelings of collective victimization and has had a deleterious effect on trust between community members and those hoping to prevent extremist violence.[103] By showing a commitment to respond to threats that emerge from across the ideological spectrum, law enforcement officials and violence prevention proponents can take an important step in restoring trust with Muslim communities in the United States.

The role of community crises in pathways to violence also suggests that efforts to counter extremist narratives and recruitment must address perceptions of community victimization. This includes challenging misperceptions of discrimination against particular communities, but also addressing legitimate community grievances. Counter-narratives and actions on the ground must be closely matched to ensure that both are working towards a common goal. Close unity of effort between all actors that play roles in programmatic efforts, including family members, community leaders, and law enforcement, is the best way to achieve this synergy.

Finally, a complex view of radicalization illustrates that psychology and emotion act as key motivators of violent extremism. Efforts to address violent extremism in U.S. communities must be led by those who are in a place to recognize when individuals are vulnerable to extremist narratives. At the community level, this is most likely to be religious leaders, community organizers, and social service organizations. At the individual level, this is likely to be family, friends, and others who are in a position to recognize concerning changes in the beliefs and behaviors of loved ones. Violence prevention programs must empower those who

are closest to at-risk individuals through education and support services, which should include participation from mental health and social services professionals. Law enforcement, while an important aspect of counterterrorism efforts, should not be viewed as the first resort for addressing the needs of individuals who are at risk of radicalizing.

Notes

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41. While most extremists cite ideological justifications for their use of violence, we chose not to include ideology as a conceptual construct in our analysis for two reasons. First, while all of the individuals included in this study expressed violence-justifying ideologies, nearly half did not participate in acts of violence. Thus, beliefs cannot explain variation in behaviors. Second, when ideology was included as a causal construct in earlier models it increased the overall complexity of the analysis but did not produce substantively different results.
42. Because mechanisms can have multiple, related effects, they can appear in more than one construct. For example, an economic crisis can form the basis of one's personal crisis and also be the source of their physical/material vulnerability.
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68. Hogg (see note 25), 189.
69. Bandura (see note 39); Borum, "Radicalization into Violent Extremism II" (see note 33).
70. David A. Snow, E. Burke Rochford, Jr., Steven K. Worden, and Robert D. Benford, "Frame Alignment Processes, Micromobilization, and Movement Participation," *American Sociological Review* 51, no. 4 (August 1986): 464–81. For a meta-analytics review, see Stephen J. Kraus, "Attitudes and the Prediction of Behavior: A Meta-Analysis of the Empirical Literature," *Personality and Social Psychology Bulletin* 21, no. 1 (January 1995): 58–75.
71. David Collier, "Understanding Process Tracing," *PS: Political Science & Politics* 44, no. 4 (October 2011): 823–30; Alexander L. George and Andrew Bennett, *Case Studies and Theory Development in the Social Sciences* (Cambridge, MA: The MIT Press, 2005).
72. Jensen et al. (see note 8), 16.
73. Schneider and Wagemann (see note 15).
74. Ragin, *Redesigning Social Inquiry* (see note 15).
75. Ibid.
76. Schneider and Wagemann (see note 15); Ragin, *Redesigning Social Inquiry* (see note 15); Gary Goertz and James Mahoney, *A Tale of Two Cultures: Qualitative and Quantitative Research in the Social Sciences* (Princeton, NJ: Princeton University Press, 2012).
77. Gary Goertz and Harvey Starr, eds., *Necessary Conditions: Theory, Methodology, and Applications* (Lanham, MD: Rowman & Littlefield, 2002).
78. Ragin, *Redesigning Social Inquiry* (see note 15); Schneider and Wagemann (see note 15).
79. Causes that combine with others to form sufficient conjunctions are commonly known as INUS conditions. INUS refers to a cause that is a necessary, but not sufficient, part of a conjunction of conditions which are collectively sufficient, but not necessary, for producing an outcome. For a review of INUS conditionality, see J. L. Mackie, "Causes and Conditions," *American Philosophical Quarterly* 2, no. 4 (1965): 245–64.
80. Ragin, *Fuzzy-Set Social Science* (see note 15).
81. After this step, truth tables are further refined through logical minimization in order to produce similar results. On this type of minimization, see Schneider and Wagemann (see note 15), 186–90.
82. Schneider and Wagemann (see note 15).
83. Ragin, *Redesigning Social Inquiry* (see note 15); Schneider and Wagemann (see note 15).
84. Ragin, *Redesigning Social Inquiry* (see note 15).
85. Ragin (*Redesigning Social Inquiry* [see note 15], 56) suggests that a solution coverage score greater than 0.30 constitutes a significant finding.
86. The raw data that were used for the fs/QCA analysis are available upon request.
87. Alternate calibration schemes for the outcome were used, including treating material support to a terrorist group as an act of violence. However, these alternate calibration schemes did not significantly change our fs/QCA results.
88. On trivial necessary conditions, see Schneider and Wagemann (see note 15), 144–48.
89. Borum, "Radicalization into Violence II" (see note 33); McCauley and Moskalenko (see note 14).
90. Following the advice of Ragin, we dropped one of our necessary conditions—cognitive frame alignment—from the tests for sufficiency, leaving 9 causal constructs for analyses. Our other necessary condition—community crisis—was retained since there are cases where the outcome is present but the condition is not. See Charles Ragin, "Qualitative Comparative

Analysis Using Fuzzy Sets (fsQCA)," in *Configurational Comparative Methods: Qualitative Comparative Analysis (QCA) and Related Techniques*, edited by Benoit Rihoux and Charles Ragin (Thousand Oaks, CA: Sage, 2009).

91. We relied on the complex solution to the truth table, which does not utilize logical remainders for further minimization of the truth table. It is important to note, however, that when conditions were allowed to be either present or absent, the intermediate and complex solutions were identical.
92. On this type of logical minimization, see Ragin, *Redesigning Social Inquiry* (see note 15).
93. Wiktorowicz (see note 36).
94. Bhui and Dinos (see note 18); Crenshaw, "Theories of Terrorism" (see note 37); McCormick (see note 37).
95. Gerwehr and Daly (see note 32).
96. In order to gauge the robustness of our findings, proportional reduction in inconsistency (PRI) tests were performed to determine if any of the solution paths are sufficient explanations for membership in the negation of the outcome. The results show that none of the solution paths are simultaneously sufficient for membership in the violent and nonviolent sets.
97. Martha Crenshaw, "The Causes of Terrorism," *Comparative Politics* 13, no. 4 (July 1981); Piazza, "Poverty, Minority Economic Discrimination, and Domestic Terrorism" (see note 1).
98. While an ideological focused analysis is outside of the scope of this study, our results reveal that the solution pathways described above are well balanced across the ideological categories and that our ability to explain violent outcomes is not limited to a particular ideological milieu. Specifically, our pathways account for 62% of the violent far-right individuals in our sample, 50% of violent far-left individuals, 64% of violent Islamists, and 40% of the violent single-issue individuals.
99. Scott H. Decker and David C. Pyrooz, "'I'm down for a Jihad': How 100 Years of Gang Research Can Inform the Study of Terrorism, Radicalization and Extremism," *Perspectives on Terrorism* 9, no. 1 (February 2015): 104–12.
100. Lorne L. Dawson, "The Study of New Religious Movements and the Radicalization of Home-Grown Terrorists: Opening a Dialogue," *Terrorism and Political Violence* 22, no. 1 (December 2009): 1–21.
101. Louise I. Shelley and John T. Picarelli, "Methods Not Motives: Implications of the Convergence of International Organized Crime and Terrorism," *Police Practice and Research* 3, no. 4 (January 2002): 305–18.
102. Abbas Barzegar, Shawn Powers, and Nagham El Karhili, *Civic Approaches to Confronting Violent Extremism: Sector Recommendations and Best Practices* (Institute of Strategic Dialogue, September 2016), http://tcv.gsu.edu/files/2016/09/Civic-Approaches-Sept-8-2016-Digital-Release.pdf; David Schanzer et al., *Challenge and Promise of Using Community Policing Strategies to Prevent Violent Extremism: A Call for Community Partnerships with Law Enforcement to Enhance Public Safety* (Durham, NC: Triangle Center on Terrorism and Homeland Security, Duke University, 2016).
103. Ibid.

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