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CHAPTER

17   The Roots of Intergroup Conflict and the Co-optation of the Religious System: An Evolutionary Perspective on Religious Terrorism 🔓

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Abstract

This chapter reviews the cultural evolution of religious terrorism since the late nineteenth century and explores how terrorists have effectively exploited religious systems to pursue their political goals. Religious systems are adaptive complexes that efficiently respond to rapidly changing socioenvironmental conditions and successfully motivate prosocial and sacrificial behavior by engaging evolved psychological capacities. Ongoing religious terrorism differs from previous waves of terror by manipulating religious systems in order to frame political conflicts, organize combatants, and render collective violence as sacred. By taking an evolutionary perspective of religious terrorism, scholars can begin to shed light on the ultimate and proximate mechanisms of collective violence and the manner in which religion contributes to contemporary terrorist activity.

Keywords: coalitional aggression, collective violence, intergroup conflict, moral disengagement, parochial altruism, religious system, religious terrorism, revenge

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Introduction

The academic study of terrorism faces two recurring questions. The first is the conceptual issue of what constitutes terrorism (e.g., Primoratz, 2013), and the second is the explanatory query of what causes it (e.g., Crenshaw, 1981; Sandler, 2014). The first question asks under what conditions an act of violence, such as revolutionary violence or guerrilla warfare, can be considered terroristic, while the second one asks why and how terrorism occurs—and therein how it might be prevented. By several accounts, the second question presupposes the first (e.g., Reitan, 2010; Schinkel, 2009). Obviously we must know what terrorism is—how it is defined and demarcated—before we can know what causes it. However, in evolutionary analyses there is often a close connection between the explanation of a phenomenon and its conceptualization (Daly & Wilson, 1983; Tinbergen, 1963). For example, religion is a notoriously fuzzy category (see Sosis, 2009), but evolutionary explanations of behaviors related to such things as ritual, counterintuitive beliefs, the sacred, and so forth (e.g., Alcorta & Sosis, 2005) have helped to clarify the conceptualization of religion. In this sense, evolutionary theory can broadly unify even the most disparate and variegated social phenomena under the umbrella of a single perspective (e.g., Mayr, 1961). The same is true for the conceptual and explanatory questions of terrorism. As we aim to show in this chapter, terrorism and its demarcation from other forms of violence become clearer once we appreciate the selectionist logic of coalitional aggression and evolutionary patterns of intergroup conflict. Likewise, if under such conditions we recognize the adaptive value of religion and its relationship to psychological and sociopolitical risk factors for collective violence, we begin to understand how the recent proliferation of religious terrorism has occurred.

p. 266   In response to the opening questions, then, we propose that religious terrorism is a form of collective violence that is, in turn, a subset of intergroup conflict and, ultimately, coalitional aggression. With that said, an ultimate explanation of why humans engage in coalitionary killing includes scholarly terrain that is already well traversed by evolutionists (e.g., Durrant, 2011; Kelly, 2005; Potts & Hayden, 2008; Wrangham, 1999). The less traversed territory, and by far the more significant issue for this chapter, is how the proximate causes of coalitional aggression and other behavioral propensities for violence come together to support intergroup conflict in the form of terrorism. Equally important is the question of how terrorism comes to be supported under the guise of religion. To that end, we distinguish "religion," a term that is too often reduced to mere belief (Sosis & Kiper, 2014), from what is known as the "religious system." The latter is an adaptive complex comprising recurrent constituents, such as supernatural agent beliefs, ritual, music, and emotionally charged symbols, that not only emerged and coalesced throughout human history but also evolved culturally to interact with human cognition, emotion, and behavior to increase survivability in changing environments (Sosis, 2019). Collective violence is any instance of intergroup conflict that is characterized by a person or group intentionally harming another group of people as such (World Health Organization [WHO], n.d.). We argue that religious terrorism is a form of collective violence that has co-opted the religious system in particular ecological, sociopolitical, and historical contexts, and thereby used the system's constituents to support acts of violence against noncombatants or soft targets.

Our discussion proceeds as follows. After preliminary examinations of coalitional aggression, parochial altruism, and intergroup conflict, an analysis of collective violence and its proximate causes is delineated, including a brief consideration of moral disengagement. We then provide a sketch of the function and history of terrorism, and stress the importance of four waves of terroristic activity that have followed the establishment of the Westphalian state. Building on these issues, we then identify the most significant aspects of the religious system that get co-opted by terrorist organizations to overcome collective action problems and sanction collective violence.

The Evolutionary Roots of Terrorism

As a first approximation, the claim that terrorism—whether as a contentious political movement (e.g., Beck, 2008), militaristic strategy (e.g., Bockstette, Jertz, & Quandt, 2006), or mode of self-radicalization (e.g., Teich, 2013)—can co-opt the religious system is based on several observations that are considerably developed in the course of this chapter. We begin here, in this section, by addressing several observations regarding the evolutionary roots of terrorism.

Coalitional Aggression

The first is that terrorism is a form of intergroup conflict, which is rooted in human evolution by way of coalitional aggression. Observed in chimpanzees and humans alike, coalitional aggression occurs whenever members of one group deliberately inflict physical harm on one or more conspecifics of another group (e.g., Bowles, 2009). Given the shared quality of coalitional aggression in chimpanzees and humans, and provided the principle of parsimony in biology, coalitional aggression was likely selected in the last common ancestor of chimpanzees and humans (Boehm, 2012a, 2012b).

Since then, coalitional aggression has become adaptive in human populations, some have argued (e.g., McDonald, Navarrete, & Van Vugt, 2012), for reasons that shed light on human proclivities for war. For one thing, coalitional aggression was arguably advantageous for most of human history, whenever there were power asymmetries between groups and one group faced a low-risk and high-benefit outcome in attacking another (Johnson & MacKay, 2015; Roscoe, 2007; Wrangham, 1999). Such attacks were likely necessitated by competition for mating opportunities (Wrangham, 1999), natural resources (van der Dennen, 1995, 2002), territorial disputes (Wilson & Wrangham, 2003), or deterring future transgressions (Boehm, 1984; McCullough, 2008). For instance, coalitional attacks among traditional societies are still often prompted by irresolvable conflicts or threats concerning mating opportunities, food acquisition, or safety among kith and kin (Boehm, 2012b).

Another set of reasons why coalitional aggression was likely adaptive throughout human history is that it yielded higher reproductive payoffs than otherwise and minimized the risks of violence by offsetting the costs and risks among the group (Rusch, 2014). Given these advantages, ancestral humans probably aggressed against neighboring groups whenever it was reproductively advantageous to do so (e.g., Johnson & MacKay, 2015). In turn, the threat of coalitional attacks by predatory out-groups probably selected for out-group avoidance and in-group attachment (Van Vugt, 2011). With regard to ↳ evolved psychology, this would entail the acquisition of a suite of traits, such as preferences for in-group phenotypes and tribal markings (see Kurzban, Tooby, & Cosmides, 2001), which heightened cooperation within groups and strengthened vigilance toward out-groups (e.g., Choi & Bowles, 2007; Rusch, 2014; Van Vugt, 2009). Culturally speaking, groups were likely to have enacted social mechanisms, such as rites of passage or collective rituals, to inculcate group identity and strengthen group commitments. This resulted in a dual propensity for engaging in coalitional aggression and reciprocating with in-group members (or familiar and reciprocating out-groups) above unknown out-groups (Durrant, 2011).

Provided this scenario, a complex of psychological mechanisms and behavioral propensities for in-group approach and out-group avoidance has been advantageous for groups, largely due to the role of coalitional aggression throughout human evolution (e.g., Tooby & Cosmides, 1988). Remarkably, those basic propensities can still be witnessed today: People cross-culturally tend to be highly affective, favorable, and cooperative with kith and kin. Yet they are also weary of strangers and in most cases show an innate apprehensiveness toward out-groups, which would minimize out-group contact and therefore reduce the threat of coalitional aggression (e.g., Rusch, 2014). Hence, a proclivity in humans that contributes to intergroup violence today, such as

terrorism, is preferential altruism toward in-groups and habitual avoidance of—or aggression toward—unfamiliar or threatening out-groups.

Parochial Altruism

The second observation is that intergroup conflict is also rooted in parochial altruism, a behavioral propensity whose evolutionary history is akin to coalitional aggression. Parochial altruism is defined as favoring one's in-group above out-groups (see Bernard, Fischbacher, & Fehr, 2006). Darwin (1871) originally alluded to the potential adaptiveness of this behavior in the *Descent of Man*, when he noted that strong in-group morality might not always benefit the individual moralist, but it would benefit the moralist's in-group whenever they faced between-group competition (p. 157). In such circumstances, parochial altruism—or what Darwin originally called "in-group love"—would enhance intragroup trust and cooperation, giving groups, broadly defined, an advantage in competing for valuable resources. Albeit a remarkable insight, parochial altruism as a potentially adaptive behavior was nevertheless overlooked until evolutionary biologists considered the mutual benefits of it alongside coalitional aggression. In terms of its evolution, parochial altruism now appears to have probably been group selected because it allowed communities to maximize cooperation and, given the risk of predatory out-groups, cooperatively defend against coalitional threats (e.g., Glowacki & Wrangham, 2013).

Besides this selectionist logic, several lines of evidence support the adaptive value of parochial altruism. First, game theoretic simulations demonstrate that groups of parochial altruists consistently outcompete groups of pure altruists or parochialists (Choi & Bowles, 2007; Garcia & van den Bergh, 2011; Rusch, 2014). Second, as groups in economic games become more parochially altruistic, egalitarian norms emerge, such as strong reciprocity (see Fehr & Fischbacher, 2004), which allow groups to cooperate more than others and thus outcompete them (e.g., Parks, Joireman, & Van Lange, 2013). Third, because parochially altruistic communities cooperate more than others, they often outlive less cooperative communities (e.g., Mcfarlan, Walker, Flinn, & Chagnon, 2014). Fourth, archeological evidence of demarcated communities during and after the Neolithic suggests an increased frequency of both coalitional aggression and parochial altruism, thus entailing the likelihood of their coevolution (e.g., Bowles & Gintis, 2011; Choi & Bowles, 2007).

If coalitional aggression and parochial altruism coevolved, then the two constitute an important behavioral complex, and arguably preadaptation, for intergroup conflict, which bears on conflicts today. It is very likely, after all, that coalitional aggression was not only adaptive in ancestral populations but also continues to be an adaptive strategy for most cultural groups today, such that groups with "warrior males," who are trained to engage in coalitional aggression against outgroup threats, outlive groups that do not (e.g., Bowles, 2009; Van Vugt, 2009). Relatedly, the rather "tribal inclination" of humans to categorize individuals according to group membership—and to treat out-group members indifferently or malevolently and in-group members benevolently—is potentially an inclination that still contributes to in-group cooperation and the avoidance of threatening out-groups, which would be quite adaptive in terms of group competition, as Darwin once suggested (see McDonald et al., 2012).

Intergroup Conflict

Another important observation is that when humans exercise coalitional aggression in highly organized and cooperative groups, they engage in intergroup conflict (Rusch, 2014). Otherwise known simply as "war," intergroup conflict is more precisely defined as the planned and executed hostilities between two relatively defined groups and can range from unconventional warfare (e.g., raids, guerrilla fighting, gang violence) to conventional warfare (e.g., state militaries engaged in armed conflict). Intergroup conflict has been a major reproductive threat to human communities for most of recorded history (e.g., Laing, 1984), though some argue that humanity overall is becoming steadily more peaceful (see Pinker, 2011). In terms of its evolution, intergroup conflict grew out of coalitional aggression and became prevalent throughout most of the world after the Neolithic (e.g., Fry, 2007; Kelly, 2000). During that time, five factors appear to have combined with coalitional aggression and parochial altruism to engender intergroup conflict: the demand for collective defense; social hierarchies and the increased capacity for systematic attacks on neighbors; population growth and the exhaustion of local resources; and climactic disturbances (e.g., Reuveny, 2007). Given the overlap of these factors with sedentary communities, intergroup conflict became more common with human settlements, defined territories, and especially the spread of agriculture. After the Neolithic, intergroup conflict became such a threat in virtually every part of the world that communities could not be sustained or developed without defenses against ambushes, battles, and raids (e.g., Kelly, 2000; Otterbein, 2004).

Kelly's (2005) cultural evolutionary stages of intergroup conflict complement our discussion thus far. The first was an era during human evolution that exhibited infrequent to intermittent coalitionary killing, where attacks on neighbors became highly fitness relevant. The second was an era of conflict avoidance, beginning between 14,000 to 12,000 bp, wherein the development of strong intragroup relations became favored to deter predatory out-groups. The third era, which began about 4,000 bp and persists to our time, is the rise of intergroup conflict and the cultural transformation of male coalitions into rather permanent "violence cadres"—that is, militarized groups of male warriors designed to defend one's in-group and aggress against threatening out-groups. Once this phenomenon emerged, military culture evolved thereafter, with most cultures entering a persistent preparedness for war, including the development of weapon technologies, organizational tactics, and social hierarchies (e.g., Bowles, 2008, 2009). In turn, military culture has contributed to a cycle of population growth, wars, population decline, peace, population growth, wars, and so forth, which has further contributed to the cultural evolution of war (e.g., Turchin, 2006).

Several environmental circumstances have triggered intergroup conflict (see Gat, 2006. First, when subsistence is threatened or the competition for nourishment is intensified, as in times of population expansion or environmental stress, groups resort to conflict (see also Reuveny, 2007). Second, propensities for dominance and related signs of hierarchical status can add to intergroup displays of power, such as wanton resource exhaustion and social stratification, which can indirectly contribute to war (e.g., Pinker, 2011; Turchin, 2006). Third, revenge-cycles are due to the psychological propensity for revenge, which was selected to deter transgressions in ancestral environments but contributes to enthusiasm for war and often runs rampant in societies with a history of conflict (Boehm, 1984; McCullough, 2008). Fourth, security dilemmas characterized by power asymmetries and runaway effects in intergroup credibility displays, such as stockpiling weapons, can push groups toward increased distrust, eventually giving way to intergroup conflict (e.g., Posen, 1993). Fifth, worldviews can justify intergroup violence and exacerbate perceived threats of outgroups (e.g., Hybel, 2012).

Collective Violence

The picture that emerges thus far is that the evolutionary roots for intergroup conflict are coalitional aggression and parochial altruism. Further, as intergroup conflict evolved culturally into warfare writ large, it has been recurrently triggered by six environmental or cultural conditions. With that said, a related observation can now be advanced. Terrorism is a form of intense parochial altruism and unconventional warfare that, although triggered by the above conditions, constitutes a distinct kind of intergroup conflict. Specifically, terrorism is a kind of collective violence—the indiscriminate targeting of members of another group as if they were combatants or deserving of aggressive retribution. Being a kind of collective violence, which is again a subset of intergroup conflict, is what makes terrorism so morally objectionable and criminal in our era of human rights.

p. 269   On that score, the United Nations (1994) observes a legal distinction that is relevant to our analysis. Terroristic activity, unlike other forms of "legal" warfare, is an act of intergroup conflict that is committed by nonstate actors who deliberately attack or victimize noncombatants, whether in the context of self-described revolution, liberation, or self-determination, and is designed, as such, to kill or maim innocent victims in order to provoke public fear and to manipulate political structures. As many social scientists observe (e.g., Hoffman, 2006; Kilcullen, 2009; Sageman, 2004), terrorist activity along these lines ensues in environments where the following conditions are present:

- Minority groups striving for independence or collectively feeling threatened by a more powerful nation-state (Hoffman, 2006).

- Leaders using ideologies, such as religion, to unite the community and to justify acts of intergroup conflict (e.g., Juergensmeyer, 2003; Kiper & Sosis, 2016a; Pape, 2005).

- Individuals who would not otherwise engage in violence, such as the elderly, supporting attacks due to feelings of revenge or because local violence cadres provide communal benefits (e.g., Iannaccone & Berman, 2006; Juergensmeyer, 2003).

- Surpluses of young unmarried males having little or no socioeconomic mobility and countenancing local or traditionally sanctioned forms of violence (e.g., Howe & Jackson, 2008; Thayer, 2009).

- Populations, generally segregated or occupied by foreign powers, having experienced chronic social injustices or expressing acute frustrations about recurrent victimization or perceived humiliation by an out-group (e.g., Taspinar, 2009).

- Densely populated communities experiencing subsistence grievances or believing their economic prospects are limited by a seemingly threatening out-group (e.g., Gassebner & Luechinger, 2011).

Given the similarities of these conditions to those of intergroup conflict, it is evident that the causes of terrorism overlap with those of war, especially those involving revolutionary struggles (Lutz & Lutz, 2008). Thus, the ultimate causes of terrorism are those of intergroup conflict, as rooted in coalitional aggression and parochial altruism.

However, as critical theorists note, terrorism is not simply a revolutionary tactic akin to guerrilla warfare (Jackson, Jarvis, Gunning, & Breen-Smyth, 2011). In the same way, we suggest here that terroristic activity is a variety of collective violence. To clarify that distinction, consider the following. Collective violence occurs most often in the context of intergroup conflict and includes torture, indiscriminate bombings, massacres, mass rape, ethnic cleansing, and genocide, all of which are aimed at attacking a group of people as such (WHO, n.d.). For this reason, collective violence is what makes terrorism, like torture and ethnic cleansing, an international crime: It violates the laws and customs of acceptable warfare by seeking to humiliate and degrade the dignity of an entire population (see Robertson, 2013).

Of course, there is admittedly a grey area between freedom fighters using guerrilla tactics to humiliate and contest the power of an unjust regime and terrorists wantonly attacking combatants and noncombatants alike (see Lutz & Lutz, 2008). Yet the grounds between resistance, revolution, or liberation and terrorism become clearer with an understanding of nonstate intergroup conflict that employs collective violence. For whenever self-proclaimed freedom fighters resort to attacks on another group of people as such, those fighters engage in collective violence (Barkan & Snowden, 2007). Therefore, the key to understanding terrorism and demarcating it from other kinds of intergroup conflict is recognizing it as collective violence undertaken by nonstate actors.

Moral Disengagement

In line with the above, we arrive at another observation. As noted by social psychologists, most persons must disengage their reluctance to harm conspecifics if they are to engage in collective violence (Fiske, 2004). By doing so, actors practice moral disengagement, a psychological process of coming to believe that moral standards do not apply to oneself in particular contexts (Bandura, 1999). Besides these conditions, social psychologists focus on three preconditions that contribute to moral disengagement: collective predispositions for revenge, war propaganda fomenting violent ideologies, and community leaders encouraging hostility.

Collective Predispositions for Revenge

Collective predispositions for revenge are likely to occur in cultures where intergroup conflict has been chronic and unhealed traumas from prior wars remain prevalent. Such conditions are especially ripe for collective violence when accompanied by social injustices that have gone unresolved, leaving people with a sense of victimization and insecurity ↳ (DiVietro & Kiper, 2018; Staub, 1999). In these conditions, a phenomenon known as "accusation in a mirror" often ensues (see Marcus, 2012):

- Individuals of a group, *P*, who have been victims of historical trauma or social injustice, fear they will be individuals of some outgroup, *S*, who are accused of plotting against *P*.

- In defensive aggression or what they see as a justified revenge, *P* aggresses against *S*, often indiscriminately and in the very form *P* accused *S* of plotting.

Prior to the Rwandan Genocide, for instance, Hutu leaders accused Tutsis of plotting to massacre Hutus, which many Hutus used as a pretext for collective violence (Marcus, 2012). Likewise, Nazi allegations of Jewish conspiracies for global domination were used as a widespread justification for anti–Semitic legislation and sanctioned persecution (Eastwood, 2012). In the same way, many religious terrorists have accused the West of plotting to destroy Islam, which has served as a rallying cry for collective violence against Western nation-states, including its civilians (e.g., Leiken, 2005).

War Propaganda

War propagandists are critical in fomenting violent ideologies that contribute to support for collective violence (e.g., Benesch, 2012; Kiper, 2020). Such instigators are most effective in communities where life conditions are difficult, and where people experience relative deprivation such as lack of sufficient resources, police and security, positive social connections, or positive self-identities (Staub, 1999). In these conditions, instigation is strengthened by a controlled media and what the community believes are genuine social crises, which together allow propagandists to promote destructive ideologies within a "crisis frame" that calls for intergroup violence and even collective violence (Oberschall, 2012; Wilson & Kiper, 2020). Those ideologies include scapegoating out–groups, promoting "better–world ideologies" (which promise a better world once a targeted out–group is removed), legitimating hierarchies and justifying subordinations, and portraying oneself as righteous and opponents as evil (Staub, 1999).

Most human beings are indeed reluctant to harm conspecifics in normal circumstances, and that is a propensity overridden by a set of psychological conditions that go along with war propaganda, allowing even "ordinary men" to engage in collective violence (see Browning, 1992; Kiper, 2015). These include the perpetrator believing that the would-be victim is deserving of violence (Aquino, Reed, Thau, & Freeman, 2007), adopting an ideology that justifies violence (e.g., Dunbar, 2003), and diffusing responsibility among a cohort of perpetrators (e.g., Zimbardo, 2007). A further mechanism is dehumanizing the enemy or denying him or her of humanness (Harris & Fiske, 2006). Finally, in times of war, xenophobic propaganda that exacerbates parochial altruism contributes to disengaging moral considerations for the targeted out-group (e.g., Choi & Bowles, 2007).

Community Leaders

Prior to the onset of collective violence, community leaders play a critical role in quelling or encouraging between-group hostilities (Saxon, 2012). In particular, leaders can intensify hostilities and often do so whenever it maintains or enhances their power and status, which can be especially dangerous in stratified societies (Staub, 1999). In such societies, leaders tend to go unchallenged and thus, during times of conflict, create violence cadres, such as terrorist organizations, to terrify the target out-group (and often resisters in the in-group), and indoctrinate society writ large with reasons for supporting or tolerating collective violence (Oberschall, 2012). We discuss these factors in further detail in subsequent sections.

The Cultural Evolution of Terrorism

From a cultural evolutionary perspective, terrorism is not a recent phenomenon born out of religious fanaticism (e.g., Harris, 2004), but rather a form of collective violence that is sanctioned not by the state or third-party sympathizers (as with many liberation movements) but rather by its practitioners. As a mode of intergroup conflict, terrorism has evolved culturally alongside political states as a weapon against the sovereignty of the nation-state. Given that terrorism is also a form of collective violence, it is not so different from other kinds of unconventional warfare that are designed to weaken so-called enemy populations, including acts such as ethnonationalistic violence (Primoratz, 2013). As a point of illustration, ethnonationalist leaders have sanctioned indiscriminant ethnic cleansings, massacres, and genocides (see Dojcinovic, 2012). In these cases, ethnonationalistic violence is designed to "terrorize" an ethnic minority in its entirety; and such violence is, in fact, caused by the same factors and conditions outlined in previous sections (e.g., Staub, 1999). Here we arrive at another key observation for our discussion. Terrorism differs from ethnonationalistic violence in terms of its function, risk factors, and cultural evolution, which we address in turn.

Function

According to Crenshaw (2003), the function of terrorism is to empower weak political entities by means of illegitimate force, as understood in terms of the sovereignty of nations and the nation-state's monopoly on force. Such force, as practiced by terrorists, is typically carried out by an organization composed of nonstate actors who attempt to weaken and manipulate a more powerful political entity, such as an empire or nowadays a nation-state, by threats of unpredictable and indiscriminate violence (e.g., Hoffman, 2006). Although such organizations employ unconventional methods of war, such as guerrilla fighting, their main tactics center on attacking the noncombatants of an enemy nation-state in order to force that state's leaders to undertake sociopolitical courses they would not otherwise take (Schmid, 2004). Typically, these courses involve outcomes in a geopolitical struggle over land or the nation-state's influence on cultural matters (e.g., Juergensmeyer, 2003). The most common exploitations by terrorists include assassinating political figures, kidnapping and ransoming citizens, and inflicting unpredictable harm on noncombatants through civilian-centered bombings and mass shootings (Lutz & Lutz, 2008).

Contrary to other forms of collective violence, terroristic attacks on noncombatants are intended to affect not only the would-be victims but also—and most importantly—those who witness the attack via mass media (see Kiper & Sosis, 2016b). After all, terrorism is first and foremost a form of psychological warfare that is designed to exploit soft targets and mass media to frighten victims and weaken political opposition (e.g., Chalk, 1996). Witnessing terrorism typically results in either heightened levels of distress after the attack or elevated anxiety that contributes to "catastrophizing" or overgeneralizing the threat of another terrorist incident (Bonanno, Brewin, Kaniasty, & La Greca, 2010). These effects include elevated stress (fast-acting epinephrine) or anxiety (slow-acting corticotrophin) that can lead to long-term cognitive changes (e.g., hippocampal changes, immune system suppression, growth hormone inhibition, inhibition of reproductive functions, and gastrointestinal shutdown). They also contribute to the survivors' avoidance of out-groups, attachment to in-groups, and threat-compensation behavior such as agoraphobia, out-grouping, isolation, and even suicide (see Sinclair & Antonius, 2012). Achieving these effects through psychological warfare on noncombatants further separates terrorism from the guerrilla warfare of revolutionaries. For instance, although revolutionaries practice guerrilla fighting to frighten and weaken their enemies (e.g., through ambushes, insurgencies, or bombings), they do so to paralyze combatants specifically, and not civilian populations in their entirety.

Furthermore, terrorism functions on the threat of repetitive and unpredictable attacks in civilian spaces, as committed by highly organized violence cadres, whose covert methods make it resilient to retaliation using conventional warfare. As Hesterman (2014) observes, deliberately attacking the soft targets of a nation-state and avoiding military engagement are common characteristics of terrorists. Still, clandestine states may (and often do) financially back terrorist organizations; but when doing so, states intentionally distance themselves from terrorists to deny criminal culpability, and terrorists, in turn, do the same to increase their own economic power base (e.g., Hoffman, 2006). As such, terrorist organizations often resort to undertaking criminal acts, such as trafficking or drug dealing, to fund their political agendas (e.g., see Rollins & Wyler, 2013). When successful, terrorist organizations can therefore grow more powerful than other violence cadres, such as paramilitaries, and attract disenfranchised individuals who seek empowerment as members (see Atran, 2003, 2006). Consequentially, terrorist cells can function much like other criminal organizations whose aims are to increase their own strength through illegal means and to weaken opposing yet legitimate power structures.

Risk Factors

Several risk factors contribute to the selection of terrorist organizations in certain environments (see Horgan, 2014; Moghaddam & Marsella, 2003). Terrorists overall appear to be extremely parochially altruistic due to histories of conflict and various kinds of ideologies or war propaganda advocated by local leaders (e.g., Crenshaw, 2010; see also Dojcinovic, 2012). Further, most individuals who join terrorist organizations identify with a minority group whose ideology includes the exercise of justice and revenge against an occupying or threatening out-group (Silke, 2003, pp. 37–40). Besides these, one of the most prominent risk factors is a perceived power discrepancy between the would-be terrorist's group and a political entity, usually because of rapid sociocultural changes and the prospects of losing a traditional way of life or land (e.g., Crenshaw, 2003, 2007). In many cases, then, terrorism is selected as a "weapon of the weak" that ↳ offers a strategic advantage in the practice of collective violence against a powerful nation-state (see Thornton, 1964). Like most "ordinary men" who engage in collective violence, terrorists are not psychologically unstable but instead relatively normal individuals (e.g., Krueger, 2007). In fact, contrary to popular belief, what characterizes terrorists is neither poverty nor lack of education but rather high levels of motivation to achieve the social political goal of their organization (e.g., Atran, 2010).

It is here that we see the importance of the evolutionary roots for intergroup conflict and the unfortunate human potential for collective violence during war. Terrorist organizations recruit by appealing to peoples' propensities for protecting one's in-group and aggressing against what appears to be a genuine out-group threat. Terrorist leaders usually frame these threats within a crisis frame that insinuates in-group victimization. Likewise, violent responses to the entire out-group, who are said to be collectively responsible for victimization, are legitimated by equating the commission of violence with previous wars or revolutions (Jenkins, 1990). In so doing, terrorists offer a better-world ideology that promises worldly and otherworldly rewards for killing out-group members. Motivations for collective violence are further enhanced by the diffusion of responsibility among the terrorist organization (Schillinger, 2016), the prestige of terrorist leaders who often locally go unchallenged in their calls for violence (Schmid, 2011), and the community's acceptance of antagonistic ideologies that dehumanize the out-group (Matusitz, 2014). This can be witnessed by ISIS's rather successful recruitment strategy of appealing to Islamic fundamentalism, anti-Western rhetoric, and a purported cosmic struggle that renders recruits with an existential sense of purpose (e.g., Cottee, 2015; McCoy, 2014).

As the above example illustrates, terroristic motivations are also born out of genuine anxieties due to rapidly changing sociocultural systems, experiences of unjust governments, exploitive economic systems, relative deprivation, or discriminatory policing systems. These are, in fact, often brought about by natural disasters, imperialism, colonialism, or war (Lutz & Lutz, 2008). Along these lines, would-be terrorists may be motivated by a lack of social mobility within their densely populated community and the related opportunity of attaining social status and existential purpose through terrorist cells (Taspinar, 2009). Furthermore, terrorism is a risk factor in places where acts of extreme government repression or ongoing warfare incentivize violent resistance movements as opposed to nonviolent opposition and democratic modes of political change (Crenshaw, 2003). As Benesch notes (2012), these factors are especially dangerous in cultures with a history of armed conflict that experience a social crisis such as acts of governmental injustice, economic depressions or recessions, or invasion. Additional cultural characteristics for terrorism are a history of nationalism, the onset of rapid modernization, and governments that prove to be unable to curtail terrorism (Lutz & Lutz, 2008).

Of course, these factors are nothing new to many large-scale agricultural societies and the emergence of powerful states. From the onset of empires to the development of the modern nation-state, terrorism has been a weapon of the weak and has undergone four waves of cultural evolution (see Rapoport, 2003). Prior to the first wave, there existed what one might call "primal terrorism," such as that of the Sicarii or Jewish daggermen of the 1st century who killed supporters of Rome, and the Assassins or medieval Nizari Ismalis of the 11th century who targeted oppositional leaders in Persia or Christian Crusaders on their way to the Holy Land. Yet

because of their limited reach, these violence cadres may not constitute genuine terrorist organizations. For even though they attacked soft targets for political ends, the Sicarii and Assassins could neither challenge the absolute state sovereignty of their enemies nor mobilize media to propagate fear. Those respective factors arose only after the development of the Westphalian state in the 17th century and the onset of mass media in the late 19th century. According to Rapoport (2003), these factors are the necessary conditions for terrorism, and they did not coalesce until the development of the global system and its interconnected mass media in the 1880s. Once that occurred, terrorism emerged as a mode of intergroup conflict that used collective violence to challenge modern nation–states and, due to its effectiveness, has evolved since then in four waves.

Four Waves

According to Rapoport (2003), the first wave of terrorism occurred in eastern European and Central Asian cultures, where Marxists and anarchists, respectively, opposed the growing economic exploitations by capitalists and the rising power of the nation–state. To encourage opposition, Marxists and anarchists modeled liberation ideologies similar to those of the American and French Revolutions and adopted violent strategies to achieve their goals. For instance, the anarchists followed the Sicarii and ↳ Ismalis by killing oppositional leaders. In so doing, anarchists discovered that they could use the recent developments of printed mass media to further discredit the nation–state by revealing the latter's weaknesses. In particular, anarchists presumed that because the nation–state would lose its legitimacy if it could not prevent attacks on its leaders, it would be further delegitimated if it could not prevent attacks on its citizens (Garrison, 2007). As a result, anarchists engaged in indiscriminate attacks on the population that, having been widely reported, were expected to hasten the fall of the nation–state—a method known as "propaganda by the deed" (see Fleming, 1980). In response, President Theodore Roosevelt called the actions of anarchists "terrorism" and, like several leaders after him, appealed for an international effort to prevent such "crimes against the nations" (Rapoport, 2003, p. 52).

The second wave took place from the early to mid-20th century amid the anticolonial movement, wherein attempts were made both to delegitimate colonial states and force imperial powers to withdrawal from colonized territories (Rapoport, 2003). In these circumstances, terrorists once again made appeals to liberation ideologies and adopted the strategy of killing not only oppositional leaders but also colonial populations within the territory destined for liberation (see Chaliand & Blin, 2007). However, unlike the previous wave, second-wave terrorists used radio broadcasting and print media to portray their collective violence as a necessary means toward liberation (Kaplan, 2010, pp. 35–36). It was during this phase that "terrorism" and "freedom fighting" became especially blurred and, arguably, combined with liberation and the end of colonialism. Accordingly, the combination of targeting oppositional leaders, employing minimal collective violence, and mobilizing mass media to legitimate self-determination were together highly effective in ending imperialism and establishing new states in former colonial territories such as Ireland, Cyprus, and Algeria.

Evolving out of the above phase, third-wave terrorism combined with the ensuing Cold War, once again making terrorism a clear threat to noncolonial nation–states. During that time, the United States and Soviet Union engaged in several covert "ghost wars" throughout the Third World (Coll, 2004), where formerly colonized countries that had striven for national independence but had not reached full self-determination were forced either to side with one of the superpowers or to maintain a course for establishing territorial authority (Kaplan, 2010, pp. 37–38). The result was the emergence of many state-sponsored terrorist organizations that characterized their struggles as liberation (Rapoport, 2003, pp. 56–57) yet were better armed than their predecessors; they blurred the lines of intergroup conflict and collective violence by using guerrilla tactics and attacking combatants and noncombatants alike. Moreover, their use of collective violence was more extreme than previous phases—such as kidnappings, ransoming, torturing, or massacring—and television coverage made it possible for international audiences to witness such crimes. Consequentially, an international response to terrorism led by the United States, Britain, and Israel undertook military and financial means to isolate and

weaken terrorist organizations. As Rapoport observes (2003, pp. 57–59), many so-called liberation fronts either maintained terroristic threats and lost local or international support, eventually "burning out," or they renounced collective violence altogether, thus ceasing to be a terrorist organization and even achieving international recognition.

The fourth wave is the recent surge of religious terrorism, as characterized by organizations such as the Taliban, Al-Qaeda, and ISIS. While religion has often played an important role in warfare (see Armstrong, 2014), it is a rather salient feature of contemporary terrorists, even so-called secular organizations such as the Tamil Tigers, who exercise extreme ideologies and perform seemingly religious rituals (see Roberts, 2014). Besides embracing religion, what makes fourth-wave terrorists unique is their effectiveness. Through vastly organized networks, they engage in military battles with nation-state armies, undertake guerrilla operations, and embrace blatant acts of collective violence such as kidnappings, ransoming, and massacres, which have terrorized the citizens of nation-states unlike previous phases. And unlike third-wave terrorism, today's terrorists are able to exercise a great deal of control over their own propaganda by exploiting the Internet and social media. Hence, fourth-wave terrorists—and an emerging fifth wave that uses technological warfare—are able to engage in sophisticated intergroup conflict that combines collective violence and religion, making it more successful in recruiting and organizing coalitions, and thereby more challenging to nation-states than ever before (see Global Terrorism Index, 2015).

Co-opting the Religious System

So why has the last wave of terrorism strongly embraced religion? To answer this question, we turn to ↳ our final observation. Because religion can unite communities and promote cooperation among organizations to overcome collective action problems (see Atran, 2006, 2010; Sosis & Alcorta, 2003, 2008), it can be co-opted to support and encourage parochially altruistic group behavior, especially when conditions demand for it. Unlike previous waves, fourth-wave terrorists face significant collective action problems such as overcoming intense sociopolitical competition, maintaining a collective identity amid growing globalized (and pluralistic) environments, and discouraging defection. And because defection is the greatest threat to the longevity and effectiveness of terrorist organizations (see Berman, 2009), terrorist leaders have turned to local religious traditions to encourage group commitments. In this sense, religion is not the ultimate cause of fourth-wave terrorism, which, in many ways, is an after-effect of Cold War conflicts in the Third World and cultural developments between nation-states and nonstate organizations that oppose them (see Rapoport, 2003). Instead, religion is an important proximate mechanism for supporting intergroup conflict and justifying collective violence that many fourth-wave terrorists have embraced.

The Religious System

Besides being a fuzzy category, religion is an evolving complex that includes more than mere belief, including behavioral repertoires and local traditions (Sosis & Kiper, 2014). When analyzing religion, we thus take an adaptationist approach and examine religion as a complex adaptive system (see Alcorta & Sosis, 2005; Purzycki et al., 2014; Sosis, 2009). As such, "religion" is taken to be a dynamic complex consisting of cognitive, emotional, and behavioral adaptations and constituent elements that have coevolved throughout human history to support extensive human cooperation and coordination. The complex that emerges from these adaptations and constituents is a self-organizing structure that allows adherents to structurally coordinate with one another and thereby adapt to varying environments. Constituents include "ritual, myth, taboo, emotionally charged symbols, music, altered states of consciousness, commitment to supernatural agents, and afterlife beliefs among others" (Sosis, 2009, pp. 319–320). By engaging in these constituents, adherents signal group commitments, establish trust, and promote cooperation (e.g., Alcorta & Sosis, 2013).

The religious system can be further characterized in functional terms. The constituents of the system, such as ritual and counterintuitive supernatural beliefs, are flexible microstructures that coevolved and perpetually network together for the survivability of the macrostructure, which, in this case, is the religious community that adapts to dynamic social, political, and economic conditions (see Kiper & Sosis, 2014). Like all systems, the religious system requires energy to function and it is specifically fueled by ritual activity (Sosis, 2019) that is motivated by religious concepts generated and constrained by evolved cognitive modules (e.g., hazard-precaution system, hyperactive agency detection, theory of mind; see Barrett, 2004; Lienard & Boyer, 2006) and human behavioral propensities (e.g., costly signaling, reciprocal altruism; see Bulbulia & Sosis, 2011). By participating in rituals, adherents reinforce the meanings of religious concepts, "naturalize" social conventions, and signal group commitments (Rappaport, 1999). Furthermore, by adhering to social conditions, adherents create a shared ethos and instill cooperation and coordination within the group. Finally, group cooperation and coordination is the output of the religious system, from which adherents experience positive or negative environmental feedback that is expressed in their health and well-being, survival, and reproduction (Kiper & Sosis, 2014, 2019; Sosis, 2019).

Understood in this light, one appreciates why human communities throughout history have used the dynamics of religion not only to benefit adherents but also to promote cooperation and coordination. As Durkheim (1995/1912) observed:

> Religion is a unified system of beliefs and practices relative to sacred things, that is to say, things set apart and forbidden—beliefs and practices that unite into one single moral community called a Church, all those adhere to them. (p. 62)

Sacred things created in the religious system are given symbolic significance, moral meaning, and power through the performance of communal rituals (Durkheim, 1995/1912, p. 462). Such performances communicate significant information that is conducive to promoting trust and engage both evolved neuroendocrine responses that intensify emotions and autonomic functions that reinforce the learning and recall of learned tenets (Alcorta & Sosis, 2013). Communities throughout history have taken advantage of these dynamical features to reinforce group obligations and extreme behaviors on behalf of the group. Similarly, terrorist

p. 275 organizations have adopted the religious system to use its rituals, rites of passage, and counterintuitive beliefs
↳ to organize combatants, frame conflicts, and render violence as being sacred.

Ritual, Rites of Passage, and Counterintuitive Beliefs

Of all the constituents of the religious system, communal rituals provide groups with the most adaptive benefits, largely by means of establishing cooperation through performance. Rappaport (1999, p. 24) defines ritual as "the performance of more or less invariant sequences of formal acts and utterances not entirely encoded by the performers." Adherents adopt such invariant performances, which tend to be quite costly. Besides the physical and temporal demands of the ritual itself, costs include accompanying beliefs (the expressions and declarations expected of adherents), badges (socially demanded religious attire and bodily alterations), and bans (observed taboos and sacrifices; Sosis, 2006). Because the demands of rituals are hard to fake (e.g., Bulbulia, 2004), given that only members who are committed to the group's way of life are likely to perform them (see Irons, 2001), they act as legitimate "membership costs" for group members to signal their group loyalties. Accordingly, communal rituals serve as effective channels for conveying group commitments, building group trust, and thereby overcoming collective action problems (Sosis, 2003; Sosis & Alcorta, 2003, 2008).

A noticeable feature of fourth-wave terrorism is that it parallels the rise of fundamentalism throughout the world; both movements have embraced religious ideologies of so-called traditional values, scriptural literalism, and high ritualistic demands on adherents. Provided that rituals are understood as costly signals (i.e., hard-to-

fake signals that correlate with the qualities of the signaler), three factors appear to have motivated the rise in ritual requirements for fundamentalists and fourth-wave terrorists: the growing risk of apostasy generated by mass media technologies, multicultural openness in Western societies, and resource competition among modern multicultural nation-states (Sosis & Alcorta, 2008). Indeed, the highly demanding rituals among religious terrorists signal hard-to-fake in-group loyalties. To illustrate, a common ritual for fourth-wave terrorists is to give video testimony of one's faith and life prior to attacks, thereby committing the would-be terrorist to violence (Atran, 2003). The result of such rituals is trust among terrorists and, above all, the unlikelihood of defection, which is vital to the success of their clandestine activities (e.g., Hassan, 2001; Pape, 2005).

Perhaps the most important ritual for instilling group commitments is a rite of passage. Such rites are important for marking life transitions and rendering individuals with collective identities (e.g., van Gennep, 1960). During rites of passage, initiates learn what constitutes the sacred and acquire deeply emotional associations with group symbols whose meanings are embodied through grueling trials that accompany the ritual such as circumcision, sacrifice, or torture (see Sosis, 2004). Because most rites of passage occur during adolescence (when brain cortices are still developing and individuals are most sensitive to social ideals), they reshape the brains of adherents and render them with both group commitments and social identities (Alcorta, 2006, 2008). Rites of passage among violence cadres, such as initiations akin to boot camp, "fuse" adherents (i.e., they come to see their personal and group identities as equivalent), creating "bands of brothers" who are willing to die for one another, and teach adherents to respond violently to threats against group symbols (e.g., Whitehouse & Lanman, 2014). It has been noted that the religious rites of passage employed by communities of fourth-wave terrorists render not only adherents but also local adolescents with a desire for martyrdom (see Atran, 2003).

In addition to rituals and rites of passage, counterintuitive beliefs in supernatural agents and an afterlife are important incentives for persons within most religious systems. Supernatural agents are often believed to access socially strategic information about adherents and to both monitor and enforce community-defined moral behaviors, especially those concerning in-group cooperation (see Schloss & Murray, 2011). Through repeated ritual performances, adherents come to internalize counterintuitive beliefs about supernatural agents, such as gods, demons, or ghosts, which tend to include ideas about nonmaterial rewards and punishments in an expected afterlife (Sosis, 2003). Supernatural beliefs appear to be strong motivators for fourth-wave terrorists who commit acts of collective violence under the belief that they are divinely sanctioned to do so and will be rewarded for their actions in an afterlife. Thus, one of the ways to deter terrorism is to expose children and adolescents to alternative notions about supernatural agents and the afterlife before they are indoctrinated with beliefs that incentivize violence.

Framing the Conflict

Although the religious system is not the cause of most conflicts, it nevertheless facilitates organized ↳ violence in at least three additional ways. First, counterintuitive religious beliefs about supernatural forces engaged in a struggle of good and evil can be used to translate local political conflicts into cosmic struggles (Juergensmeyer, 2003). In other words, by transforming a 21st-century political struggle into a cosmic struggle, terrorist leaders motivate adherents to perceive themselves as participating in collective violence with divine significance, which not only heightens feelings of parochial altruism but also allows for moral disengagement. Along these lines, the US Center for Strategic Counterterrorism Communication (CSCC) recently commented that the power of ISIS recruitment is the simple message that Muslims are everywhere being threatened and ISIS is the divine solution (Cottee, 2015). Second, myths and taboos can be used to morally justify intergroup conflict (e.g., Sosis, Phillips, & Alcorta, 2012). This is usually done by legitimizing one's own cause as being consistent with the myths and taboos of one's tradition, and effectively demonizing opponents whose way of life is inconsistent with one's own. Finally, afterlife beliefs can be used to instill notions of eternal rewards for participating in violence. These spiritual rewards usually involve benefits in the afterlife that cannot be matched in this world. The 9/11 hijackers, for instance, believed they "would meet in the highest heaven" (Lincoln, 2003, p. 98), which presumably motivated and rationalized their actions.

Organizing Combatants

In many regards, fourth-wave terrorists are not very different from other communities at risk for intergroup conflict and collective violence. What makes them different, however, is the use of religious ritual as an important mechanism for banding terrorist organizations together. Yet ritual is liable to extreme progroup behaviors and the collective execution of violence as an extended sign of group commitment. Many scholars suggest that religious ritual is effective in intergroup conflict because it evolved to promote collective action in the face of predatory out-groups (e.g., Johnson, 2008). Rituals and communal trust account for the group acceptance of extreme behaviors. By increasing the costs of membership in times of crisis, such as wars, groups provide a means to convey trust and coordinate collectively (e.g., Sosis, Kress, & Boster, 2007).

Terrorists exploit the ability of religion not only to create tight social bonds among adherents, typically through communal ritual and shared counterintuitive beliefs (Sosis et al., 2012), but also to forge extended communities of support. Terrorists rely on extended anonymous communities that share in religious rituals for material and sociopolitical support. Support from an extended community is often vital for terrorist organizations. The publicity of terrorist attacks is often the key to maintaining the support of extended communities. As Atran (2010, p. 278) observes, "With publicity, even failed terrorist acts succeed in terrorizing; without publicity, terrorism would fade away."

Shared religious beliefs, however, may not be enough to ensure such support. For example, Ginges, Hansen, and Norenzayan (2009) found in surveys and a priming experiment among Palestinians and Israeli settlers that attendance at religious services was positively related to support for suicide attacks. Moreover, they similarly found increased support for martyrdom among attenders of religious services in six countries, representing six different religions, including Indian Hindus, British Protestants, and Mexican Catholics. Intriguingly, in all of these studies the frequency of prayer itself did not predict support for out-group violence and parochial altruism; only frequency of attendance at a house of worship did. As the authors note, attending religious services likely enhances coalitional commitments.

Sacred and Profane

Because the creation of the sacred and profane through ritual renders objects, events, and symbols with highly emotional significance (e.g., Durkheim, 1995/1912), it can be exploited by terrorists who wish to sanctify violence (e.g., Lincoln, 2014). In particular, through the use of intense rites of passage, individuals can be transformed socially into warriors (e.g., boot camp), instilled with feelings of communitas for compatriots (e.g., Turner, 1969) and a sense of the sacred, for which they are willing to give their lives (e.g., Hassan, 2001). Through rituals terrorist organizations also come to see their lands as holy, which often makes them nonnegotiable in economically rational terms (Sosis, 2011). Furthermore, when transgressed by out-groups, sacred lands are therefore defended at all costs because transgressions on them are seen not only as direct threats but also as repugnant acts (see also Ginges & Atran, 2009; 2011).

Remarkably, the sacred is in many cases encountered as physical space (Eliade, 1959). As noted by Pape (2005), most suicide terror campaigns center on a dispute over land and an ensuing intergroup conflict against an

p. 277   occupying power that must be ↳ removed from the homeland. In these conditions, religious symbolism can be used to represent land and conflict, and homelands in these conflicts are almost always publicly perceived as sacred. Such sacralization of land is an adaptive strategy aimed at increasing coalitional commitment (Sosis, 2011); and sacralizing land is not very difficult. Pape (2005, p. 85) observes that "although boundaries may be ambiguous and history may be contested, the homeland is imbued with memories, meanings, and emotions." Religious rituals sustain memories, shape meanings, and foster these emotions. Religion's reliance on such emotionally evocative symbols also explains why religious terrorist groups are more successful than secular ones in mobilizing their forces (Bloom, 2005). Religious terrorists do not appeal to rational political arguments to win public approval; they rely on sacred symbols imbued with emotional power to enlist followers in their cause.

Conclusion

In this chapter, we have taken an evolutionary approach to the conceptual and explanatory questions of terrorism to show that terrorism is a kind of collective violence, and that collective violence is a subset of intergroup conflict and coalitional aggression. Although coalitional aggression is the ultimate explanation for why humans engage in warfare, the latter emerged out of a history of intergroup conflict, as rooted in the evolved psychology of parochial altruism and the cultural evolution of human social groups. Some of the proximate mechanisms of intergroup conflict that contribute to collective violence include histories of warfare or occupation, perceived humiliation, feelings of revenge, densely population communities with subsistence grievances, and leaders who justify violence. In these circumstances, leaders and authority figures play a prominent role in providing ideologies of moral disengagement. While all of these factors contribute to forms of collective violence, such as ethnonationalist conflicts, terrorism differs in terms of its cultural history. Terrorism emerged as a violent response to the power and influence of nation-states, and acts of "terror" in the modern sense were not possible until the development of mass media in the late 19th century. From that time onward, terrorism underwent four cultural shifts that correspond to four historical periods and technological media developments: anarchism/print media, anticolonialism/radio, the Cold War/television, and post–Cold War religious terrorism/Internet. Otherwise known as fourth-wave terrorism, religious terrorism appears to have adopted the religious system in order to overcome collective action problems and coordinate the activities of would-be warriors, who are more effective than ever in engaging nation-states in armed conflicts and managing their own propaganda using mass media technologies.

When we examine religion from an evolutionary perspective, we see that it is not simply a set of beliefs but rather a complex adaptive system that includes recurrent constituents such as counterintuitive beliefs and rituals. These constituents can be powerful motivators of human behavior insofar as they have coalesced

throughout human history and evolved culturally to interact with human cognition and emotion to increase survivability in varying environments. As such, terrorists have exploited the religious system to frame and justify current political conflicts as cosmic struggles, organize combatants and extended communities of support, and render collective violence as sacred.

In practical terms, our analysis complements other disciplinary observations about ending terrorism. As noted in the latest Global Terrorism Index (2015, p. 65), "the West has...frequently responded to the threat of terrorism with the use of violence. Such violence has, all too often, been indiscriminate, and has had a tendency to exacerbate conflict dynamics rather than contribute to sustainable peace." We believe evolutionary theory can shed light on how to deal with terrorism by better understanding what terrorism is and what causes it. If combative strategists ignore the underlying evolutionary roots of terrorist activity, they will likely fail in ending terrorism because they underappreciate the important psychological, behavioral, and cultural drives behind terrorist activity.

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