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April 19, 2001

A Cognitive Approach to Understanding Religious Violence

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## Abstract

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This paper argues that the unitary explanations of religious violence that dominate current scholarship are inadequate and useless due to the multiplicity of possible motivations that could drive people to commit religious violence. Instead, this paper argues that scholars should examine the cognitive biases that increase the likelihood of religious violence. This approach provides a more universal and accurate tool for making coherent explanations of religious violence, as well as being a more effective starting point for analyzing each individual's choice to commit religious violence.

The paper starts by analyzing religion's role in inter- and intra-group relationships through the lens of commitment factors and essentialism. Through this approach, religion makes hostility to outsiders much more likely because of the strength of commitments and levels of trust between members of a particular religious community. Augmented by the human mind's essentialist perspective, this paper argues that religion can be a particularly catalyzing force for both intra- and inter-group violence to preserve and strengthen bonds of commitments and cooperation.

The next section of the paper expands upon religion's role in group relations but from a more individualistic perspective. The section argues that the idea of God as an agent that has full access to strategic information about people has significant implications for religious violence. Seeing God as an agent with complete access to such information mediates social interactions, gives higher authority to religious orders, and heightens people's emotional state when dealing with religion.

The last section takes a biological approach to the issue of religious violence in analyzing what physiological and cognitive factors directly affect the human propensity to commit religious violence. Humans typically overdetect agents when explaining phenomena, triggering what is commonly known as the flight-or-fight mentality. Because agent overdetection is a common aspect of how people analyze events as religious, it may lead to heightened levels of hostility, increasing the likelihood of violence

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## ***Introduction***

The purpose of this paper is to examine the biases in the human mind that increase the likelihood of religious violence. First, this paper will analyze why religious violence is *religious* violence. In other words, what makes religious violence different than other forms of violence? What makes religion a particularly catalyzing force for violence? Why don't the combatants choose a secular avenue for their goals? Second, the paper will examine what motivates people, once they join a religious group or organization, to commit violence. This paper will examine cognitive mechanisms in the brain to understand the human motivations behind both the religious aspect and the violent aspect of religious violence.

Another goal of this paper is to show that religious militants are not generally insane, pathological killers driven by a desire to destroy humanity. Instead, the biases in the brain that increase the likelihood of religious violence inhere within every person. Despite many people's thoughts that religiously violent acts such as suicide bombings are "unthinkable," they are a logical response to certain conditions for some people. Accepting that these militants are not simply irrational, insane people is necessary both to understand the violence committed and to attempt to solve it. Calling religious militants crazy, insane, and neurotic will achieve nothing. Instead, policymakers and scholars should acknowledge that there are certain cognitive properties in all human minds that bias people towards religious violence when certain conditions are met.

The paper begins with a literature review analyzing the current explanations for religious violence. I find that the current explanations are too unitary and generalizing to be effective. Instead of focusing on individual motivators of religious violence, of which there are a potentially infinite amount, scholars should instead understand the tendencies in the human mind



that create the potential for religious violence in the first place. In other words, scholars should understand why there are so many motivators for religious violence and why they are effective, not what each individual motivator is.

The paper then analyzes religion's role in inter- and intra-group relationships through the lens of commitment factors and essentialism. Through this approach, religion makes hostility to outsiders much more likely because of the strength of commitments and levels of trust between members of a particular religious community. Augmented by the human mind's essentialist perspective, this paper argues that religion can be a particularly catalyzing force for both intra- and inter-group violence to preserve and strengthen bonds of commitments and cooperation.

The next section of the paper expands upon religion's role in group relations but from a more individualistic perspective. The section argues that the idea of God as an agent that has full access to strategic information about people has significant implications for religious violence. Seeing God as an agent with complete access to such information mediates social interactions, gives higher authority to religious orders, and heightens people's emotional state when dealing with religion.

The last section takes a biological approach to the issue of religious violence in analyzing what physiological and cognitive factors directly affect the human propensity to commit religious violence. Humans typically overdetect agents when explaining phenomena, triggering what is commonly known as the flight-or-fight mentality. Because agent overdetection is a common aspect of how people analyze events as religious, it may lead to heightened levels of hostility, increasing the likelihood of violence.

## ***Methods***

For the purposes of this paper, I will use an extremely narrow definition of both religion and violence. Clifford Geertz proposes a definition that religion is “a system of symbols which acts to establish powerful, pervasive, and long-lasting moods and motivations in men by formulating conceptions of a general order of existence and clothing these conceptions with such an aura of factuality that the moods and motivations seem uniquely realistic.”<sup>1</sup> This definition highlights the powerful effect that religion has on its practitioners while noting that it is primarily a set of symbols. Each religion’s symbols have distinctive consequences and effects depending on the nature of the symbols and their use. A definition that acknowledges the powerful effects of these symbols on its practitioners is necessary to understand religious violence.

A significant problem with Geertz’s definition is that he ignores the role of the individual mind in creating religion and culture. He says that a “system of symbols” acts, but a system of symbols is not an autonomous body that can act on its own. Instead, individual people are the actors that make up culture and religion, but are unmentioned in Geertz’s definition.

Despite this shortfall, it is not relevant to this paper for two reasons. First, because this paper takes a cognitive approach to religion, a precise definition of religion is not necessary. According to the approach taken in this paper, religion is a byproduct of various cognitive mechanisms that have been developed in the brain for other purposes through evolution. Locking down religion to a set definition that is completely accurate is not necessary when the purpose is to examine how and why it operates, not what it is. In other words, despite a slight problem in Geertz’s definition, it is accurate enough to place parameters around what this paper is describing and what is affected by cognitive biases.

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<sup>1</sup> Clifford Geertz, "Religion as a Cultural System," *Anthropological Approaches to the Study of Religion*, ed. M. Banton (London: Tavistock, 1966)

Also, cognitive science corrects the problems of Geertz's definition. Whereas Geertz ignores the role of the individual and uses culture as the actor for religion, cognitive science shows that individual minds create culture as well as culture influencing individual minds. Therefore, interpreting Geertz's definition under a cognitive frame, we can argue that it is a system of symbols while also acknowledging that individual minds shape and propagate these systems.

When I refer to religion in this paper, I am specifically referring to organized religion, or a group of people who share common beliefs and practices about religion and the divine. Geertz's definition supports this framing of religion by defining it as a "system of symbols." Therefore, in this paper, religious people are people who belong to an organized religion and share a belief system with other people. This, in effect, excludes people who identify themselves as "spiritual but not religious," or people who believe in the divine but not in a particular religious path set out by one or more organized religions.<sup>2</sup> The reason for this is simple; no person has committed an act of severe religious violence (as defined in this paper) without belonging to an organized religion. The prevalence of religious violence stems from organized religion, not from the actions of lone spiritual people who do not belong to any religious organization.

When I discuss violence in this paper, I am talking about violence intended to influence political or social arrangements. In other words, the end goal of the violence has to be to change the social, political, or religious status quo. I am not referring to other interpretations of violence such as linguistic or psychological violence. Further, I am excluding other forms of physical

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<sup>2</sup> By organized religions, I do not simply mean the traditional religions of Islam, Christianity, Judaism, etc. I mean a group of people who share common beliefs and practices related to the divine.

violence such as spousal abuse and physical assault. These modes of violence are simply beyond the scope of this paper.

The phrase “religious violence” has a very specific meaning in this paper as well. Religion has to be the primary cause of the violence, not a secondary consideration. The violence has to be driven by religious justifications in and of themselves. Political considerations must be secondary to religious ones. The combatants must show that they are committing violence for the sake of religious doctrine, not for practical gains such as political freedoms, power, or wealth.

Groups that are included in this definition are organizations such as Al-Qaeda, Islamic Jihad, Hamas, Jaish-e-Mohammad, Abhinav Bharat, the National Liberation Front of Tripura, Russian National Unity, and the Jewish Defense League. All these groups commit violence in the name of their religion. Although they may desire political gains, it is not their prime motivation. Political power without religious power would not be desired by any of these groups. Therefore, their prime motivation is religion.

On the other hand, groups like Fatah, the Tamil Tigers, and the ETA (Basque Homeland and Freedom Group) do not commit religious violence. Their desired end is the achievement of political power and independence from Israel, an independent Tamil homeland, and the secession of the Basque region of Spain, respectively. Although all the groups identify with a particular religion (Fatah with Islam, ETA with Catholicism, and the Tamil Tigers with Hinduism), religion is not their primary motivation for violence.

This paper will draw heavily upon recent discoveries in the cognitive science of religion. This approach to the study of religion argues that humans are drawn to religion due to certain biases in the brain developed through evolution. Religion is the byproduct of many different

cognitive mechanisms that on face have nothing to do with religion in the first place. The confluence of all these unrelated mechanisms is what drives humans to believe so intensely in religion.

The cognitive approach to religion seeks to explain how humans acquire, practice, and transmit religion by means of cognitive capacities acquired through human evolution. Such an approach seeks to understand why religion is such a prevalent concept among human populations by analyzing biases in the human brain. Such biases, referred to in this paper as cognitive biases, are patterns of thought common to all people. As such, they constrain and modify the way people think. For example, common cognitive biases include “anchoring,” or the tendency to rely on one piece of information heavily when making decisions, “bias blind spot,” or the tendency to see oneself as less biased than other people, or the “Simmelweis reflex,” or the tendency to reject new evidence that opposes an already established idea.

Inherent in a cognitive approach is a rejection of the *sui generis* nature of religion which, as many scholars such as Max Müller<sup>3</sup> and Clifford Geertz<sup>4</sup> have argued, religion is unique and independent of all other social sciences. Due to the nature of faith, spirituality, and believing in the divine, religion cannot be reduced to a simple science or phenomenon. Instead, for these authors, religion is a personal experience that is unique. The cognitive approach to the study of religion challenges this claim, arguing that religion is a direct byproduct of mechanisms in the brain and can be studied scientifically just as well as psychology and sociology. All of the studies presented later in the paper show that religion can be studied scientifically, thus refuting the idea that religion is *sui generis*.

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<sup>3</sup> Max Müller, *Introduction to the Science of Religion* (London: Longmans Green and Co., 1882).

<sup>4</sup> Geertz, "Religion as a Cultural System."

Another criticism of a cognitive approach to religion is that it denies individuals agency and treats them as computers reduced solely to chemical reactions in the brain. While cognitive science does take into account brain function and cognitive mechanisms, it does not ignore the role of the individual. On the contrary, it is shortsighted to completely ignore the role that cognitive biases play in determining individual actions. For example, Pascal Boyer, among many other scholars, has argued that virtually all religions describe their supernatural agent or agents as being minimally counter-intuitive. In other words, all assumptions that people would make about such agents are true except for one or two counter-intuitive traits. As multiple studies have shown, this is due to the fact that the brain remembers minimally counter-intuitive agents better than either completely normal or maximally counter-intuitive ones.<sup>5</sup> Therefore, religious beliefs with a minimally counter-intuitive agent will win out in the marketplace of ideas because the brain remembers it better and feels more attached to such a concept. If individuals were completely free-thinkers without cognitive or cultural biases, patterns like this would not exist. It is important to acknowledge both individual agency and cognitive constraints and biases on human thought.

### ***Literature Review***

There are a wide variety of theories that people have proposed to explain the prevalence of religious violence in modern times. The majority of them are divided into two categories: those that claim religious violence is not about religion at all, and those that claim that religious violence is solely the fault of religious ideology. We shall see that the vast majority of current proposals to explain religious violence are inadequate both in theory and practice, by failing to

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<sup>5</sup> Pascal Boyer, *Religion Explained* (New York, New York: Basic Books, 2001), 60-78.

account for certain theories that explain the violence and by failing to account for many actual instances of violence.

### *Areligious Explanations of Religious Violence*

The theories proposed to explain religious violence that fall under this category largely discount religion as a factor in creating the violence. Examples of these theories include material grievance-based explanations and explanations that claim the violence is purely political or social. For example, Robert Pape, professor of political science at the University of Chicago, has argued that “there is little connection between suicide terrorism and Islamic fundamentalism, or any one of the world's religions.”<sup>6</sup> He goes on to conclude that suicide bombers commonly associated with Islam attack the United States because of solely political factors, not religious ones. Michael Sheehan, former military officer and government official, has stated that “A number of terrorist groups have portrayed their causes in religious and cultural terms. This is often a transparent tactic designed to conceal political goals, generate popular support and silence opposition.”<sup>7</sup> Further, Terry Nardin, professor of political science at the University of Singapore, states that “a basic problem is whether religious terrorism really differs, in its character and causes, from political terrorism... In short, one wonders whether the expression ‘religious terrorism’ is more than a journalistic convenience.”<sup>8</sup>

There are a number of problems that stem from denying the religious nature of religious violence. Treating religious violence like any other violence is inadequate and bound to fail to correctly analyze the problem and create a solution. First, religion clearly motivates many

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<sup>6</sup> Robert A. Pape, *Dying to Win: The Strategic Logic of Suicide Terrorism* (New York, New York: Random House, 2005).

<sup>7</sup> Interview with Michael Sheehan, Ambassador, *Terrorism: The Current Threat*, Brookings Institution. 2000.

<sup>8</sup> Terry Nardin, “Review: Terror in the Mind of God,” *The Journal of Politics* 64 (2001):683-4.

people to commit violence. It is hard to believe that figures such as Osama bin Laden and other prominent religiously violent individuals are motivated solely by secular goals and not religious beliefs. Osama bin Laden has made the religious nature of his violent acts known through quotes such as, "we should fully understand our religion. Fighting is a part of our religion and our Sharia [an Islamic legal code]. Those who love God and his Prophet and this religion cannot deny that. Whoever denies even a minor tenet of our religion commits the gravest sin in Islam." Bluntly, he has stated that "I'm fighting so I can die a martyr and go to heaven to meet God." Quotes such as these are abundant from all people engaged in religious violence from all religions. Even if other motivations are relevant to examining religious terrorism, it is clear that religion does at least play some role in the violence.

Further, studies done by Jeremy Ginges, Isela Hansen, and Ara Norenzayan have shown that in the West Bank and Gaza, where political grievances would be most high, the greatest predictor of support of suicide bombings is the frequency of involvement in religious rituals. Expanding upon the findings, they also found similar results in groups of Indian Hindus, Russian Orthodox, Mexican Catholics, British Protestants, and Indonesian Muslims.<sup>9</sup> The advocates of a secular view of religious violence would cite these groups as examples of politics preceding religion, as people in the West Bank and Gaza are relatively impoverished and oppressed. However, these studies show that frequency of involvement in religious rituals is the greatest indicator of support for violence, not poverty or hatred of Israel.

Second, in the case of religious violence, sacred and symbolic values trump any sort of secular gains. The goal is not to acquire money or territorial conquest, but instead to advance a sacred value. There are a few examples to illustrate this point. First, Jeremy Ginges, Scott

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<sup>9</sup> Jeremy Ginges, Ian Hansen, and Ara Norenzayan, "Religion and Support for Suicide Attacks," *Psychological Science* 20 (2009):224-230.



Atran, Douglas Medin, and Khalil Shikaki conducted a study that spanned across occupied Palestine and Israel proper. They asked many supporters of religious violence various scenarios that all included secular compensation for abandonment of their sacred goals. For example, they asked whether they would stop fighting if the United States gave Palestine ten billion dollars for aid. A significant majority of the respondents instantly said no and proceeded to become angry and indignant at such a question as if they were bribed to give up their cause.<sup>10</sup> Many other scenarios included a relative paying them money in exchange to stay home instead of engaging in violence, other international bodies paying their country money, and so forth. What was striking was that when given scenarios in which their enemies gave them symbolic concessions instead of secular concessions, the militants became less confrontational and leaned more towards peace. For example, if Israel would publicly apologize for oppressing Palestinians, Palestinians would be much more likely to compromise and sacrifice to achieve peace.

These questions show that the militants value sacred and symbolic actions greater than purely secular considerations. The religious aspect of the conflicts must be taken into account.

Further, the rational cost-benefit analysis inherent in the secular explanations for religious violence does not adequately explain the motivations and thoughts of the combatants. In order for people to commit religious violence to gain a material goal such as political power or money, they must commit violence for rational self-benefit. However, in addition to the importance of symbolic actions shown above, multiple studies have shown that the combatants do not engage in rational cost-benefit analysis. First, from an economic standpoint, most religious combatants are actually relatively well-off compared to the rest of the population. This has been shown in

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<sup>10</sup> Jeremy Ginges, Scott Atran, Douglas Medin, and Khalil Shikaki, "Sacred Bounds on Rational Resolution of Violent Political Conflict," *National Academy of Sciences* 104 (2007):757-60.

studies ranging all over the world including Lebanon,<sup>11</sup> Palestine,<sup>12</sup> Afghanistan, Beirut, Bangladesh,<sup>13</sup> and South America.<sup>14</sup> If combatants were committing violence for material, secular goals instead of religious ones, then one would expect the combatants to be poor or have significant grievances against the objects of their violence.

Another study, conducted by Scott Atran, found that religious combatants did not take into account rational calculus when committing religious violence.<sup>15</sup> Surveying supporters of jihad in Palestine, he asked if they would delay a suicide bombing if they had to take care of their sick father. A majority of the people asked said that they would delay it for a short while in that case. However, if asked if they would delay a suicide bombing to take care of the whole family or an entire village, they responded negatively and said that they would continue with the bombing as planned, despite answering that they would delay it for their father who would be a subset of groups in the second question. The survey shows that they do not think rationally when preparing for religious violence.

Also, a survey, conducted by Scott Atran again, adds to this argument. He once again surveyed supporters of jihad in Palestine and asked them if they would accept a monetary gift, given to their families, after their suicide bombing mission.<sup>16</sup> An overwhelming majority of the respondents said that they would not accept the gift and in fact became repulsed and offended by such a question. They said that partaking in a suicide mission is a gift in itself and they would not accept money or any other “bribe” in exchange. If they were driven by cost-benefit analysis

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<sup>11</sup> Alan Krueger and Jitka Maleckova, “Poverty and Terrorism: Is There a Causal Connection?,” *Journal of Economic Perspectives*, 2003.

<sup>12</sup> Nasra Hassan, “An Arsenal of Believers,” *The New Yorker*, 2001.

<sup>13</sup> Charles Russel and Bowman Miller, “Profile of a Terrorist,” *Perspectives on Terrorism*, 1983. p. 55.

<sup>14</sup> Alberto Abadie, “Poverty, Political Freedom, and the Roots of Terrorism”, *National Bureau of Economic Research*, 2004.

<sup>15</sup> Scott Atran, *Talking to the Enemy* (New York, New York: Harper Collins, 2005). p. 342.

<sup>16</sup> *Ibid.* 343.

or by material gain, then these religious combatants should have accepted the money on behalf of their families.

Atran's last survey dealt with Israeli settlers in the West Bank and Gaza. He asked them why they live in settlements in such a dangerous area when they could be living in peace and comfort in the heart of Israel.<sup>17</sup> The respondents said that they saw it as their God-given right to settle on that land and so they would take the risks, even to the point of engaging in violence. The settlers are willing to give up better living conditions in order to settle on their "God-given" land, showing that they sacrifice rational self-benefit for the advancement of their religious beliefs.

Third, there would be no reason for people to join religious organizations and wage violence in the name of religion if they had purely secular goals. There are plenty of secular violent organizations with a variety of different aims such as the Partiya Karkeren Kurdistan in Turkey, the Front de Liberation de Quebec in Canada, Partito Comunista Politico-Militare in Italy, 17 November in Greece, and so on. If they desired material gain, then becoming criminals on the black market would probably be their best choice. If it was to destroy the United States because of political grievances, then any militant right or left-wing, anarchist or communist organizations would suffice. Secular terrorist organizations dominated much of the history of the modern world in terms of militant organizations, meaning that there would be no reason to shift to religiously-inspired violence unless one truly believes that they are fighting for religion.

Lastly, religion is a distinctive catalyst to violence. Some scholars such as Terry Nardin have argued that although religious violence has a symbolic aspect, secular causes such as communism or anarchy also include a symbolic or sacred element.<sup>18</sup> However, although it is

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<sup>17</sup> Ibid. 344.

<sup>18</sup> Nardin, "Review: Terror in the Mind of God."

true that secular causes can include a sacred element, the brain processes religion in a different way than it does secular causes. There are several factors inherent in religion that make it a catalyst for violence that are not present in secular causes. The first section in this paper will discuss these factors in more detail.

This paper does not ignore the role that secular factors play in religious violence. Clearly, political and social factors do have an effect on an individual's decision to commit religious violence. Otherwise, each religious person would be just as likely to commit violence in the name of God. There would be no difference between a Catholic living in the United States and a Catholic living in Northern Ireland during the 1970's and 1980's. However, completely ignoring the role that religion plays in catalyzing people to violence is misguided and inadequate.

As Scott Atran wrote, "cultures and religions do not exist apart from the individual minds that constitute them and the environments that constrain them, any more than biological species and varieties exist independently of the individual organisms that compose them and the environments that conform them."<sup>19</sup> In other words, it is impossible to create a complete analysis of religion without understanding the cognitive principles that have formed such beliefs and the culture that has constrained them. What Atran leaves out, however, is the inverse. Not only do individual minds shape religion, but religion and culture shapes the mind just as much. The way people process information, hold values, believe in principles, and carry out their daily lives are all shaped by culture, of which religion is an essential part. Exploring religious violence and cognitive science in tandem provides insights into both disciplines.

### *Economic Grievance Explanations*

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<sup>19</sup> Scott Atran, *In Gods We Trust* (New York, New York: Oxford University Press, 2002) p. 10.

One group of scholars argues for a grievance-based explanation for religious violence, or that people commit violence due to grievances that they hold against the system such as inequality, oppression, lack of human rights, or lack of educational opportunities. These scholars include Gary Becker,<sup>20</sup> Daniel Hamermesh, Neal Soss,<sup>21</sup> and Paul Berman.<sup>22</sup> It is perhaps the prevailing view in the eyes of many world leaders as well, ranging from Colin Powell and George W. Bush<sup>23</sup> to Al Gore<sup>24</sup> and Tony Blair<sup>25</sup>. For these scholars, religion is a secondary factor that does not factor into the actual decision-making processes of the combatants.

The most common of these grievance-based explanations for religious violence focuses on the issue of poverty and education. The basic logic of this approach is that religious violence attracts people who have “nothing to lose.” Building upon economic rationality, these scholars argue that people with very little chance to become economically successful are more likely to turn to violent organizations. Religiously violent organizations in particular are appealing to these people because of their guarantee of a glorious afterlife that solves all of their economic grievances. Therefore, people with fewer opportunities in the secular world are expected to be more likely to commit crimes or join religious sects as a means of gaining opportunities and power.

However, this view is misleading and insufficient to fully explain the complexities of religious violence. First, there is plenty of anecdotal evidence that serves to discredit this theory. Osama bin Laden was part of an extremely wealthy Saudi family of businessmen. He graduated from King Abdulaziz University with a degree in public administration and was wealthy.<sup>26</sup> His

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<sup>20</sup> Gary Becker, “Crime and Punishment: An Economic Approach,” *The Journal of Political Economy*, 1968.

<sup>21</sup> Daniel Hamermesh and Neal Soss, “An Economic Theory of Suicide,” *The Journal of Political Economy*, 1974.

<sup>22</sup> Paul Berman, *Terror and Liberalism* (New York, New York: WW Norton & Company, 2003).

<sup>23</sup> George Bush, *Speech to the U.N Conference on Poverty*, Monterey, Mexico, 2002.

<sup>24</sup> Al Gore, *Speech to the Council on Foreign Relations*, New York, New York, 2002.

<sup>25</sup> Tony Blair, *Speech to the Lord Mayor’s Banquet*, London, England, 2001.

<sup>26</sup> PBS Frontline, *A Biography of Osama bin Laden*.

life was relatively luxurious compared to the millions of other Saudis living at the time. Further, the 9/11 hijackers were middle-class men with high degrees of technical skill and expertise in engineering. They studied in the United States and had well-off lives.<sup>27</sup> Also, Nasra Hassan, a scholar on the Middle East, interviewed the families of 250 religiously-inspired suicide bombers in Palestine and found that “none were uneducated, desperately poor, simple minded, or depressed. Many were middle class and, unless they were fugitives, held paying jobs.”<sup>28</sup>

In addition to an abundance of anecdotal evidence that tends to argue against the economic grievance model, numerous statistical studies serve to discredit the model. Alan Krueger and Jitka Maleckova conducted a multifaceted study aimed at testing the economic grievance theory. Drawing parallels between religious violence and hate crimes, they found that hate crimes have no link to economic condition globally. Rich people are just as likely to commit violence based on religion, race, and sexuality as poor people. Further, using data from the Palestinian Center for Policy and Survey Research consisting of 1357 Palestinians, they found that support for the 9/11 attacks was not correlated to poverty. Just as many middle and upper class citizens supported the attacks as people in poverty. Lastly, they studied the economic situation of religious militants associated with Hezbollah. Using data from biographies and accounts of the attacks, they found that the militants were better educated and less poor when compared to the general population of Lebanon.<sup>29</sup>

Another study examining the economic grievance theory was performed by Claude Berrebi, an economist with the RAND Corporation. He studied members of Hamas and Palestinian Islamic Jihad who died while committing violence in the name of religion. Like

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<sup>27</sup> Jodi Wilgoren, “After the Attacks: The Hijackers; A Terrorist Profile Emerges that Confounds the Experts,” *New York Times*, 2001.

<sup>28</sup> Hassan, “An Arsenal of Believers.”

<sup>29</sup> Krueger and Maleckova, “Poverty and Terrorism: Is There a Causal Connection?”

Krueger and Maleckova, he found that the religious militants were in fact wealthier and more educated than the general populace with 16% being poor compared to 31% of the public and 96% having a high school diploma compared to 51% of the public.<sup>30</sup>

To add a comparative dimension to these studies, Charles Russell and Bowman Miller compiled data on 350 religiously affiliated combatants in the Middle East, East Asia, Europe, and the United States. Their findings are consistent with the other studies. They found that “approximately two-thirds of those identified terrorists are persons with some university training, university graduates, or post-graduate students.”<sup>31</sup>

Broadening the study even more, Alberto Abadie analyzed the economic data of countries around the world and compared them to religious violence emanating from within that country. He found that poorer countries do not have more religious violence than wealthier countries.<sup>32</sup> Further, Cait Murphy notes that of the fifty poorest countries in the world, only Afghanistan and Bangladesh have substantial amounts of religious violence.<sup>33</sup> The statistical and anecdotal evidence opposed to the economic grievance theory is substantial.

In sum, economic factors are in no way the sole or determining factor in religious violence. This is not to say, however, that economics is completely irrelevant altogether. Based upon the results of the studies, people who commit religious violence are educated and from the middle class. Seemingly, people have to be educated enough to understand and be emotionally affected by political or religious issues to decide to fight for the cause. People in poverty are concerned about getting food on their table and finding a way to provide a future for their children, not protest in the streets and fight for their religious cause. Only when a buffer is in

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<sup>30</sup> Claude Berrebi, “Evidence About the Link Between Education, Poverty, and Terrorism among Palestinians,” *Peace Economics, Peace Science, and Public Policy*, 2007.

<sup>31</sup> Russel and Miller, *Profile of a Terrorist*.

<sup>32</sup> Alberto Abadie, “Poverty, Political Freedom, and the Roots of Terrorism.”

<sup>33</sup> Cait Murphy, “The Poverty/Terror Myth,” *FORTUNE Magazine*, 2007.

place that provides a safe economic situation and an informed education level can people then consider fighting for a religious cause. As Sheikh Yussuf al-Qaradhawi, a cleric in the Muslim Brotherhood, said, “He who commits suicide kills himself for his own benefit, he who commits martyrdom sacrifices himself for the sake of his religion and his nation...The Mujahed is full of hope.”<sup>34</sup>

A common theme among all grievance theories is the lack of acknowledgement of religion as a cause of conflict. Instead, poverty, lack of human rights, political oppression, or torture are the causes of religious violence. Any theory that does not take religion into account is wholly inadequate for explaining religious violence.

First, why would the combatants use religion at all if it was simply a question of a certain grievance? Many instances of political terrorism exist, completely unrelated to religion. Felice Orsini attempted to assassinate Napoleon purely for political gain, Sergey Nechayev founded a purely atheistic group that used violence for political gain, and Timothy McVeigh<sup>35</sup> bombed the Federal Building in Oklahoma City to show his hatred for the federal government. It would be much simpler and more effective for potential militants to use a political message and commit an act of political terrorism instead. Sending an enigmatic message guised in religious language does virtually nothing to correct the perceived political wrongs of the protesters.

Second, a significant portion of religious violence is directed at members of one’s own group.<sup>36</sup> For example, the IRA killed or tortured many of its own members because they did not

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<sup>34</sup> Sheikh Yussuf al-Qaradhawi, “al-Ahram al-Arabi,” in Scott Atran, *Talking to the Enemy* (New York, New York: Harper Collins, 2010).

<sup>35</sup> I acknowledge that many commentators claim that he acted upon religious impulses, his own writings and admission say that he was acting in response to the Waco Siege and federal government control. According to the definition of religious violence posed at the start of the paper, he would not qualify as religion is not the primary motivation for conflict.

<sup>36</sup> Pascal Boyer, *Religion Explained*, 2001.



follow certain religious principles.<sup>37</sup> The Taliban also directs many attacks against its own members who commit seemingly sinful acts. This violence seems unexplainable under a grievance-based theory, which accounts only for attacks directed towards a political end.

Lastly, many acts of religious violence do not aim to change the government or its policies. Violence against people who drink alcohol or smoke, killings of apostates, the attempted assassination of the Dutch cartoonist who depicted Mohammad with a bomb, and the threats and attacks against Salman Rushdie who wrote The Satanic Verses all have a distinctly religious purpose. They are not done to influence human rights violations or implement democracy, but are based upon a supposed religious obligation.

### ***Purely Religious Explanations of Religious Violence***

Many scholars argue that religion is the sole cause of religious violence – that people are motivated purely by the creed of their religion. Many supposed justifications include God’s orders to kill infidels, reward in heaven, and bringing about the apocalypse. Proponents of this view include the “new atheists” of Christopher Hitchens, Samuel Harris, and Richard Dawkins. They argue that people will kill others because the Bible, Torah, Qur’an, or any other holy text has references to killing non-believers to gain God’s favor. For them, because it is God’s word, it is final and absolute so people cannot be negotiated with and they are killing for a cause above anything in this world.

For example, in The End of Faith, Sam Harris writes that “we will see that the greatest problem confronting civilization is not merely religious extremism: rather, it is the larger set of cultural and intellectual accommodations we have made to faith itself.”<sup>38</sup> Further, he also states

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<sup>37</sup> Denis Murray, *Punishment Beatings: A Grip of Fear*, BBC, 1999.

<sup>38</sup> Samuel Harris, *The End of Faith* (New York: New York: W.W. Norton Company, 2004).

in *A Letter to a Christian Nation* that “it is, therefore, not an exaggeration to say that if the city of New York were suddenly replaced by a ball of fire, some significant percentage of the American population would see a silver-lining in the subsequent mushroom cloud, as it would suggest to them that the best thing that is ever going to happen was about to happen: the return of Christ.”<sup>39</sup>

In *The God Delusion*, Richard Dawkins writes that “Peter Sutcliffe, the Yorkshire Ripper, distinctly heard the voice of Jesus telling him to kill women, and he was locked up for life.

George W. Bush says that god told him to invade Iraq (a pity God didn't vouchsafe him a revelation that there were no weapons of mass destruction).”<sup>40</sup> Christopher Hitchens writes in *God Is Not Great* that “The Bible may, indeed does, contain a warrant for trafficking in humans, for ethnic cleansing, for slavery, for bride-price, and for indiscriminate massacre, but we are not bound by any of it because it was put together by crude, uncultured human mammals.”<sup>41</sup>

There are a number of reasons why this approach to religious violence is inadequate and incorrect. Not all religious people are motivated to violence. In fact, a significant majority of religious people in the world do not commit violence in the name of God and find it disturbing that people do so. Just because a small minority of religious people commit violence does not mean that religion in itself is evil and is the sole cause of violence. To ignore environmental, social, and political factors in understanding religious violence ignores an essential part of the picture. There is a significant difference in the likelihood of people committing violence if they are Muslims living in Palestine or Muslims living in the United States, or if they are Christians living in Italy or Christians living in Indonesia, or if they are Jews living in New York or Jews living in the Israeli settlements in occupied Palestine. There must be political, social,

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<sup>39</sup> Samuel Harris, *A Letter to a Christian Nation* (Toronto, Canada: Random House, 2006).

<sup>40</sup> Richard Dawkins, *The God Delusion* (Great Britain: Bantam Press, 2008).

<sup>41</sup> Christopher Hitchens, *God Is Not Great* (New York, New York: Hachette Book Group, 2007).

environmental, or cultural factors that differentiate between the religious people who support violence and the religious people who do not.

Further, this approach fails to account for all of the non-violent, beneficial actions that religion has spurred. For instance, Muslim charities took it upon themselves to save thousands of Tutsis and Hutus from Rwanda during the genocide, an action which secular organizations refused to take.<sup>42</sup> The charity wing of Hezbollah has stepped in to buy food, provide health services, rebuild homes, pay for school, given loans for small businesses, and build hospitals when the secular government was unable or unwilling.<sup>43</sup> In Jamaica, where religious rates are extremely high, it is the religious organizations that are trying to stop discrimination and violence.<sup>44</sup> There are countless instances of religion helping people, just as there are just as many if not more instances of religious violence.

Some scholars, such as Harris, argue that it is the cult-like nature of some religions that spur violence. However, deep devotion to a tight-knit group of religious people is not a complete indicator of violence either. The U.S. National Election Study found that Pentecostals, who have a tight-knit devotion to one another, show stronger trust to people outside of their group than atheists, Catholics, mainline Protestants, Jews, or people of virtually all other religious affiliations.<sup>45</sup> Their results have been replicated with other highly devoted religious people across the country. Studies have found that there is no difference in trust levels or intolerance between atheists and religious people as well.<sup>46</sup> The Soka Gakkai International, a massive yet very tight-knit organization of socially engaged Buddhists, focuses on world peace almost as

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<sup>42</sup> Marc Lacey, "Ten Years after Horror, Rwandans Turn to Islam," *New York Times*, April 7, 2004.

<sup>43</sup> Sabrina Tavernise, "Charity Wins Deep Loyalty for Hezbollah," *New York Times*, August 5, 2006.

<sup>44</sup> James Keist, "Anti-gay Violence in Jamaica Continues," *The Examiner.com*, September 19, 2009.

<sup>45</sup> Michael Welch, David Sikkink, Eric Sartain, and Carolyn Bond, "Trust in God and Trust in Man: The Ambivalent Role of Religion in Shaping Dimensions of Social Trust," *Journal for the Scientific Study of Religion*, 43:317-43.

<sup>46</sup> Ara Norenzayan and Ian Hansen, "Does Religion Promote Scapegoating?," in Atran, *Talking to the Enemy*. p. 416.

much as Buddhism itself. The point is that even if religion is a catalyst to violence, as history clearly proves, it is not the sole determinant of violent actions.

### *Religious Texts*

Another argument that proponents of this view make argue that virtually all religious texts justify violence against non-believers. Since it is God's word, believers are commanded by a power greater than anything on earth to kill. This argument breaks down when the rest of the religious texts are examined as well. It is undeniable that almost all religious texts have a justification for violence if interpreted in a certain way. In the Old Testament, it states that "if a man still prophesies, his parents, father and mother, shall say to him, 'You shall not live, because you have spoken a lie in the name of the Lord.' When he prophesies, his parents, father and mother, shall thrust him through."<sup>47</sup> The Qur'an states "believers, take neither Jews nor Christians for your friends"<sup>48</sup> and "'make war on them until idolatry shall cease and God's religion shall reign supreme."<sup>49</sup> The Bhagavad Gita, Mahabharata, and the Vedas all tell stories of Gods ordering the killing and slaughter of countless people. Some Buddhists have taken their holy texts relating to nothingness, reincarnation, and non-duality as reasons why killing is acceptable.<sup>50</sup>

Despite these claims, there are justifications for non-violence and peace in all of these texts as well. The Old Testament includes the famous sixth commandment of "thou shall not kill" and other quotes such as "but this word of the Lord came to me: 'You have shed much blood and have fought many wars. You are not to build a house for my Name, because you have

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<sup>47</sup> Zechariah 13:3

<sup>48</sup> Surah 5:51

<sup>49</sup> Surah 8:36

<sup>50</sup> Brian Daizen Victoria, *Zen at War* (New York, New York: Rowman and Littlefield Publishers, 2006).

shed much blood on the earth in my sight.”<sup>51</sup> The Qur’an states that “there shall be no compulsion in religion: the right way is now distinct from the wrong way”<sup>52</sup> and that “whoever kills another one without justifiable cause, surely he is killing all of humanity. And whoever saves the life of another one, surely he saves the lives of all of humanity.”<sup>53</sup> The Hindu holy texts include stories of people who refuse to fight and would rather risk their own death than kill another. Buddhists, such as Thich Nhat Hanh, have used the same concepts of nothingness, reincarnation, and non-duality as reasons why Buddhists should seek peace and compassion in the world. The purpose of this is not to argue over interpretation of the holy texts and whether they justify peace or violence, but instead to show that justifications can be claimed in both directions. Religious texts include passages about violence and non-violence.

Religious texts may, in some circumstances, spur people to violence as they believe they are fulfilling divine will, yet it is not a completely adequate explanation. A textual explanation begs the question of why certain individuals are motivated by the texts and others are not, why certain people are drawn towards the violent aspects and others enjoy the peaceful ones. The answer to these questions comes from a cognitive framework of evaluating people’s choices, biases, and beliefs.

### *The Afterlife as Motivation*

Another argument cited by Sam Harris is that the religious combatants are fighting to gain eternal reward in the afterlife. According to Harris, Christians are killing to go to heaven and Muslims are fighting to gain virgins in heaven. This argument also fails to account for all religious militants. First, many religions don’t have rewards in the afterlife for people who fight

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<sup>51</sup> 1 Chronicles 22:8

<sup>52</sup> Surah 2:256

<sup>53</sup> Sura Al Ma'aidah: Ayah 32

for their religion. There is no doctrinal basis for a reward in the afterlife in Buddhism, for example, whose followers believe that they will be reincarnated into the mundane world until they achieve personal enlightenment. Judaism also places very little emphasis on heaven or hell and little to no emphasis on fighting to get to heaven. Also, as Scott Atran found in his interviews with leaders of Hamas and Islamic Jihad, the leaders of religiously violent organizations do not accept martyrs who are seeking rewards in the afterlife. If a recruit says that they want to become a martyr for monetary gain or virgins in heaven, they will send them away. Instead, they are seeking people who want to fight for God and religion, not virgins.<sup>54</sup>

Just as with the explanation that relies upon religious texts, the afterlife may motivate some people to commit religious violence but it is not enough on its own. It does not explain even the majority of religious violence and still begs the question of why different people have different responses to these phenomena. This paper seeks to explain the underlying factors that make people even consider religious violence in the first place.

### ***Clash of Civilizations***

Samuel Huntington, former professor of political science at Harvard, has famously argued that religious violence and global conflict in general is a result of a “clash of civilizations.” According to Huntington, cultural and religious identities will be the major source of conflict in the post-Cold War era. Some factors that he attributes to the rise in Christian-Muslim violence are missionaries trying to proselytize, the absolute Truth claims of each religion, population growth in the Arab world, historical tensions from prior conquests, and the

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<sup>54</sup> Atran, *Talking to the Enemy*.

aggressive imposing of Western values on the Muslim world.<sup>55</sup> For Huntington, the rise in Islamic religious violence is due to the fundamental incompatibility between Islamic civilization and the West.

Huntington's thesis is not an adequate explanation for the rise in religious violence between civilizations for many reasons. First, Huntington outlines major civilizations that will supposedly come into conflict. These civilizations include the West, Orthodox, Islamic, African, Latin American, Sinic, Hindu, Buddhist, and Japanese. These civilizations, however, are not homogenous and cannot be grouped together as such. On a state level, it is clear that Mongolia, listed as part of the Buddhist civilization, does not share a common identity with Laos and Cambodia. Russia does not share the same beliefs, practices, culture, or politics as Greece, both part of the Orthodox civilization. Pakistan, Turkey, Morocco, Saudi Arabia, and Qatar also have major differences in politics and culture, yet they are grouped together as part of the Islamic civilization.

Further, Huntington's civilization groupings ignore diversity on the level of culture and religion. For instance, Saudi Arabia mostly follows a strict Sunni Salafi form of Islam, while Muslims in Iran follow a strict Shiite form of Islam. Grouping the entire Islamic world as one forces hundreds or thousands of different forms into one religion, supposedly belonging to one creed. One can see how Takfiri Muslims – an offshoot of Salafi Islam that is extremely conservative and hostile to non-Muslims – would create a clash of civilizations with the West, but it is difficult to imagine such a scenario with more liberal Muslims in urban Jordan.

On yet another level, Huntington's thesis ignores the role of the individual. Similar to the criticism of Geertz's definition, Huntington seemingly establishes culture and civilization as an

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<sup>55</sup> Samuel Huntington, *The Clash of Civilizations and the Remaking of World Order* (New York: New York: Touchstone Publishing, 1996).

agent instead of the human individual. The “clash of civilizations” thesis ignores diversity on the level of the individual by not accounting for minority groups in each area. Lebanon is included in the Islamic civilization, yet the Maronite Christians control a large amount of government power and constitute 40% of the population. Chechnya is included in the orthodox civilization because it is part of Russia, yet many individuals in the region are Muslim. Overall, the groupings do not account for racial, ethnic, cultural, and religious diversity within areas and establishes the majority groups as the complete group.

Not only do these opposing views and cultures exist in supposedly homogenous civilizations, but they are extremely powerful. The call for a pan-Arab identity in the 1960’s failed due to competing ideologies between states and the diversity of all Arab and Islamic countries. The countries in the former Soviet bloc, mostly comprising what is Huntington’s orthodox civilization, split and now have independent culture and ideology. The call for a unified Latin America in support of socialism has resonated with only a few countries. The diverse, independent, opposing views of individuals and countries have empirically trumped calls to unity as a civilization.

Second, Oliver McTernan, co-founder of Forward Thinking, a British NGO focused on peace-building, has performed statistical studies testing Huntington’s principle argument.<sup>56</sup> According to McTernan, the past few decades have marked a significant decline in inter-civilization conflict. The World Wars have ceased, the Cold War ended without a major US-Russian war, and there are only a few instances of inter-civilization war such as the 2001 invasion of Iraq. Most conflicts since the Cold War have actually been within each civilization. Countless civil wars have taken place in places such as Darfur, Uganda, Sri Lanka, Somalia, Sierre Leone, Liberia, Congo, Chechnya, Palestine, Peru, and Georgia. Inter-state wars within a

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<sup>56</sup> Oliver McTernan, *Violence in God’s Name* (London: Darton, Longman, and Todd, 2003).



civilization has also risen dramatically, such as the invasion of Georgia by Russia, Somalia by Ethiopia, Ethiopia by Eritrea, and Kuwait by Iraq. The aftermath of the Cold War has seemingly caused increased tensions within civilizations, not between them.

This also bolsters the third argument against Huntington's "clash of civilizations" thesis. The cause of conflicts is not a clash of civilizations in the post-Cold War era, but instead a collapse of civilization boundaries. With rapid globalization, free markets, and an open marketplace of ideas, traditional civilization boundaries have almost disintegrated into a mixing of cultures, ideas, and religions. Edward Said, scholar on the Middle East, has critiqued Huntington's thesis by ignoring the interdependent mixing of cultures. Blogs, western clothing, western media, and ideas have all penetrated the Middle East, just as the West is becoming more familiar with Islamic and Arab ideas.<sup>57</sup> There are no Western or Islamic empires anymore, but independent actors intermixing with one another.

This is especially true in the context of religious violence. Pascal Boyer, anthropologist and professor of cognitive science at Washington University, has argued that most religious violence has occurred due to the free marketplace of ideas that is enveloping all cultures in the world.<sup>58</sup> The popularization of global religions such as Christianity, Islam, and Judaism that are not exclusive to a particular ethnic group or region, combined with the availability of information and a free marketplace of ideas, makes religious conversion much more available and common. People are becoming exposed to other religions and, due to freedom of religion in most places, are converting to these global religions.

This is inherently threatening to many religiously conservative people. Formerly, apostates would be killed, forcefully converted back, or imprisoned. Yet due to the openness of

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<sup>57</sup> Edward Said, "The Clash of Ignorance," *The Nation*, October 4, 2001.

<sup>58</sup> Boyer, *Religion Explained*, 291-295.

religious expression in modern times, there is little cost to being an apostate. According to Boyer, the resurgence in religious violence in modern times is due to the collapsing of traditional, localized religions and the free expression of ideas across the globe. Religious violence is committed in order to add a cost to apostasy. It is to both strengthen their own religious coalition and to break down opposing religious views in a few ways. First, religiously violent organizations strengthen commitment factors in supporting their religion. People who are convinced to commit their life to a religion to the point of killing and dying for it are extremely unlikely to become apostates because it raises the costs of committing to the religion in the first place. Just as defections from gangs and other closely-knit violent organizations are extremely low, the same goes for religious organizations committed to violence.

Second, violence is used to deter people from becoming apostates. If a group is dedicated to killing infidels, then people would be less likely to switch over to another religion because they do not want to be the target of violence. Muslims living in a Taliban-controlled territory are unlikely to convert to Christianity because they do not want to be killed. The thought of violence increases the cost of apostasy. Related to the military, a high sense of trust and dedication is necessary for the squad to be effective. Confronted with adversity, a rational choice for a soldier may be to desert his fellow soldiers so that he does not get shot and die. If this choice was cost-free, and a soldier could desert anytime he pleased, then one could imagine both greater mistrust of fellow soldiers and greater desertion in total. However, a soldier would be court-martialed and sentenced to imprisonment or death. The same logic applies to religions, in which desertion has no cost in modern times, so religious organizations impose a cost through religious violence.

There are a few reasons why this explanation is preferred over the “clash of civilizations” hypothesis. First, Huntington’s thesis cannot explain why much religious violence is located within its own particular civilization or religion. For example, some Muslim men attack or kill Muslim women who supposedly disgrace their honor by choosing not to dress according to a certain Islamic code, talking with men, or acting without their husband’s permission. Some fundamentalist Christian groups ostracize women who have any sort of sexual relations before marriage and bomb the abortion clinics of fellow Christian doctors. These forms of violence should not exist in Huntington’s framework, as the violence should be directed solely towards other civilizations.

Further, many religiously violent attacks are aimed at localized, modernized forms of religion within their own territory as well. For example, many fundamentalist Christian groups target more liberal Christians for not following God’s word and swaying from the true path. A lot of the violence committed by Muslims targets other Muslims who belong to a liberal orientation instead of their conservative ideology. Many Buddhist groups, such as *the Shugden Society*, target the Dalai Lama for swaying from the supposedly true, conservative ideology of worshipping *Dorje Shugden* by banning sacrifices and his worship.

The problem, then, should not be framed as a clash of civilizations, but as a clash of coalitions. It is not civilizations that are coming into conflict with one another in the post-Cold War climate, but instead it is coalitions of people who share a common religious ideology. Instead of a cohesive, homogenous Islamic civilization battling against the Christian West, it is Takfiri Muslims against liberal Muslims, Muslims in India against Hindus in India, Christians in Indonesia against Muslims in Indonesia, etc. Each individual group is struggling against the others to maintain their ideology, their followers, and their practices in the face of a global free

marketplace of ideas. The clashes occur not on fault lines of civilizations, but on ideological fault lines when groups are forced to compete with one another over followers and beliefs.

### ***Single-Cause Theories***

Single or root cause explanations for religious violence are inadequate and detract from truly understanding the phenomenon. There is not one sole cause for religious violence, but a multiplicity of factors that can contribute to each individual becoming involved with religious violence. Theories that claim that economic grievances or a holy book or a charismatic leader influence people to commit religious violence may be partially true – some people in the world probably have been influenced to try and join a religiously violence organization such as Hamas for the monetary reward, just as some people may have been influenced by charismatic leaders such as Osama bin Laden to attack Christians. The fact that individuals have been motivated by all of these causes is an indication that none of them are adequate explanations.

There are countless theories, supported by anecdotal or quantitative evidence, as to why people commit religious violence. All of the theories above can cite at least one instance of why someone has committed religious violence for a certain reason. Others include arguments that they truly believe in the ideology,<sup>59</sup> that they are driven to violence because they were humiliated in some way,<sup>60</sup> that communal bonds pressure others into joining the organization as well,<sup>61</sup> and that people are driven by a quest for fame and honor.<sup>62</sup> They are all validated by data and anecdotes, yet not all can be a complete explanation. Just as some people become Christians for a wide variety of reasons such as comfort, community, hard times, societal pressures, family

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<sup>59</sup> Mark Juergensmeyer, *Terror in the Mind of God* (Berkeley, California: University of California Press, 2001).

<sup>60</sup> Atran, *Talking to the Enemy*.

<sup>61</sup> Ibid.

<sup>62</sup> Ibid.

pressures, belief in its theology, or political reasons, so too do people have hundreds, if not thousands, of reasons to engage in religious violence.

It is functionally impossible to make a generalized theory to answer the questions of why certain people engage in religious violence while others do not and for what reasons people join religiously violent organizations. Unitary explanations are inadequate and fail to account for the diversity of possible motivations for religious violence. Biological, social, familial, cultural, environmental, political, economic, and communal factors can all influence a person to commit religious violence. There are so many factors that all generalized theories with a root cause lose their explanatory power and are reduced to explanations for single individuals.

Instead, then, the question that needs to be answered is what makes religious violence so natural and common to humans. In other words, why are there so many reasons and explanations for why religious violence is commonplace in the world? The answer lies in understanding the biases in the human brain that influence people towards religious violence in an almost accidental way.

### ***The Evolutionary Problem of Religion***

This paper examines religion from an evolutionary lens. That is, it accepts that the cognitive biases in the human brain have developed over time from the gradual process of evolution. However, religion almost seems like a challenge for evolutionary biologists to explain. At face value, religion does not seem to provide any sort of benefit to increase humanity's fitness or survival. Whereas other animals evolved better camouflage methods, more accessible eating techniques, and better skills for being a predator, religion does not seem to fit with those examples in providing any benefit to the species. Yet religion is one of the most

pervasive, powerful forces in human culture and society. According to Scott Atran, “the evolutionary problem of religion in particular, and commitment in general, is one of explaining how and why biologically unrelated individuals altruistically sacrifice their own immediate material interests to form genetically incoherent relationships under an imagined permanent and immaterial authority.”<sup>63</sup>

Religion does not seem to fit into an evolutionary framework because it is extremely costly and impractical in terms of cognitive and biological resources. First, it is a significant time investment in the sense that people spend hours worshipping a god instead of spending that time foraging for food, creating better shelter, or undertaking other ways of maximizing their fitness. Taking into account religiously-inspired actions, consider the physical expenditure to create massive mausoleums across the globe, sacrificing scarce livestock, chopping off fingers and other forms of bodily mutilation, or creating complex art forms.<sup>64</sup> These acts provide little or no evolutionary advantage, yet people still spend a significant portion of their lives performing these actions. Further, religion is not only materially costly, but cognitively costly as well. People spend mental resources praying, thinking about pleasing gods, and all the other attendant relationships that come with religious belief. Comparatively, one would think that another species that spent all of its time maximizing its fitness would win out over a species that spent a significant portion of its survival performing strange rituals and pleasing gods.

Second, if people truly lived according to their religious beliefs, humanity would have died off a long time ago. If people truly acted that the dead are living, the weak are advantaged over the strong, or that prayer can literally change the world and the situation you are in, then

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<sup>63</sup> Atran, *In Gods We Trust*, 117.

<sup>64</sup> Atran, *Talking to the Enemy*, 433.

they would not be living for much longer.<sup>65</sup> The basic tenets of religions violate parts of rational thought and actions that are necessary to survive. If people sat around and prayed all day for food instead of actually foraging and hunting, the species would go extinct. In fact, with most religion's focus on a glorified afterlife, one could say that religion makes maximizing and striving for survival irrelevant. If one dies, he or she simply goes to a better place in the afterlife. Religion seems to detract from a species' fitness.

Clearly, not every single human property acquired through evolution is for a purpose. Evolution is based upon random mutations just as much as maximizing a species' fitness. Yet religion not only seems to provide no rational self benefit, but appears to severely hinder an individual's fitness. One could argue that less religious people should have won out over more religious people, evolutionarily biasing humanity towards a less religious stance. But religion is, as this paper will show, part of people's cognitive framework and people are biased towards believing in religion, not opposed to it. Why is this the case? What is the answer to the evolutionary problem posed by religion?

The answer is two-fold. First, insight is gained by analyzing the cognitive mechanisms behind religion in general and religious violence in particular. There is no religious gene or religion section of the brain that handles all things associated with religion. Instead, the view taken in this paper is that religion is an almost accidental byproduct of various cognitive mechanisms that have evolved to benefit our survival. As this paper will articulate later, the human mind evolved many properties such as overdetecting agents and an increased remembrance of minimally counter-intuitive properties that have helped our survival but have also led to a propensity for humans to believe in religion.

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<sup>65</sup> Ibid. 432.

The second is that there are significant advantages to believing in religion in terms of managing daily interactions with other people. Despite what was articulated above, humans do not follow religious beliefs to their logical conclusion. When participating in religious rituals or thinking about religion, we do believe in these irrational beliefs that would jeopardize our survival. However, when participating in daily life we choose to suspend our belief in the supernatural, in a sense. People pray for food, yet still go out and hunt. But why, if prayer works and gods answer the calls, would someone have to go out and forage for food as well? There is a tacit acceptance that, when taking part in daily life that is essential for survival, we set aside our beliefs in the irrational and supernatural in favor of survival. This is not to say that religion is forced out of the picture, simply that rational self-benefit is elevated to a level above religion.

A major disadvantage of religion in terms of survival is its significant material and cognitive costs. However, these irrelevant, non-beneficial actions often have significant benefits, particularly in strengthening inter-group relations. Significant amounts of research and argumentation has been written about the in-group/out-group distinction in religion and the centrality that it plays in religious violence. What this literature ignores, however, is the role that religion plays in in-group relations. That is, how religion mediates behavior between fellow believers and religion's role in violence against both insiders and outsiders alike. To be fair, claiming that the insider/outsider dichotomy is the source of violence can be one valid explanation. However, it is not the whole story.

### *Coalitions, Altruism, and Cooperation*



Human societies used to operate on very small scale, tightly knit groups based upon kinship. Any sort of altruism or cooperation that occurred was naturally for evolutionary self-interest, as it furthers the survival of an individual's genes. Hence the concept of the "selfish gene" explaining away any acts of cooperation and altruism that did occur. Cooperation was relatively easy as well, as the number of people belonging to the group was small so reciprocity and social restrictions could moderate behavior. People could be expelled or stigmatized if they received acts of altruism but did not themselves contribute to group prosperity. Trust and cooperation<sup>66</sup> were possible because they were on such a small scale.

However, with the advent of larger groupings, this system became untenable. The traditional modes of moderating social behavior could not be used on such a large scale. People may only interact with someone once in their entire lives, so reciprocal altruism and social stigma would not necessarily stop cheating and deception. Altruism based upon kinship also could not work, as groups were filled with non-related and related people and it was nearly impossible to tell the difference between them. Cheating and deception<sup>67</sup> are incredibly costly to the group. Different ways of moderating cooperation, altruism, trust, and commitments were necessary.

Religion's role in modern times has changed to fulfill this need for mediation of cooperation and commitments. As social groupings become larger, religion takes on a larger role in intra-group relations. In the past, entire coalitions and communities were built upon a common religion. Until modern times, religion was an extremely regional phenomenon, as each

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<sup>66</sup> By cooperation I mean positive interactions with other individuals. Cooperation can take the form of buying and selling goods, helping others, or even dating.

<sup>67</sup> When I refer to cheating and deception, I am referring to a specific concept. Cheaters are people who, due to the collective action problem, free-ride off of the group. In other words, they attain the benefits of group membership without paying any of the costs. An example of this would be a member of a fraternity that did not pay dues or engage in costly rituals like hazing yet still take advantage of the fraternity's parties and events. Deception occurs when a cheater engages in these sorts of actions.

society had their own religion and there were no globalized versions of religion. As scholars have noted, religion is an important way in creating an insider/outsider distinction that limits and differentiates different members of groups. The gods that each society worships creates a sharp boundary between who belongs to the group and who does not, who receives the group benefits and who does not.

It is important to note that this does not mean that religion was created or used consciously to control populations, as some have argued.<sup>68</sup> Instead, religion simply functions this way on a cognitive basis. Religion acts as a moderating force, checking deception and cheating and making a way for people to cooperate and form bonds of trust in a few ways. First, religion causes people to self-moderate their behavior in ways they otherwise would not do. Having an omniscient god that judges you upon the moral worth of your actions can motivate people to act in a morally acceptable way on their own. In this framework, a group does not need outside forces acting to keep people from cheating and deception because, hypothetically, they will do it on their own.<sup>69</sup>

Take, for example, a group of devout Catholics. A member of the tradition could assume with decent accuracy that the other members will not steal, murder, or commit adultery. They will most likely be opposed to abortion and capital punishment as well. Clearly, not all devout Catholics act upon those ideals and are perfectly moral, yet it is still an accepted standard. Even if all devout Catholics do not act upon those morals, they at least hold them as ideals. In broader society, however, a devout Catholic cannot assume that everyone they come into contact with holds those same ideals.

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<sup>68</sup> The origins of religion are discussed further in the paper. The stance taken in this paper is that religion is a byproduct of various cognitive principles that bias people towards believing in gods and other concepts associated with religion.

<sup>69</sup> Teehan, *The Evolutionary Origins*.

Further, religion is a way of increasing people's cooperation with fellow believers. People are more likely to cooperate with members of their own group and religion provides a visible, rigid social grouping with which to do so. Further, however, the mediating presence of a god when acting with people of one's own religion increases generosity and cooperation and reduces the amount of deception and cheating that occurs. Studies have shown that random strangers, when negotiating deals and put in situations where deception is beneficial and fairly easy, will choose to be generous and cooperative when religion was evoked in some regard.<sup>70</sup> When religion is not evoked, people will be likely to cheat and deceive total strangers to achieve greater benefit, but the mediating presence of a god provides a check on people's actions.

Illustrations of this argument are abundant in modern society. Witnesses swear upon the Bible before testifying in court as a way of making sure that the witnesses are telling the truth. Even if a witness can lie and cheat the law, he or she supposedly must still answer to God. Politicians are sworn into office on a Bible so that they must answer to their constituents as well as God when ruling. God is used as a way of constraining behavior through virtue of it being a higher power.

#### *Parochial Altruism and Fictive Kin*

One prevalent form of altruism, perhaps the most relevant to the issue of religious violence, is parochial altruism. Associated with bravery in modern times, parochial altruism is sacrifice for the benefit of one's group. Under an evolutionary framework, parochial altruism makes very little sense. Why would, for example, a soldier volunteer for the front lines and charge ruthlessly into battle? Why would a suicide bomber blow him or herself up? There is no self-benefit in these calculations as the person voluntarily sets him or herself up for death.

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<sup>70</sup> John Bargh and Tonya Chartrand, "The Unbearable Automaticity of Being," *American Psychologist* 54:462-79.

Parochial altruism is almost an intrinsic part of religion, especially religious violence. Virtually all justifications of religious violence involve sacrificing oneself for God or fellow believers in the faith. People glorify, almost worship, these acts. Abraham in Christianity is seen as one of the pinnacles of faith for almost sacrificing his son for God. Saints and martyrs in early Christianity are also held up as great examples of faithful Christians. In Islam, martyrs are held up as fighting for their religion and community, acting on solid acts of faith. These examples exist in every religion.

The explanation for parochial altruism lies in the way that religion and people's use of religion tricks<sup>71</sup> human cognitive mechanisms. People's mechanisms may be tricked into, for a variety of reasons, treating non-kin members as actual kin. This would motivate people to commit many acts of altruism in order to propagate their selfish genes. This concept of imagined or fictive kin<sup>72</sup> is essential to understanding the way in which religion operates at a group level.

Humans have become incredibly good at tricking the mind. When I say that the cognitive mechanisms are tricked, I mean that the mechanisms are triggered by phenomena that are not directly associated with such mechanisms. For example, pixels of color on a computer screen or paper, otherwise known as pornography, trick the body into triggering many sexual responses. Images of light on a movie screen cause people to jump in fear, laugh out loud, or release adrenaline. Religious groups have also become extremely effective at utilizing cognitive mechanisms in this way by creating fictive kin among believers. The way people dress, talk, hold ritual together, and have sexual relations (or the absence thereof) all trick the mind in this way.

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<sup>71</sup> Atran, *Talking to the Enemy*, p. 326.

<sup>72</sup> Randolph Nesse, "The Evolution of Commitment and the Origins of Religion," *Science and Spirit* 10:32.

The picture of a mosque service is fairly common to the Western media. It is an image of men lined up in rows, virtually all wearing white robes and a white cap, gesturing and chanting in unison with one another. This image, and many other aspects of religious life, tricks the cognitive mechanisms dealing with kin to trigger in many ways. First is the dress. Most tightly knit religious groups have some sort of dress code. In Islam it is the flowing white robes in many traditions, in Catholicism the clergy wears similar clothing, and so on. Similar clothing allows these groups to maintain a clearly identifiable marker of who is an insider and who is an outsider to the group, making an easily identifiable cue of who is able to be trusted and who is not, in some sense. This is also an easily identifiable kinship marking, as people who look alike and wear the same clothing usually belong to the same group or come from the same kin.

The more rigid the group boundaries and extreme and exclusive a group becomes, the stricter of a dress code is implemented. For instance, puritanical and violent groups within Islam, such as the Taliban, demand more strict dress codes such as untrimmed beards, head coverings in public, and the wearing of long white robes.<sup>73</sup> For women, it is even more extreme as they have to be clothed from head to toe.<sup>74</sup> This allows the group to evoke a stronger sense of kinship and group exclusivity, allowing more trust, cooperation, and altruism within the group. In turn, it also creates a wider, more rigid divide between insiders and outsiders of the group.

Second, language plays a large role in shaping groups of fictive kin. Traditional religious language relies heavily upon kinship language such as seeing God or religious authorities such as priests as “fathers,” fellow worshippers as “brothers,” and female religious clergy as “mothers.” The most successful and mobilizing religious political movement in the Middle East is known as

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<sup>73</sup> NNI, “Taliban Measure Beards with Lantern Glasses,” December 3, 1998. <http://www.rawa.org/beard.htm>.

<sup>74</sup> Zohra Rasekh, Heidi Bauer, Michele Manos, and Vincent Iacopino, “Women’s Health and Human Rights in Afghanistan,” *Journal of the American Medical Association* 280:449-455.

the Muslim Brotherhood. The use of this language is used to create a fictive kinship among its followers, evoking the mechanisms in the brain that are usually used for kin relations.

Just as with clothing, kinship discourse is utilized more often in exclusive, puritanical groups. The *Oath to Jihad* of Harkat Al-Mujahedin states that “each martyr has a special place – among them are brothers, just as there are sons and those even more dear.”<sup>75</sup> It continues to state that martyrs, by their sacrifice, make the world a better place for their fictive brothers, fathers, and sons of the community. The use of kinship language in tightly knit, exclusive, puritanical groups motivates people towards greater sacrifice, trust, and commitment by tricking the mind into treating fellow group members as kin.

Third, these methods of tricking cognitive mechanisms towards treating religious group members as kin are magnified by the alienation of traditional family ties. In many religions such as Catholicism and Buddhism, religious clergy are prohibited from marrying and thus having biological sons or daughters, instead motivating them more clearly towards treating their followers as such. Buddhist and Catholic monasteries are used to distance the clergy members from their traditional family to get closer to God the Father and their fellow brothers in the clergy.

In order to augment the feelings of trust and sacrifice, puritanical, exclusive religious groups use this tactic more frequently than other religious groups. In some regards, people are separated completely from their families in order to gain a truly religious experience.<sup>76</sup> Many violent religious groups use training camps and religious retreats to make entire groups act as one family unit where people treat each other as kin. It forces people to devote everything to

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<sup>75</sup> David Rhode and C.J. Chivers, “Qaeda’s Grocery Lists and Manuals of Killing,” *New York Times*, March 17, 2001.

<sup>76</sup> Atran, *Talking to the Enemy*.

their fellow believers as they are separated from biological familial ties. But to the mind it makes no difference.

Based upon these examples, it is fairly easy to see how the concept of imagined kin increases the likelihood of violence. Treating people as fictive kin creates a more rigid, distinctive insider/outsider dichotomy that leads to greater hostility between groups and coalitions. With bonds of trust and cooperation being so high within the group, fictive kin necessitates intolerance and hostility towards outsiders because it is not worthwhile to cooperate or trust them when people can cooperate with members of their own group instead. There is no reason people would work with strangers when they have members their own group to work with. Scholars have repeatedly made this argument as to why religious violence occurs.<sup>77 78</sup>

Further, this insider/outsider distinction causes violence by causing suspicion of others' behaviors. Whereas dress codes and particular language are used to evoke kinship and trust within the group, to the outsider these are seen as alien, foreign, and unapproachable. Hostility arises simply from the fact that they are different and hold different traditions, values, and customs. In some ways, it is a blood feud, as one group of fictive kin becomes hostile to another group, fighting to protect its identity and imagined family.

In many ways, this is true. However, it is not enough on its own. In fictive kin, there is no distinction between near kin and far kin, something that is essential to calculating cooperation and altruism with your own kinship. Further, people still know the difference between fictive and imagined kin. Despite the invocation of kinship language and all the other factors, if asked directly if members of one's own religious group were their biological relatives they would be able to say no. Yet, just because people can tell the difference between biological and fictive kin

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<sup>77</sup> Juergensmeyer, *Terror in the Mind of God*.

<sup>78</sup> McTernan, *Violence in God's Name*.

does not make it pointless. The cognitive and biological mechanisms are still triggered, causing a particular response. Humans can tell the difference between pornography and real people having sex in front of them, yet the biological triggers still occur. This means that fictive kin plays a role in shaping religious violence, but is not a complete explanation.

Most of the time, the “something extra” that motivates people is essentialism, or the human bias to attribute some inherent, universal essence to social categories.<sup>79</sup> Multiple studies in many disciplines have shown that humans operate under a framework of essentialism when analyzing many things, animals, humans, or social groupings. Lawrence Hirschfeld, professor of anthropology and psychology at Columbia University, has argued that humans believe there is some aspect of animals that make it what it is.<sup>80</sup> If a tiger lost its stripes, was albino, lost all its limbs, or was killed, it would still be a tiger. Some hidden essence makes the tiger a tiger even without its physical characteristics. Susan Gelman, professor of psychology at the University of Michigan, has performed many studies on both children and adults across various cultures and found that humans have a strong bias towards essentialism when dealing with animals and the biological world.<sup>81</sup>

Douglas Medin and Scott Atran have argued that humans acquired this essentialist bias through evolution because it was more beneficial to think that a tiger with no stripes was still a tiger and to run away than to think that it was a different creature and get eaten alive. This essentialist association to biological objects is so pervasive that it also affects how people view social groupings.<sup>82</sup> Using the same logic, people view an underlying essence to things such as

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<sup>79</sup> Atran, *Talking to the Enemy*, 306.

<sup>80</sup> Lawrence Hirschfeld, *Race in the Making: Cognition, Culture, and the Child's Construction of Human Kinds* (Cambridge, Massachusetts: MIT Press, 1996).

<sup>81</sup> Susan Gelman, *The Essential Child: Origins of Essentialism in Everyday Thought* (New York, New York: Oxford University Press).

<sup>82</sup> David Medin and Scott Atran, “The Native Mind: Biological Categorization and Reasoning in Development and Across Cultures,” *Psychological Review* 111:4.



race, personality, and ethnicity. An albino African-American with one eye and a mental disease would still be an African-American, just as a nice person is a nice person even if they were rude in one context. Hirschfeld has also confirmed this by expanding his analysis of how people view the essence of a tiger to various social groupings.<sup>83</sup>

This essentialist bias in the human brain is so pervasive that it affects every aspect of a person's worldview. Animals, ideas, social groupings, and inanimate objects are all affected by essentialism. Paul Bloom, professor of psychology at Yale University, has stated that:

One of the most exciting ideas in cognitive science is the theory that people have a default assumption that things, people and events have invisible essences that make them what they are. Experimental psychologists have argued that essentialism underlies our understanding of the physical and social worlds, and developmental and cross-cultural psychologists have proposed that it is instinctive and universal. We are natural-born essentialists.<sup>84</sup>

This bias in the human mind has such a strong grip on human thought that it is almost impossible to escape, even consciously.

Essentialism is the missing link in determining why humans fight over religion in terms of fictive kin and insider/outsider distinctions. Groups mobilize their followers to fight against another group, which, through essentialism, is characterized almost as another species. They are no longer fighting fellow humans, but a separate species of group. As Scott Atran notes, "in the spiraling competition between human groups, it is often prudent to make 'fast and dirty'

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<sup>83</sup> Lawrence Hirschfeld, "Natural Assumptions: Race, Essence, and Taxonomies of Human Kinds," *Social Research* (Summer 1998).

<sup>84</sup> Paul Bloom, "Why We Like What We Like," *Observer* 23:8 (2010).

inferences about who is a potential friend or foe. A ready-made stereotype brings causal coherence to a group where initially there was none.”<sup>85</sup> The dividing of the world into separate, essential categories makes cooperation easier, as people cooperate with members of their group, reducing the risk of deception and cheating. Yet, as noted above, our cognitive preference towards our own group fosters hostility against outsiders.

Taken as a whole, fictive kin, insider/outsider distinctions, and essentialism combine in the human mind with religion to create a hostile, violent situation with members of other groups. Routinely, radical and violent Muslims claim that Jews are evil by nature – that there is some Jew-ness about them that causes them to be greedy, evil, and conniving. One poll found that 74% of students in a school ran by Jemaah Islamiyah believed that all people “were born evil but some learn to become good.” According to them, a child born of Jewish parents that was adopted by a Muslim couple would not grow up to be a Muslim. Students at this school were also ten times more likely than other students to believe it was their duty to kill non-Muslims.<sup>86</sup>

This poll, and the general discourse about Jews by radical Islamic groups, shows the application of essentialism not only to biological objects and race, but also to religion. There is some underlying essence of a Jew or a Christian that can never be altered even if they attempt to convert or were raised by Muslims. It treats followers of other religions literally as a wholly different species, as no amount of social or cultural change can alter their essential characteristics. Essentialism augments the creation of fictive kin and the insider/outsider distinction by granting it supposedly biological legitimacy and hardwiring these beliefs into the brain. Hostility and violence between groups is seemingly natural and inevitable under this cognitive framework.

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<sup>85</sup> Atran, *Talking to the Enemy*, 307.

<sup>86</sup> Scott Atran, Justin Magouirk, and Jeremy Ginges, “Radical Madrasas in Southeast Asia,” *CTC Sentinel*, 2008.

This analysis, however, does not show how religious violence is distinctive. The analysis above shows that this is a common problem to almost all aspects of human life. Nations, towns, coalitions all would follow the same argument. Any grouping of humans would create increased trust between members and hostility against outsiders because there is little to no incentive to cooperate. Essentialism is an inherent aspect to the human mind and not unique to religious thought.

Yet this analysis shows that religions do it better than many other aspects of human society. They use kin language, dress codes, exclusion from family members, and insider/outsider distinctions more often than other groups and with better effectiveness. The creation of members of other religions as a separate species inherently evil or corrupt is most often seen in religion and only rarely seen otherwise, such as in Nazi Germany. Religious violence then, can be seen as a perfect storm of all the factors listed above – abundant use of fictive kin triggers, strong essentialist characteristics, and a sharp insider/outsider distinction where people only want to cooperate with members of their own group.

### *Commitment Factors*

Another important factor in answering the evolutionary problem posed by religion, and in understanding religious violence, is the concept of commitment. It operates on an entirely different level than kin selection and reciprocal altruism and is crucial in understanding religion. Commitment, in this paper, is a term of art that refers to an act that forgoes certain options in order to alter the decision calculus of certain individuals, convince them of particular intentions. According to Randolph Nesse, professor of psychology at University of Michigan, a commitment is an act that “changes behavior by giving up options and thereby changing people’s

beliefs.”<sup>87</sup> In other words, commitments can change the situation so that fulfilling them becomes in a person’s self-interest.

Examples are everywhere. Political leaders threaten nuclear annihilation if their country is attacked. If attacked, it would obviously be detrimental to themselves and the world if they launched nuclear weapons, yet the promise is made in order to make a commitment so that a country backs down from invading. An army may burn the bridges behind themselves; a clearly dangerous and harmful situation to the army, yet the signal it sends may intimidate the defenders or rally the troops. If a wife makes a husband believe that she will kill him if he leaves her, then he will be less likely to leave her even though going through on that commitment would be detrimental due to serving a life sentence in prison.

The implications of this are crucial for evolutionary theory and for understanding religious violence. Commitment factors are another reason why the traditional forms of rational self-interest both do not explain human interaction and are not the best strategy. People constantly make commitments that are not in their rational self-benefit in every aspect of their daily lives because of the signal it sends and the way it alters other people’s decision calculus. People spend so much of their lives assessing the validity of commitments and judging whether or not to believe them.

The way commitments operate can be most clearly seen in parent/child relations. It shows that this is a cognitive process, subconsciously operating even in children and in all people. Children won’t eat their vegetables unless their parents personally eat them first,<sup>88</sup>

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<sup>87</sup> Randolph Nesse, “Natural Selection and the Capacity for Subjective Commitment,” *Evolution and the Capacity for Commitment* (New York, New York: Russell Sage Foundation, 2001).

<sup>88</sup> Lawrence Harper and Karen Sanders, “The Effect of Adults’ Eating on Young Children’s Acceptance of Unfamiliar Foods,” *Journal of Experimental Child Psychology* 20 (1975) in Atran, *Talking to the Enemy*.

children won't go to religious services unless their parents also do so,<sup>89</sup> and children won't follow proper hygiene habits without their parents doing so first.<sup>90</sup> This shows that even children operate by assessing the commitments that parents make. If parents say to eat their vegetables but do not personally do it, the children thinks that the commitment is invalid because the parent is not following through on it. By providing a sense of trust and security on the commitment, parents convince their children to do things they do not want to.

Commitments are what make up most of the religious practices in modern times. One of the main purposes of religion is to create beliefs and ideologies that make commitments less risky and more believable. One can feel safer making a commitment with someone of the same religion due to constraints on their actions placed by gods. According to Loyal Rue, professor of religion and philosophy at Luther College, worshippers in Western religions enter into a covenant with God, "agreeing to submit and obey unconditionally in return for a better life and, often, eternal life."<sup>91</sup> This means that the individual gives up a substantial amount of time, money, freedom, and effort, yet gains the knowledge that they are with other people that follow the same moral rules that they do and will hopefully honor their commitments.

Further, William Irons, professor of Anthropology at Northwestern University, has studied the way that people respond to ideologies that are centered on altruistic and benevolent ideologies instead of personal gain.<sup>92</sup> He found that people respond much more positively to commitments that are made upon a benevolent justification instead of personal gain, making religious commitments and commitments within religious communities much more powerful

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<sup>89</sup> Loren Marks, "Sacred Practices in Highly Religious Families: Christian, Jewish, Mormon, and Muslim Perspectives," *Family Process* 43 (2004):217-31 in Atran, *Talking to the Enemy*.

<sup>90</sup> Paul Harris, "Germs and Angels: The Role of Testimony in Young Children's Ontology," *Developmental Science* 9:1 (2006):76-96 in Atran, *Talking to the Enemy*.

<sup>91</sup> Loyal Rue, *Amythia: Crisis in the Natural History of Western Culture*. (Tuscaloosa: University of Alabama Press, 2004) in Nesse, *Natural Selection*.

<sup>92</sup> William Irons, "Morality, Religion, and Science," *Religion and Science* (New York, New York: Routledge).

than an average commitment based upon self-interest. If people truly believe that someone is acting for the general welfare instead of personal gain, then they will be more likely to cooperate with him or her and believe his or her commitments.

This effect becomes more powerful the more exclusive and tightly knit the religious community. When it is difficult to become a member of a certain religious group, the cost of defection becomes higher and commitments become more credible. The commitments become virtually secured, as defecting from a group like Al Qaeda could have devastating consequences. Even though the initial act of joining was a purely voluntary commitment, that commitment is secured once the person has entered the group. Religious groups provide more protections and close relationships than many other organizations. The potential cost of the commitment is higher, yet the potential return is much greater.

A famous study by Roger Finke and Rodney Stark outlined the history of religions in America from the revolution till 1990.<sup>93</sup> They found that churches with stricter guidelines, more rigid boundaries, and higher difficulty in becoming a member grew exponentially while churches that were much more liberal declined dramatically. This is another piece of evidence to show the prevalence of commitment factors in analyzing religious groups. Stricter religious groups are better providers of the benefits of commitments to a group than liberal ones.

A clear example of tightly-knit religious groups relying upon commitment is written about by William Irons. Describing the Yomut of Iran, he recalls that:

All adults were required to pray fives times a day. The prescribed prayers had to be preceded with a ritual washing, and had to be performed in a clean place while

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<sup>93</sup> Roger Finke and Rodney Stark, *The Churching of America 1776-1990* (New Jersey: Rutgers University Press, 1993).

facing “the house of God” in Mecca...Everyone would dismount from his horse, or the bus would stop, and everyone would get off and begin to look for water for the required absolutions and would inquire as to the direction of Mecca.<sup>94</sup>

This symbolic action, along with the fasting during the month of Ramadan, sacrificing one’s prized animal on the Day of Sacrifice, and cooking costly feasts on holy days, highlights the costly nature of religious ritual.

Not only ritual, but also moral codes serve the same purpose. The Yomut believed that people should not lie, steal, kill, or commit adultery. Religious taxes were paid, almsgiving was honored, and people adhered to a certain moral code. These make commitments more credible and establish members of the religion as having a special privilege in terms of cooperation with other members.

To be clear, this example could be done with all religions across the globe. The Yomut adhered to their own version of Islam and many of their rituals and moral codes are accepted by all Muslims. Christians, Jews, Hindus, Buddhists, Sikhs, and all other religious people have costly rituals and moral codes that they must follow. They serve to reinforce the distinction between religious insiders and outsiders. Rituals are a clear sign of whether or not someone belongs to their own group and a feeling of exclusion accompanies anyone who does not understand or follow such rituals. During Irons’s own time in Iran with the Yomut, he mentioned that “I struggled with the fact that cooperation with outsiders was basically less desirable than cooperation with insiders and did my best to look as Muslim as I could...It always seemed obvious that, were I to stay, conversion to and conspicuous practice of Islam would be

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<sup>94</sup> William Irons, “Religion as a Hard-to-Fake Sign of Commitment” *Evolution and the Capacity for Commitment* (New York, New York: Russell Sage Foundation, 2001).

the best route to acceptance by the local community.”<sup>95</sup> Insider/outsider distinctions and commitment pressures force people to even give up their own religion and convert to the local religion in order to gain access to cooperation and prevent hostility to the outsider status.

To add more evidence to this claim, Richard Sosis, professor of anthropology at the University of Connecticut, performed a statistical study of the duration of religious and secular communes.<sup>96</sup> Using data on 200 communes, he found that religious communes were four times more likely to survive in any given year compared to secular communes. Sosis attributes the prolonged life of religious communes to the fact that their commitments are so strong to one another that they can survive the threats that usually destroy a commune such as a loss of ideology, natural disasters, suppression by outsiders, or the death of a leader. The power of rigid, strict religious groups to maintain commitments survives even in an environment in which property is communal, magnifying the risks of deception and trust greatly. Irons lists many other studies that have confirmed such research in other areas of religious life such as religious people on the island of Utila, the Yomut, and Kibbutz in Israel.<sup>97</sup>

Symbolic commitments are key to weeding out cheaters in a large, globalized world. Religious groups thrive because they have easily demonstrable yet costly commitments that determine whether or not a person is a fellow member of the religious community or not. It would not be difficult at all to determine whether or not William Irons was a member of the Yomut, yet in many other social interactions it is difficult to analyze who is a free-rider or cheater and who is not. The more costly the commitment, the easier it is to stop deception and keep the group to a trustworthy circle.

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<sup>95</sup> Ibid. 300.

<sup>96</sup> Richard Sosis, “Religion and Intra-Group Cooperation: Preliminary Results of a Comparative Analysis of Utopian Communities,” *Cross-Cultural Research* 34 (2000):70-87.

<sup>97</sup> Irons, *Religion as a Hard-to-Fake Sign*, 304.



Building upon the previous analysis of the insider/outsider distinction as a major source of violence between religious groups, commitment factors cause an even more rigid and powerful boundary between the insider and the outsider. Commitments within groups are built around the fact that they receive the benefits of one another's communal, cooperative atmosphere. There is both no incentive to cooperate with anyone outside the group, but also it is harmful to the group itself if people do cooperate with outsiders. Cooperating with outsiders jeopardizes the benefits gained by commitments and makes commitments less credible. The group, therefore, has an incentive to stop cooperation with outsiders and people who do cooperate may be punished in order to ensure group survival. In this sense, it is extremely costly for an immoral, deceptive person to be a Mormon or belong to a puritanical Islamic group.<sup>98</sup>

Belonging to a religious group inherently creates commitments through the use of ritual. The religious nature of the groups gives the social norms and commitments supernatural authority and power, granting them more legitimacy and effectiveness than commitments in secular groups. This causes all divisions and unifications between groups and within groups to be under divine authority, granting religious groups a more powerful commitment and authority than secular groups. Perhaps the most interesting and clear evidence of this is a study done by Jeremy Ginges, Ian Hansen, and Ara Norenzayan, a group of psychologists.<sup>99</sup> They found that the frequency with which people of a particular religious group perform rituals correlates directly with the number of suicide attacks by members of that religious group. The reason is that ritual is a form of commitment. The more commitment within a group, the more trust and cooperation occurs. This generates both the hostility to outsiders described above, but leads to commitments

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<sup>98</sup> Boyer, *Religion Explained*, 131.

<sup>99</sup> Ginges, Hansen, and Norenzayan, *Religion and Support for Suicide Attacks*.

becoming more powerful and costly, leading to suicide violence as the epitome of such a commitment.

In other words, commitments in strict religious groups may lead to a vicious cycle in which commitments become increasingly costly. For example, initially the cost of entering a group may be a simple ritual such as circumcision, baptism, or an oath. However, as groups become more puritanical, the cost of commitments increases to make it harder for deception to occur. This motivates members of the religious group to engage in even more costly commitments such as familial separation, strict relationship guidelines and dress codes, and so on. The cycle continues with the culmination being attacks against outsiders including suicide bombings.

Further, commitment factors provide a key insight into understanding an individual's choice to commit religious violence. So often, commentators are struck with disbelief when witnessing an act of religious violence, saying "how can someone commit such a crime in the name of God?" Not only do people commit acts of violence in the name of God, but for fellow believers as well. Commitment factors provide a framework under which to evaluate an individual's choice to kill for a religious cause.

First, commitments can become much more powerful when the signal is more costly. As stated previously, the majority of suicide bombers are relatively well-to-do people who are generally happy and mentally stable. In contrast to the common belief, most suicide bombings have "everything to lose" instead of "nothing to lose." These people send much more powerful signals than poor, desolate people.

To outsiders of the particular religiously violent organization, it is a much stronger signal. They will be more likely to comply with the norms imposed by such a group. It sends a signal to

others against cheating by adding greater costs. The “terror factor” of the particular act is much higher because the commitment has been made more credible. The organization shows the world that they are not neglected, downtrodden people but people with everything to lose – that anyone can be a target, that anyone can be a bomber.

In terms of what motivates people to commit these acts, the research of post-doctoral student Uffe Schjoedt at the University of Santa Barbara can provide some insight.<sup>100</sup> He played a series of prayers to people of all backgrounds. He told them that the first group of prayers was by a known spiritual healer, the second group was by a religious man, and the third by a non-religious man.<sup>101</sup> When asked about the saliency of the prayers, the subjects responded that the known spiritual healer’s prayers were more effective, followed by the religious man, followed by the non-religious man. When listening to prayers by the non-religious man, subjects had increased activity in the prefrontal cortex of the brain, triggering increased vigilance and caution. When listening to prayers by the supposed spiritual healer, activity in the prefrontal cortex diminished. In other words, the people were assessing the validity of the non-religious person’s prayers with more scrutiny than the supposed spiritual healer.

Many leaders of religiously violent organizations claim that they have the right to lead. They had a revelation, can interpret God’s will with more accuracy, can communicate with God, or were sent by God to lead people to religious violence. This authority and people’s belief in their unique power or skill causes weakened vigilance in the other members’ assessment of their commitments. People become more ready to accept the will, orders, or bargains with the leader and therefore accept tenets that they otherwise may not, such as it is necessary to kill non-believers. Further, in a religiously violent organization, not only the leader but all members

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<sup>100</sup> Uffe Schjoedt, Presentation at Emory University, October 2010.

<sup>101</sup> The speakers were randomly selected and changed for each subject, taking away bias based upon a speaker’s own persuasive powers.

create decreased vigilance, as each person has unique skills of being close to God. It is not the leader brainwashing everyone, but group-think in which the violent tenets of the religion can become self-reinforcing. In other words, people do not scrutinize people that they feel are imbued with religious authority. Therefore, members of a religious group are more willing to accept what the leaders say and follow the leaders' orders without question.

Further, Schjoedt's findings show that attention and executive function in the prefrontal cortex compete for resources, meaning that vigilance has a direct effect upon cognitive function. If someone is highly vigilant, then they have lessened cognitive ability and vice versa. For example, when some Caucasian men are given a series of cognitive tests immediately after being shown pictures of African-American faces, they perform significantly worse than an average person. The implications of these findings are important for intergroup hostility. Although no direct tests have been performed, one could imagine that the same result would occur when a religious militant of a particular sect is shown pictures of people that visibly belong to another sect.

The spiral created by increasing levels of commitment within a group may be a prime source of violence. People become committed to one another on such a level, and the cost of commitments keep escalating, that suicide bombing is almost an inevitable conclusion in an organization that supports violence. In a conversation with Scott Atran, the father of a suicide bomber remarked, "My son didn't die just for the sake of a cause, he died also for his cousins and friends. He died for the people he loved."<sup>102</sup> According to interviews with 53 captured religious combatants in Saudi Arabia, two thirds of the people said they committed jihad for their

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<sup>102</sup> Atran, *Talking to the Enemy*, 27.

friends.<sup>103</sup> Suicide bombings send a signal to the outside world and the religious group against cheaters, deception, and interactions with outsiders.

### ***Counter-Intuitive Properties***

A significant amount of scientific research into religious concepts has shown that most religious concepts are *limitedly counter-intuitive*. Religious concepts are counter-intuitive in the sense that they violate humans' inherent, natural ontological categories. These come in two categories: counter-intuitive biology and counter-intuitive psychology.

Pascal Boyer performed an experiment where he gave subjects a list of statements and asked them, based on their intuition, if these statements could serve as the basis of a religion. Some of the statements included “dead men do not talk or walk,” and “if you drop this special ritual object it will fall downward until it hits the ground.” Others were “there is only one God! He is omniscient but powerless. He cannot do anything or have any effect on what goes on in the world,” and “some people can see the future but they then forget it immediately.” Yet other statements included “some ebony trees can recall conversations people hold in their shade,” and “the river over there is our guardian. It will flow upstream if it finds out that people have committed incest.”<sup>104</sup>

Boyer found that people would say that statements from the third group listed were capable of being the basis of a religion, while statements from the first two groups could not. Why is this the case? The statements in the first group are simply too banal to be the basis of a religion. In other words, they are completely intuitive. It does not violate any intuition that we

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<sup>103</sup> Atran, *Talking to the Enemy*, 114.

<sup>104</sup> *Ibid.* 51-53.

have about people to say that dead people do not walk or talk. This shows that religious concepts have to be counter-intuitive to be considered valid.

But what about the second group of statements? They are clearly strange and violate our conceptions of the world, yet people do not find them to be suitable candidates for a religious belief. The problem is that they are *too* counter-intuitive. Religious concepts have to be minimally counter-intuitive in the sense that they usually only violate one intuitive property of the object while leaving all other intuitions in place. As soon as multiple intuitions are violated, all of the other intuitions that we have about the object start to come into question and get challenged. If we violate multiple intuitions, we cannot make accurate assumptions about the other aspects of the object. For example, if someone claims that there is a book that can talk, pass through walls, and read other books, we begin to question if it has a mind to read other books with, if it has the same level of consciousness as a person, if people can hold it, and so forth. In essence, the human mind can no longer process such an object as a book and make the inferences it usually would about books. Our intuitions about the object fall apart completely.

To clarify, humans have a natural understanding of how biological agents function. We assume that generally all animals belong to only one species and that species acts in similar ways such as having the same organs, mate the same way, eat the same things, and so on. These are intuitive properties that humans associate with biological agents. They have been programmed into the mind through evolution and the mind has natural inferences when confronted with a biological agent.<sup>105</sup> On the other hand, humans have inferences about non-biological agents as well, such as mountains and dirt. We assume that a mountain will not talk, bleed, eat, sleep, or walk.

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<sup>105</sup> Boyer, *Religion Explained*, 66.

However, most religious concepts are counter-intuitive in the sense that they violate these inferences<sup>106</sup> that humans make about biological and non-biological agents. In *Gilgamesh*, Enkidu is a half-human, half-animal hybrid. In the religion of the Fang, a group of people in Cameroon, the heroes have iron livers or stomachs which make them invulnerable.<sup>107</sup> In Christianity, there is a bush that talks and a woman that becomes pregnant without having sex. In Hinduism, most gods are represented as a fusion of animals and humans, or at least animals with human and god-like properties.

To add clarity to the concept of biologically counter-intuitive concepts, Frank Keil and Michael Kelly have studied most of these counter-intuitive biological transformations and have found that they follow a fairly structured order. Humans turn into animals more often than plants, and mammals more often than insects. Animals turn into other animals or plants more often than non-living creatures. The transformations occur between similar ontological categories in the sense that humans have more qualities in common with animals than with plants. Since they share more inferences that people make, the transformation is more likely and possible to process in the human mind. The mind can more easily imagine a prince trapped in a frog's body than the concept of a prince turned into a rock.<sup>108</sup>

The other aspect of counter-intuitive properties of religions is counter-intuitive psychologies. This occurs when someone confers psychological properties onto normally non-psychological agents such as inanimate objects. Humans intuitively assume that objects have

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<sup>106</sup> By inferences, I mean the assumptions that people make about the world based upon prior knowledge. For example, a person does not completely *know* that a mountain that they have never seen before does not speak English. It is impossible to know for certain without having studied the mountain. However, that person makes inferences about the mountain based upon what he or she knows about other mountains, geology, and psychology to infer that the mountain does not talk. The assumption that the mountain does not talk is the product of such inferences.

<sup>107</sup> Ibid.

<sup>108</sup> Michael Kelly and Frank Keil, "The More Things Change...:Metamorphoses and Conceptual Structure," *Cognitive Science* 9:4 (2010): 403-416.

certain psychological properties depending on what it is. We assume that inanimate objects cannot think or speak, that a butterfly cannot talk with a human, or that humans cannot read other people's minds. Many religious concepts violate these intuitions that we would normally have about objects. For example, in almost all religions, people pray to statues of gods or saints in order to communicate with them and hopefully receive a reward. Since statues are inanimate objects, we confer on them the ability to communicate with God or grant us certain gifts, violating their intuitive psychology. Further, the concept of possession in many religions violates the intuitive assumption that the mind is a central location for people to choose and decide on their own actions. In the Democratic Republic of Congo, the pygmies in the Ituri forest say that the trees watch over them and protect them.<sup>109</sup> All of these examples show that many religious concepts fall under the category of being counter-intuitive.

However, there is a limitation on the types of statements that can be the basis of a religion. Compare the two statements of “a woman gave birth to a child without having sex,” and “a woman gave birth to forty-seven children.” People think that the first statement qualifies as a valid tenet of a religion, while the second one does not. This is because the first statement violates our *ontological* assumptions about biology, while the second statement violates our expectations but not the ontological inferences we make about people. The first statement refers to something supernatural, something that cannot happen to a person, while the woman in the second statement is still a person. Religious concepts mostly keep the other intuitions in tact while violating one assumption we have about the subject's ontological category. Ghosts and spirits are people who are immaterial, reincarnation is a person in a different body, zombies are people with no cognitive functioning, God is a person with special cognitive powers, relics are objects that grant you requests, and so on.

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<sup>109</sup> Boyer, *Religion Explained*, 69.



Why do most religious concepts consist of minimally counter-intuitive objects? Justin Barrett, senior researcher at Oxford University, has performed several experiments studying how the mind processes minimally counter-intuitive statements. He gave subjects a long list of statements, some of which were intuitive (dead people cannot talk), some counter-intuitive on many levels (a person that is omniscient on Tuesdays but is powerless and can transform into a lawnmower), some minimally counter-intuitive on our expectations (a woman that gave birth to 30 children), and some minimally counter-intuitive on our ontological assumptions (an immaterial person). His studies found that people remember minimally ontologically counter-intuitive statements much more than any other type. The results were significant when measuring both short and long-term memory.<sup>110</sup> Barrett then traveled to many different cultures and countries in the world and performed the same test, tailoring the specific statements to each culture. The results were the same, proving that the cognitive effects of minimally ontologically counter-intuitive statements are not affected by what kinds of religious concepts the people are familiar with, how varied they are, how seriously they are considered, whether they are transmitted in literature or orally, and whether people engage in religious activity in everyday life.<sup>111</sup> The results seem to indicate that humans universally remember these statements better than any other type, and that most religious concepts belong to this group of statements.

One possible argument against this explanation is that God belongs in the realm of maximally ontologically counter-intuitive concepts. In other words, he violates almost every ontological category by being omnipresent, omniscient, and so on. However, this argument does not hold up. Barrett conducted another experiment in which he asked people to explain what God is. He then gave them a story that included God as an actor and then asked them to repeat

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<sup>110</sup> Ibid. 80-81.

<sup>111</sup> Ibid. 84.

the story an hour later.<sup>112</sup> Barrett found that subjects would answer the first question with “theologically correct” statements including such concepts as omniscience, omnipresence, and omnipotence. However, when asked to recall the story, people would interject their intuitive assumptions into the story. For example, people would say that God performed one task, *and then* performed another, even though they claimed that he was omnipresent, omnipotent, and beyond the realm of time. This shows two things. First, we compartmentalize concepts such as God into separate stories, each being minimally counter-intuitive. God may be able to do anything, everywhere, all the time, yet the mind still creates individual stories with individual actions in a sequencing order. Second, it shows that our intuitions override our explicit statements and understandings of religious concepts. What makes religion so easy to acquire, transmit, and remember is not the explicit doctrines and teachings, but our implicit assumptions and counter-intuitive violations.

One more hurdle for the minimally counter-intuitive thesis to overcome is the fact that not all minimally ontologically counter-intuitive statements are eligible candidates to be the basis of a religion. Mickey Mouse, the cartoon mouse from Disney, has all of the properties of a human except that he has a mouse body. He satisfies the conditions outlined above, yet people do not worship Mickey Mouse as a deity in a religion. The same goes for Santa Claus, the Easter Bunny, Teenage Mutant Ninja Turtles, and almost all Disney movies. There are thousands of minimally counter-intuitive concepts in modern culture, yet very few of them are considered as a foundation of a religion. There are a few factors that differentiate what people intuitively believe are religious concepts rather than simply counter-intuitive ones. These also happen to be the essential characteristics that link this cognitive bias with our drive towards religious violence.

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<sup>112</sup> Justin Barrett, “God Concept and Story Recall,” *Religion and Cognition: A Reader* (Oakville, CT: Equinox Publishing, 2006) ed. Jason Slone.

### *Goals and Strategic Information*

Because humans are social beings, we spend a significant portion of our interactions with other people figuring out *strategic information*. In other words, we try to analyze the people we are interacting with in order to both gain and give off strategic information. If someone is applying for the position of a babysitter, the applicant analyzes the interviewer and probably calculates that the person is looking for a responsible, drug-free, and patient person and therefore acts in a way that gives off those qualities. The person applying for the job may be an irresponsible drug-addict with anger management problems, but in that context, the person will pretend to have all of the qualities that the boss wants.

On the other end of the interaction, at the same time, the boss will be constantly searching for cues in the interviewee to gain a true understanding of his or her strategic information. There are an almost infinite number of cues that people can pick up on in order to undertake such a task. These include a tobacco smell, the clothes they wear, the music they listen to, their hair style, the way they talk, their educational background, eye contact, fidgeting, how they interact near children, how well-spoken they are, etc. All of these calculations going on are done to try and gain access and insight into the other person's strategic information. Thousands of cues are processed extremely fast and almost subconsciously, yet it happens in almost every interpersonal communication that we have.

Strategic information, then, is any information that is relevant to assessing social interactions between people. People expend tremendous amounts of cognitive resources to gather relevant strategic information about others in order to solve this problem. People analyze these cultural and social cues in order to calculate whether the person is trustworthy or not, and

whether it is beneficial to cooperate with them. These social cues are highly context specific. People in America are more likely to trust someone for a babysitter position if they are a well-dressed, well-spoken, clean, responsible, nice person, as can all be gathered from cues of strategic information. This process works both ways. The babysitter will most likely try to change his or her behavior, or at least the appearance of his or her behavior, to conform to the boss's expectations, just as the boss attempts to analyze the babysitter.

Bringing us back to the original problem of differentiating between Mickey Mouse and God in terms of counter-intuitive beliefs, strategic information plays a key role. There are two essential problems with each person's analysis of other people's strategic information. First, a person's access to the other person's strategic information is limited.<sup>113</sup> In other words, we cannot know everything about a person that is relevant to our lives. A babysitter may be well-dressed and well-spoken, but that does not mean that he is not a kidnapper or a murderer. People cannot know for sure about other people's intentions, motives, and backgrounds.

Second, people do not know what information other people know about them.<sup>114</sup> If someone is a kidnapper applying to be a babysitter, he or she will be constantly wondering and trying to assess whether the other person knows that about them. The same goes with almost all interactions with other people. Especially when dealing with transgressions, such as breaking the law, cheating in school, or sexual promiscuity, people will constantly search to understand if other people know their relevant strategic information. However, people do not know if other people know or not, making their knowledge of strategic information limited in yet another way.

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<sup>113</sup> Boyer, *Religion Explained*, 156.

<sup>114</sup> *Ibid.* 156.

Gods are not bound by these restrictions on strategic information. They are known as FASAs or full access strategic agents.<sup>115 116 117</sup> Gods' access to strategic information is not limited and people know that gods know all of their strategic information, as people assume that gods know all their actions. If people murder or steal, they do not ask themselves whether God found out about it or how they can hide that secret from God. When associating with other people, people try to cover up or hide their actions because other people do not have full access to their strategic information. When associating with God, people work under the assumption that God already knows their actions and instead work towards repentance instead of deceit. In other words, the concept of gods solves the dilemma of social interactions in modern times. God concepts act as a mediator of social interactions and places restrictions upon people's behavior. People's actual behavior is influenced by gods due to their full access of strategic information and the supposed consequences of noncompliance.

Multiple psychological studies have lent credence to this theory. When people were reminded of God in some way, be it a simple prayer, story, or comment, they were more likely to show reduced cheating and greater generosity among strangers. People will distribute goods more equally, become more altruistic, and become less likely to cheat people out of goods when God is invoked in some way.<sup>118</sup> People feel that there is a God watching over them so they have to act in a fair and just manner.<sup>119</sup> These studies add support the concept that religion is a social mediator and is a safeguard against cheating and deception.

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<sup>115</sup> Ibid. 159.

<sup>116</sup> Jesse Bering, "The Folk Psychology of Souls," *Behavioral and Brain Sciences* 29 (2006): 453-498.

<sup>117</sup> John Teehan, *In the Name of God: The Evolutionary Origins of Religious Ethics and Violence* (London: Wiley-Blackwell, 2010).

<sup>118</sup> Ara Norenzayan and A Shariff, "The Origin and Evolution of Religious Prosociality," *Science* 322:58-62.

<sup>119</sup> Bargh and Chartrand, "The Unbearable Automaticity."

The concept of FASAs is one possible source of religious violence for three reasons. First, FASAs are used as a way of constraining behavior of people both within a group and outside the group. As mentioned above, believing in a being with full access to strategic information alters people's behavior because they know they cannot "get away with it," as they may be able to when interacting with human populations. If someone says that they are a devout Orthodox Jew, you can assume that in most instances they will not eat pork or steal as they believe they would be sentenced to Hell. Many communities throughout the world are based upon religious belief and people are more at ease and trusting when with people of their own religion. This is because the gods act as monitoring forces for transgressions.

This is one of the reasons why a significant portion of religious violence is aimed at outsiders to an individual's religious group. In a more traditional sense, violence is more likely when you do not know the norms and rules the others abide by. Instead of risking deception and cheating, a person may inflict violence to have a more guaranteed way to achieve what he or she wants. When there is no level of trust or cooperation, violence is likely due to the inherent tensions and worst-case-scenario planning that goes on in the human brain. This can be seen through the interactions and violence between various religions in a specific state. For example, in Indonesia, Muslims comprise about 85% of the population, while Christians comprise 10%. There is a long history of limited interaction between these two groups. There are completely Christian communities and completely Muslim communities that are separated from one another. There is also a long history of violence, as both groups feel that they cannot trust one another, that they cannot expect one another to be moral, trustworthy cooperators.<sup>120</sup> Without a mediating factor of a common god or common customs and social cues, interactions break down into violence.

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<sup>120</sup> McTernan, *Violence in God's Name*.

Further, violence is done against outsiders to a specific religion in order to impose their religious belief upon them. This is not done simply to show that their God is better or to save people from Hell, but to mediate social behavior and reduce the cost of cooperation later. As discussed above, there are significant costs to relying upon social cues as the only predictor of a person's trustworthiness such as a lot of cognitive resources, substantial amounts of time, and the chance for deception. Imposing one's religion upon another group lessens all of these problems and increases the chance for cooperation. Accepting the cost of violence now, the group may seek to lessen the cost of interaction later by sharing a common mediator of a god. Probably the clearest example of religious violence based upon this justification is the forced conversions that were performed by almost all religions. The Portuguese tortured and attacked the Muslims in Goa, India, and forced them to convert to Christianity.<sup>121</sup> Spain, when exploring and colonizing the Americas, forced many Native Americans to convert and killed the ones who did not.<sup>122</sup> The Islamic Empire, from the 12<sup>th</sup> century through the Ottoman Empire, conquered territories in Asia and North Africa, forcing conversion upon all people there in order to force assimilation into Islamic society. People that refused were killed.<sup>123</sup> People forced conversion upon members of other religions as a mediating force for interactions, as a way of monitoring others' behavior to their expectations.

Second, due to FASAs, religious violence is a way of preventing deception and cheating. As shown above, sharing a common religion is an easier, more cost-efficient way than social cues and blind trust in determining who to cooperate with. However, it is still possible under a system of shared religion that deception will occur. Religious people commit seemingly anti-

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<sup>121</sup> M. David, "Bombay," *Western Colonialism in Asia and Christianity*, (Bombay, India: Himalaya Publishing House, 1988). p.17.

<sup>122</sup> "The Sixteenth Century in American Church History," accessed January 10, 2011, <http://www.christiantimelines.com/1500samericanchurchhistory.htm>.

<sup>123</sup> MA Khan, *Islamic Jihad: A Legacy of Forced Conversion, Imperialism and Slavery* (iUniverse.com, 2009).

religious acts frequently. Ironically, many would even argue that religious violence itself is anti-religious and would be condemned by god. Religious violence is a way of imposing a cost, besides a theological or religious one, on “cheating” the system. This explains why there is a substantial amount of violence within traditional religious groupings such as Muslims or Christians.

Because of people’s willingness, based upon the FASA and cultural cues, to cooperate with one another based upon religion, people accept each other into a particular community. Each person takes risks by cooperating with one another, yet willingly accepts those risks in order to reap the benefits of a community. Religious violence is a way of enforcing this mutual cooperation and preventing deception. If someone becomes an apostate or cheats moral codes of conduct, violence may be used to punish the offender and deter others from doing the same. An example of this violence is the prevalence among puritanical forms of Islam to kill or harm other Muslims who do not conform to norms such as a particular way of dress, sexual relations, prayer, or food consumption. Puritanical religious groups may commit violence to make sure that others conform to their religious norms.

Lastly, all of these issues are augmented by people’s dependence upon social and cultural cues when interacting with people outside of their religion. The problem arises not only with the ability for these cues to be incorrect and the ease at which deception can occur, but when different people share different sets of social cues. When different societies share different conceptions of what is “normal and good” behavior, people can no longer rely on social cues or religion to determine whether or not it is worthwhile to cooperate with them or not. At best, the entire system of analyzing cues and norms breaks down and people are left to either blind risk or a refusal to cooperate. At worst, it results in a misperception of each other’s culture, leading to



hostilities and violence. A left-handed European shaking hands with someone from Bangladesh would be considered a grave insult even though the European is probably intending the opposite effect. This likelihood for misperception and miscommunication, combined with the other factors listed above, leads to a greater likelihood of violence when dealing with religion and inter-group relations.

Some may criticize this argument by claiming that the rationality implicit in argument above does not exist when talking about religious militants. According to many such as Daniel Pipes, religious militants do not follow any sort of rationality but are crazy, irrational fighters. However, there are two arguments against this claim. First, all of the calculations and processes that I discussed above are subconscious. These are not rational, conscious calculations that each person makes every time they communicate or interact with people. If that were the case, every person would spend the majority of their lives making these decisions. Instead, these are automatic, subconscious processes that occur constantly throughout each and every day. The rationality and logic (so to speak) of people's automatic, subconscious decisions may be very different than their conscious ones.

Second, there is an inherent problem with the irrational/rational dichotomy that Pipes and others have created, as mentioned in the introduction. Most religious militants act in a rational way according to their own perceived values. It may not be economically rational to kill oneself for God, but if that individual believes that the eternal reward of heaven is greater than life on earth, then it is a perfectly rational action. It is Eurocentric and impossible to judge the rationality of religious militants without taking into account their value system and what is rational to them. Religion reverses many traditional conceptions of rationality by placing sacred values above material values.

This point is obvious, even through a Western perspective. When billions of people think of Abraham as a religious, faithful hero instead of a psychopathic murderer of his only child, there is a different form of rationality than economic rationality at play, even in the Western world, when dealing with religion. If most Christians praise a man who was willing to kill because God told him to, there is a tension when they claim that Islamic militants are irrational and crazy. Acknowledging the universality of religion's effect on rationality and values is essential to truly understanding the framework in which religious violence takes place.

### *Gods and Emotions*

A second factor differentiates counter-intuitive agents such as Mickey Mouse from candidates to be the basis of a religion, and that is our emotions. People become emotionally attached to gods so much so that they cry, kill, mourn, beg, and commit suicide for them. There are not many people in the world that will do the same things for Mickey Mouse or Santa Claus as they would for their gods. Part of our emotional attachment to gods comes from the previously stated concept, that gods have full access to all of our strategic information. Gods draw upon more aspects of people's emotions than do many other minimally counter-intuitive agents. Gods can sentence people to eternal punishment or eternal salvation, they can affect people's harvest, give a couple a baby, heal the sick, and so on. They are an integral aspect of people's daily lives.

Further, gods trigger human emotions through the use of ritual. Consider a typical Pentecostal mass. Practitioners sway, dance, sing, pray, yell out to God, speak in tongues, and embrace one another. Most houses of worship are constructed to inspire awe and augment

emotions. The rituals and practices associated with religion engage the practitioner and excite the emotions as much as they can.

Lastly, and perhaps most pervasively, gods and religion trigger an emotional response through tragedy and death. People turn to God when they are faced with any and all sorts of hardships, from a teenager praying that his new found crush likes him or her to a family praying that they can pay the bills for one more month. In fact, it seems almost natural to turn to the supernatural when confronted with difficult situations. The largest crisis, of course, is recognizing the mortality of oneself or of loved ones. Gods and religion are linked closely with death and dying as humans desire to escape their own mortality and turn to the afterlife as a source of hope. Religion gives life meaning and provides hope for an afterlife, two very comforting concepts when someone close is dying. It is difficult, if altogether impossible, to imagine a religion with no focus on or concepts about dying or hardship. In fact, multiple studies have shown that people more readily accept supernatural and counter-intuitive concepts when reminded of death or when facing a crisis.<sup>124</sup> People express that they feel more emotionally motivated by religion, that gods are more likely to exist, and that religion gives them meaning in life.<sup>125</sup>

Due to this tight linkage between death, emotions, and religion, it is not difficult to see why religion and violence have a close relationship. Violence and death augment each individual's religious experience. The heightened emotions that violence and death cause in the human brain spur people towards a deeper, stronger religious feeling and sense of connection with God. This is why violence and religion are seen as almost natural in modern times, as

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<sup>124</sup> Michael Argyle and Benjamin Beit-Hallahmi, *The Social Psychology of Religion* (New York: Routledge, 1999).

<sup>125</sup> Ara Norenzayan and Ian Hansen, "Belief in Supernatural Agents in the Face of Death," *Personality and Social Psychology Bulletin* 32:174-87.

violence and killing is a way of strengthening the religious experience, as a way of transcendence and connection with God.

Not only does violence and death augment people's religious experience, but the relationship is bidirectional as well. People's increased emotions from engaging in religious activity, as described above, furthers the likelihood of violence and conflict. The heightened emotional receptivity and state of religious people makes them more likely to defend and fight for their gods. When in an emotionally sharp state, people are more willing to fight for their cause and increased conflict occurs. People are more emotionally attached to and inspired by their religion, making them more willing to kill and die for their respective gods.

The biases in the mind, specifically the fact that humans are attracted to and remember minimally counter-intuitive concepts, can have significant effects on the relationship between religion and violence. Religious violence would not be that common, and the explanations that abundant, without some intrinsic aspect of the human brain biasing humans to commit such violence. Understanding how the brain processes minimally counter-intuitive concepts such as religion is a key factor in understanding the cognitive processes behind religious violence.

### ***Hyperactive Agent Detection Device***

Counter-intuitive properties, however, are not the only cognitive bias that has an effect on religious violence. A common cognitive mechanism cited by many cognitive scientists interested in religion is something that has been coined a "hyperactive agent detection device," or HADD.<sup>126</sup> This device, according to Justin Barrett and many others, is an inherent part of people's cognitive systems. According to Stewart Guthrie, professor of anthropology at

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<sup>126</sup> Justin Barrett, "Exploring the Natural Foundations of Religion," *Religion and Cognition: A Reader* (Oakville, CT: Equinox Publishing, 2006) ed. Jason Slone. p. 91.

Fordham University, humans have a bias towards detecting agents when they do not actually exist.<sup>127</sup> People attribute agency to many events and objects in the world much more often than they actually occur. When people hear a twig snap while walking in the forest, most assume that it was an animal instead of the wind or a random occurrence. A thump in the night becomes a monster, ghost, spirit or intruder. Examples of humanity's oversensitivity to finding agents behind every action are abundant in everyday life.

Multiple studies from a wide range of disciplines have shown that this HADD is an innate aspect of the way people process information.<sup>128 129 130 131</sup> Not only do people overdetect agents when analyzing information from their surroundings, but there are a few other implications as well. First, as Heider and Simmel, psychologists from Austria, demonstrated famously in 1944, there is an aspect of intentionality inherent in HADD. They showed a simple film animation of a triangle and a circle moving around the screen. When asked to comment on the film, the subjects who watched the film attributed conscious intentionality to the figures, claiming that they were fighting, in love, kidnapping, or living happily together forever. Paul Bloom and Csaba Veres, professors of psychology at the University of Arizona, replicated Heider and Simmel's study with various other objects, groups, countries, and families and found that the results were consistent with whatever was showed on the screen.<sup>132</sup> Not only do people

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<sup>127</sup> Stewart Guthrie, "A Cognitive Theory of Religion," *Current Anthropology* 21:2 (1980):181-203.

<sup>128</sup> Thomas Lawson and Robert McCauley, *Rethinking Religion: Connecting Cognition and Culture* (Cambridge: Cambridge University Press, 1990).

<sup>129</sup> Fritz Heider and Simmel, "An Experimental Study of Apparent Behavior," *American Journal of Psychology*, 57 (1944): 243-259.

<sup>130</sup> Paul Bloom and Csaba Veres, "The Perceived Intentionality of Groups," *Department of Psychology at University of Arizona*, 1997.

<sup>131</sup> Philippe Rochat and Susan Hespos, "Differential Rooting Response by Neonates: Evidence for an Early Sense of Self," *Early Development and Parenting*, 6 (1997):105-112.

<sup>132</sup> Bloom and Veres, "The Perceived Intentionality of Groups."

overdetect agents, but they overattribute consciousness and intentionality to inanimate objects or groups.

Further, humans are extremely purpose-seeking beings, thinking that each action has a purpose and that their own actions should have a purpose as well.<sup>133</sup> When people attribute agency to an occurrence, they think that the agent did it with a purpose. The thump in the night, attributed to an intruder, is done because he is trying to break in. The twig snap in the forest, attributed to a predator, is because it trying to attack. This also applies to the purpose-seeking human that everyone can relate to; that is, how people seek a purpose to their life, a purpose to their actions. People are biased towards performing actions through which they can gather a purpose.

Also, it is important to note that these are all subconscious actions. People do not usually consciously attribute agency when something occurs, attribute intentionality to random objects or groups, or assume that agents act with purpose.<sup>134</sup> These are automatic, subconscious processes performed by the brain when triggered, such as when a twig snaps in the forest. They are powerful in the sense that even if given fairly good reason to believe that it was not an agent performing the action, such as someone saying they might have left the door opened on accident, there is still a lingering feeling that it could have been an intruder. Even if people say that they did something at random, others will be suspicious of their intentions.

Humans developed this mechanism, now known as HADD, as part of early survival techniques. When walking in the forest and a twig snaps, it is more conducive to one's survival to assume that it is a predator than to assume that it was the wind and continue on his or her path. False positives are rarely ever dangerous, as they simply induce caution in the person. However,

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<sup>133</sup> Atran, *In Gods We Trust*.

<sup>134</sup> Darren Newton, "Foundations of Attribution: The Perception of Ongoing Behavior," *New Directions in Attribution Research*, (1976): 223-247.

false negatives could be fatal as predators and dangers would go unnoticed. Through evolution, the mind became tuned to overreact to any stimuli as to ensure the best chances for survival.<sup>135</sup> This is also why the process is an automatic, subconscious one. People do not have the time to wait and ponder about the nature of a particular event. It is more beneficial to trigger an automatic process in favor of caution than to risk being attacked while wondering about whether or not it is a predator.

The linking of HADD with religion is fairly direct. Gods are often the agents that become overdetectable in the world. Creation stories, prayers being answered, ghosts haunting people, spirits doing various heinous or benevolent acts, finding images of God in common objects, and praying to statues are some of the most obvious examples. According to Justin Barrett, “HADD might lead people to posit agents, perhaps of a counterintuitive sort, that are then well-transmitted because of their easy fit within intuitive conceptual systems,” as well as “counterintuitive-agent concepts would be more likely to receive attention and be transmitted than non-agent concepts.”<sup>136</sup> In other words, people fit the scenarios of their daily lives into a conceptual framework that supports the notion of gods and spirits. A 500\$ bill on the ground becomes a gift from God, a death in the family a curse, and healing a miracle. These religious concepts are more successful than secular ones because of HADD and the bias towards counter-intuitive agents described previously. The idea of a being bestowing gifts and plagues upon humanity is more convincing and salient than the gifts and plagues being essentially random, just as the idea of an invisible man tripping someone in the forest is more salient than an invisible rock that the person tripped over. People are biased towards having an intentional, conscious, purpose-driven actor affecting their lives instead of an inanimate or non-existent one.

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<sup>135</sup> Guthrie, “A Cognitive Theory of Religion.”

<sup>136</sup> Barrett, “Exploring the Natural Foundations of Religion,” 92.

HADD contributes to the human propensity for religious violence in a few ways. The first is purely biological. As mentioned above, many of the studies such as Barrett's and Guthrie's found an inherent neurological link between the triggering of HADD and our basic primal instincts such as the fight-or-flight mentality and worst-case scenario planning. Whenever HADD is triggered, such as through the invocation of gods, spirits, or demons, the default assumption is that they are predators. Due to HADD originating from a need to have an automatically triggered response to predators and danger, the neural wiring of the brain still maintains that connection even when HADD is triggered by seemingly non-threatening concepts such as religion. HADD's origins have a profound effect on how HADD functions and have not disappeared from its programming.

Because of its origins, the triggering of HADD also biases the brain towards increased feelings of insecurity, fear, and worst-case scenario planning.<sup>137</sup> The biological response to the detection of unseen agents is acceleration of heart and lung action, increased adrenaline, increased inhibition, and heightened reflexes. The brain and body react to prepare for a conflict of some sort. Studies show that in modern times, the body still maintains this reaction in response to perceived predators or hostile situations by becoming angry, increasing argumentative behavior, and social withdrawal.<sup>138</sup> Increased agitation and hostility is also a significant byproduct.

Clearly, these biological processes do not occur every time someone thinks about religion. A priest or theologian is not in a perpetual state of agitation and hostility. However, it is likely to be a subtle response. Despite not overtly becoming aggressive or violent, the

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<sup>137</sup> Henry Gleitman, Alan J. Fridlund and Daniel Reisberg, *Psychology*, (New York, New York: W. W. Norton & Company, 2003).

<sup>138</sup> Howard Friedman and Roxane Silver (Eds.), *Foundations of Health Psychology*. (New York: Oxford University Press, 2006).



triggering of HADD through religion may make people more tense, hostile, and aggressive when they become part of a confrontation. This could be one explanation as to why people are so confrontational when arguing about religion in general or their religion in particular. Religious discussion or actions may trick the brain, in a way, triggering HADD and the associated biological responses when confrontation does occur. It may be a critical link in understanding the hostility with which people argue and fight about religion.

At very least, the link between HADD, religion, and violence can be abused by people who want to motivate others to religious violence. The omnipresent threat of a predatory agent can be a main driver for violence. Spirits, ghosts, demons, witches, and devils can be used by leaders to motivate people to violence in order to save themselves and other believers. The threat of corruption, possession, and evil influence can motivate religious followers to become puritanical and hostile to outsiders. Cognitive mechanisms can be easily tricked. Just as pornography uses cognitive mechanisms to trick the mind into triggering all relevant biological responses dealing with sex even though it is simply pixels on a computer screen, people can manipulate and abuse HADD and other cognitive mechanisms dealing with aggression and religion to motivate people to violence. To be fair, more research needs to be conducted on the topic to be certain.

Another way in which HADD may contribute to religious violence is teleological. Deborah Kelemen, professor of psychology at Boston University, has studied HADD and its relation to how people understand the world around them.<sup>139</sup> She and many other scholars argue, based upon multiple studies performed on children and adults, that humans are teleological creatures dependent upon seeking a purpose behind their and other people's

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<sup>139</sup> Deborah Kelemen, "Are Children 'Intuitive Theists?': Reasoning About Purpose and Design in Nature," *Religion and Cognition: A Reader* (Oakville, CT: Equinox Publishing, 2006) ed. Jason Slone. p. 100.

actions.<sup>140 141</sup> Because humans are biased towards seeing natural phenomena as intentionally designed by a god, people also view objects and beings as existing for a purpose. The countless people who claim to lack meaning and purpose in their lives, the thousands of books about finding purpose, and *the* classic question – what is the meaning of life – all speak to the pervasiveness of people needing a purpose in their lives. People constantly strive to know the purpose of things, including their own lives, even though that information is almost irrelevant in terms of practical considerations.

Many people searching for purpose in their lives turn to religion as the answer. Religion provides a fairly straightforward answer to the problem posed by teleological reasoning by having people's purpose be to serve God or whatever each particular religion dictates. Gods provides the most direct answer possible to the meaning of life, and, in fact, to each action every day. Not only is life in general given a purpose and meaning with religion, but some religions like most sects of Islam claim that it provides a purpose, meaning, and directions for every aspect of daily life. Each meal, political engagement, trip down the street, or haircut can be regulated and given meaning by religion. Religion also wins out over other ideas, such as secular humanism, in providing meaning to life by having an ultimate, unchanging, unchallengeable purpose. People can question secular humanism by challenging its authority, if humans were made to fulfill that purpose, and so on. Religion, on the other hand, can claim that God made humans for a specific purpose, something that no secular ideology can fulfill. It has the ultimate authority in questions of meaning and purpose.

Many times, this is a non-violent relationship. However, other times this results in a militant religious leader fulfilling the need for purpose in the follower. People meet a militant

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<sup>140</sup> Ken Springer and Frank Keil, "On the Development of Biologically Specific Beliefs: The Case of Inheritance," *Child Development* 60:3 (1989).

<sup>141</sup> Frank Keil, *Concepts, Kinds, and Cognitive Development* (Massachusetts: MIT Press, 1992).

leader and get drawn to their ideology because they are in need of purpose and meaning in their lives. Combined with all of the biases mentioned above, a religiously militant ideology would be especially attractive to a person seeking purpose. The violent ideology can be happenstance, in that the person simply went to a religiously militant leader and adopted that leader's ideology. Other times, violent ideologies can be more successful than peaceful religious ideologies by intensifying the religious experience and providing a more existential, extreme purpose to people's lives.

Combined with the analysis of FASA, the end result is a purpose-needing person receiving instruction from the highest authority to kill non-believers to achieve divine will. The teleological nature of human cognitive processes is attracted to commandments such as these in order to fulfill the purpose they seek in their own lives. Religious militants are not simply people that get bombs strapped onto them as they blow themselves up for their religious leader, but humanity's cognitive biases make it possible for people to be driven to violence for the sake of achieving purpose in the name of divine will. Killing for the ultimate authority is perhaps the greatest and most attractive answer to the question of purpose and meaning in a person's life.

## ***Conclusion***

This paper has sought to show that understanding cognitive biases in the human brain is helpful in understanding religious violence. Scholars in the field today are answering the question of why people commit religious violence with answers that are either inadequate or beg further questions. There are an almost infinite number of reasons for why someone would decide to commit religious violence. Detracting away from that is denying the distinctive aspect of each person's life and muting their own individual agency. Many people say they commit such acts

for their friends, others for their family, others for their God, others for money, others for fame and honor, others for revenge, and so on. Each person's motivations are unique to that individual.

Despite the almost impossibility of singling out a prime cause of religious violence, understanding the cognitive biases that contribute to each individual's decision to commit such violence can still be useful. Arguing that there are some people who have been motivated by a religious text to commit violence does not make academics any more relevant or grant policymakers any more tools to stop it. Only by establishing broader, more universal connections between religious militants can policy proposals be successful and effective theories be proposed.

This paper itself is not immune to such a criticism. However, the purpose of this paper is not to explain the direct thought process that goes through someone's head when they decide to commit religious violence. Such an approach is futile and the wrong outlook. This paper has sought to explain the biases that underlie the infinite motivations for religious violence. Yet not everyone may even be influenced by these biases outlined in this paper. Some people may commit religious violence for reasons wholly unexplored. But these are the questions that scholars and policy makers should be searching for and answering instead of attempting to apply the motivations of a single individual to an entire group.

The first step would be to introduce a new framework for understanding the way that religious violence operates. Instead of working under the assumption that religious militants operate under a framework of economic rationality, it would be best to acknowledge that the human mind does not work as such. Commitment factors, fictive kin, HADD, counter-intuitive properties, sacred values, honor, and friendship all distort this mode of thought. Acknowledging

that militants may not bargain over sacred territory or religious ideals because, to them, their worth is almost infinite is an important step in conflict resolution and solving the issue of religious violence. Policymakers should not be focusing upon material, economic, rational solutions, but ways of accepting their values as sacred and moving from there.

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