

# Why Radicals Win the Newsday: Ratcheting-up of Cultural Counterintuitiveness in Rumors and NRM Doctrine

M. Afzal Upal ([Afzal.Upal@drdc-rdc.gc.ca](mailto:Afzal.Upal@drdc-rdc.gc.ca))

Defence Research & Development Canada

1133 Shepherd Ave W, Toronto, ON,

M3M 3B9 Canada

## Abstract

*Culturally counterintuitive concepts* are ideas that violate a small number of justifiable expectations raised by shared beliefs of a group of people. Previous studies have shown that ideas that violate a small number of expectations are better remembered by people than ideas that conform to their expectations or ideas that violate a large number of people's expectations. However, as counterintuitive ideas become embedded in a group's belief-system they lose their memorability advantages and must change to regain those advantages. This article presents two case studies conducted to better understand the dynamics of the diffusion of information. It outlines how a cognition and culture approach can help us understand cultural dynamics and offers new insights into rumor diffusion and new religious movement splits.

**Keywords:** counterintuitive concepts, rumor diffusion, new religious movements.

## Introduction

*The Windigo monster was a superhuman giant about thirty feet tall, who lived in the forest and preyed on human beings. The algonkians believed many spirits inhabited the forest but only this was a cannibal. He was described as having a heart of ice, no lips, huge jagged teeth, and protuberant eyes rolling in blood. His feet were a yard long with pointed heels and only one toe. His hands were like claws. He hissed and made a long-drawn-out thundering sounds, accompanied by gruesome howls.* (Page 109) (Ezzo, 2008)

*This crocodile was found in New Orleans swimming down the street. 21 FT long, 4500 lbs, around 80 years old minimum.*

*Specialists said that he was looking to eat human because he was too old to catch animals. This crocodile was killed by the army last Sunday at 3:00 pm, currently he is in the freezer at the Azur hotel. The contents of it's stomach will be analyzed this Friday at 2:30 pm.*

(Snopes.com/katrina/photos/crocodile.asp)

Why and how do counterintuitive ideas such as above spread in a society? Why are counterintuitive ideas so prevalent in rumors and religious beliefs of people around the globe? Cognition and culture researchers have

suggested that a fruitful way to answer such questions is to study mental structure of different types of concepts focusing on their fit with people's cognitive machinery to understand which ideas are preferentially processed by people (Boyer, 1994; Sperber, 1996).

All else being equal, ideas that are easier to comprehend, memorize and communicate to others are more likely to become widespread and hence stand a good chance of becoming part of a group's shared belief-system. Much of the cognition and culture work has focused on cognitive processes connected to memory to identify ideas that are more memorable for people. One of the most significant achievements of this approach is the so called minimal counterintuitiveness (MC) hypothesis (Boyer, 1994, 2001; Boyer & Ramble, 2001) which suggests that minimally counterintuitive (MCI) concepts that violate a small number of intuitive expectations (such as, a tree that talks, a rock that eats, and an invisible cow) are more memorable than either intuitive concepts (such as, a green tree, a brown rock, and a good person) or maximally counterintuitive concepts that violate a larger number of intuitive expectations (such as, an invisible talking tree that does not occupy any space and a sad illuminant rock swimming to cross a river). A number of subsequent empirical studies (J. Barrett & Nyhof, 2001; Boyer & Ramble, 2001; Gonce, Upal, Slone, & Tweney, 2006; Upal, 2005; Upal, Gonce, Tweney, & Slone, 2007) have found some support for better memory for the MCI concepts.

Traditionally, the MC hypothesis has been used to explain the fact that widespread religious concepts around the globe tend to be minimally counterintuitive (J. L. Barrett, 2008; Boyer, 2001). Traditionally, some cognitive scientists of religion have argued that the MC hypothesis only applies to those concepts that are counterintuitive to all human beings regardless of their age, gender, cultural knowledge, or mental beliefs (J. L. Barrett, 2008). Upal (2010; 2011) has argued that counterintuitiveness is inherently dependent on the expectations of an agent which are generated by the agent's mental beliefs at the time. Thus counterintuitive ideas are counterintuitive in a given context. A counterintuitive idea can eventually become intuitive once people get used to it.

The notion of counterintuitiveness as context-dependent violation of people's expectations, also allows us to apply the MC hypothesis to a much larger class of concepts. In particular, Upal (2010; 2011) has argued that ideas that violate a small number of expectations raised by shared

beliefs of a group of people should also be more memorable than ideas that conform to people's cultural beliefs. Upal calls such ideas *culturally counterintuitive* and suggests that the memory advantages afforded to the culturally unorthodox ideas should give such ideas transmission advantages over culturally familiar ideas.

The dynamic model proposed by Upal (2010; 2011) also suggests that once a culturally counterintuitive idea becomes widely embedded in shared belief-system of a group of people and no longer violates their shared beliefs, it loses its memorability advantages. In order to violate people's expectations in the new environment, an idea has to either *add* more counterintuitiveness features (the so called *ratcheting up* of counterintuitiveness, Upal 2010) or *remove* the counterintuitive features that people now expect to find in relationship with this concept. One result of the ratcheting-up is that the ratcheted-up-concept, which would have seemed maximally counterintuitive in the original context, will only be seen as minimally counterintuitive to the group that was able to build cultural scaffolding to embed the original counterintuitiveness in their shared belief-system. Thus a history of gradual change can lead to the spread of maximally counterintuitive concepts. Upal (2010; 2011) suggests that this may be how maximally counterintuitive religious concepts such as the Abrahamic God and ghosts have become widespread. Upal (2011) further argued that:

*The ratcheting-up of counterintuitiveness also predicts a continuous transmission advantage for unorthodox ideas that violate cultural expectations over traditional ideas that do not. This explains the continuing evolution of cultural beliefs among groups ranging from post-modern artists to new religious movements. Cultural historians often resort to using the analogy with waves on a beach to explain the waves of innovation that seem to continually change the landscape of culture. Art historians for instance see the last few centuries of Western Art history as waves of impressionism, expressionism, Fauvism, Cubism, Dadaism, and surrealism etc. Any two historically contiguous waves have an interesting paradoxical relationship with each other. The new trend is both defined in opposition to the old one and also as a continuation and improvement of the old trend. At the core of each trend is a minimally counterintuitive idea that is advocated by a group of innovators and becomes widespread because it is culturally counterintuitive for the population of interest. However, once it becomes widely accepted and integrated into the cultural beliefs of the group of individuals, it loses its memorability advantages making room for yet another wave of innovation.* (Page 13)

While the arguments sound plausible, confirming claims about dynamics of people's shared beliefs is not an easy task (Paluck & Green, 2009). Social and cognitive psychologists studying people's identity beliefs using empirical in-lab studies have been accused of ignoring factors that affect people's identity beliefs in the real world.

Anthropologists and sociologists studying shared beliefs of cultural groups in the real world through qualitative techniques are accused of abandoning scientific controls needed for hypothesis confirmation and testing. We believe that both techniques are useful for cognition and culture research and complement each other. A number of previous studies (Gonc, et al., 2006; Upal, 2005, 2007; Upal, et al., 2007) have focused on testing various aspects of the context-based model of the MC effect through empirical in-lab studies. This paper presents the results of two qualitative studies conducted to see if changes to people's shared beliefs in the real world exhibit the patterns hypothesized by the cultural counterintuitiveness model.

## Case Studies

The first-case studies the rumors that spread in the aftermath of Hurricane Katrina in New Orleans in 2005. The second-case studies the doctrinal arguments that led to the split of the Ahmadiyya Movement in Islam (Friedman, 2003; Lavan, 1974; Walter, 1918) into two rival groups: Lahori and Qadiani (B. M. Ahmad, 2007). We chose the two studies because they represent two seemingly diverse instances of cultural change. The Hurricane Katrina rumors were primarily spread in a 21<sup>st</sup> century western population through modern media while the Ahmadiyya Movement split happened about a century ago in a rural part of India with little or no media attention.

### Case 1: Hurricane Katrina Rumors

As the centre of category-3 storm, called Hurricane Katrina, passed over New Orleans on August 29, 2005, over 50 levees designed to protect the city were breached by surging water. By August 31, over 80% of the city was flooded with some parts more than 15 feet under water. While over 90% of the city's residents were evacuated, thousands of the poor and elderly remained behind. Some of those who remained in their houses had to swim to safety or had to be evacuated on boats. Thousands of evacuees were brought (or made their own way) to the Louisiana Superdome and the New Orleans Convention Center. At its peak, the number of people in the two buildings is thought to have reached 40,000. The situation did not get better with passing of the eye of the storm because of the flood waters that remained. On August 31, governor Kathleen Blanco declared a public health emergency for the entire Gulf Coast and ordered a mandatory evacuation of all those remaining in New Orleans. However, evacuating such a large number of people remained a challenge and took several days to organize.

The events leading up to the arrival of the hurricane in New Orleans and its aftermath were extensively covered by the worldwide media. The major US TV networks, newspapers, and various global media outlets had numerous reporters assigned to around-the-clock coverage of the storm and its aftermath. People in the US and around the world were shocked to see the extent of the damage shown on their television screens. The storm winds and the water had

damaged thousands of homes and killed hundreds of people. The situation of the survivors at the Superdome and the Convention Center was not much better. With no electricity or city services and most of the highways damaged, it was a challenge to provide water and food to the survivors. The Superdome roof itself suffered damage from the storm. The roof developed holes and water leaked in. The lower level of the dome was flooded. Without any power and water or supplies, sanitary conditions at the two evacuation centers deteriorated rapidly. Heat, humidity, and confinement of thousands of people in closed space with no obvious resolution in sight also made the situation worse. People in the US and around the world were shocked to see third-world-like living conditions of the evacuees. They were surprised by how slow and how ineffective the response of the one of the richest and most powerful governments on the globe had been in face of the suffering of its own people.

It was in this environment that a number of rumors began to spread. These rumors implied that the situation in New Orleans was even worse. There were reports of gangs running amok at the Superdome. It was said that babies were being raped and people were being murdered. Apparently fears of being shot down had prevented rescue helicopters from landing on the roof of the dome. There were reports of bodies of murder victims piling up inside the convention center and the Superdome. Many of these reports were picked up by major news networks and broadcast around the world. New Orleans Police Chief Eddie Compass was broadcast as saying: "We have individuals who are getting raped; we have individuals who are getting beaten." He also told Oprah Winfrey that babies were being raped at the Superdome. On the same show, Mayor Ray Nagin warned: "They have people standing out there, have been in that frickin' Superdome for five days watching dead bodies, watching hooligans killing people, raping people." Days later, when people had been moved out of the two centers, it became clear that most of these reports had been either outright false or at least exaggerated.

Hurricane Katrina rumors were not the only ones to follow this pattern as they spread. Rumor psychologists have seen this pattern often enough that they have a name for it. In fact, they have several names according to rumor psychologists Difonzo and Bordia (2007):

*adding has been referred to as "snowballing" (Rosnow 1991), invention and elaboration (G. W. Allport & Postman, 1947b), "compounding" (Peterson & Gist, 1951), "embroidering" (G. W. Allport & Postman 1947v), and "fabrication" (Sinha, 1952). (Page 135)*

Rumor snowballing appears to be an instance of ratcheting-up of cultural counterintuitiveness. While social factors such as political uncertainty and lack of a credible official narrative (Allport & Postman, 1947) clearly have an impact on rumor generation and growth, rumors, that violate people's expectations but can be made sense of, catch people's attention the way expectation conformant pieces of information simply cannot. As Clark (2008) states, surprisingness is one of 8 ½ laws of rumor propagation:

*you're probably familiar with at least one notorious malapropism from President George W. Bush: "The problem with the French is that they don't have a word for 'entrepreneur.'" Or this embarrassing gem from the pop starlet Mariah Carey: "When I watch TV and see those poor starving kids all over the world, I can't help but cry. I mean, I'd love to be skinny like that, but not with all those flies and death and stuff." Can you believe they actually said these things?*

*Well, don't. Both quips were made up by pranksters. Even so, they enjoyed viral spread for the simple reason that both are juicy enough to be shocking—yet not so far-fetched that we doubt the two parties could have uttered them.*

(Page 2) (Clark, 2008)

Schank (1999) argued that stories such as surprising rumors catch people's attention because they violate their expectations. This indicates a gap in their world knowledge and presents an opportunity to learn. Such 'learning opportunities' (Schank, 1999) cause people to update their beliefs. Once people have heard enough rumors that reinforce a similar point, and have revised their world model accordingly, the thesis of such rumors becomes conventional wisdom. Once this happens rumors lose their interestingness and start to die. In order to catch people's interest in the new environment, a rumor must change by either building on this counterintuitiveness or by removing it. Hurricane Katrina rumors clearly exhibit this pattern. The first reports from New Orleans about thousands of poor people unable to evacuate from the city and being housed in poor conditions without water and food were initially shocking but soon they became conventional wisdom and lost their shock value. Later news reports added lawlessness to the mix to keep the interests of their viewers. Once theft and looting in New Orleans became conventional wisdom and were no longer news-worthy, reports of rapes and murders began to emerge. Initially reports talked about a small number of isolated incidents but later reports added to the numbers as well as intensity of the incidents. It was no longer the adult women who were getting raped, now it was underage girls, and once that lost its shock-value, babies!

The cultural counterintuitiveness model suggests that this snowballing is not a pathological condition but a necessary consequence of how people comprehend, remember, and communicate information. As a wave of rumors advocating a particular point becomes widespread, it changes the informational context in which new rumors must operate. In the new environment, rumors must change or die. This is essentially what rumor psychologist report finding in the real world, as Kapferer (1990) concludes:

*Snowballing is the only way for a rumor to last. It is a necessary condition of rumor persistence. Indeed identical repetition kills the news value of all information. Were a rumor to be repeated word for word, without any modification whatsoever, throughout its diffusion process, its death would be thereby accelerated. (Page 108)*

While ratcheting-up of counterintuitiveness is one prediction of the cultural counterintuitiveness model, another prediction is that once a counterintuitive entity or event becomes mundane, removing counterintuitiveness can become just as surprising and interesting for people. The “rumor-debunking” news stories that replaced the initial “doom and gloom” news stories of the first week of coverage can be considered to be messages of this type. The following brief of the [salon.com](http://salon.com) story from October 20, 2005 is typical of these stories:

*The reports coming out of New Orleans in the immediate aftermath of Hurricane Katrina were shocking. Stories of murder, rape, and relief helicopters being fired upon raced around the world in the form of breathless headlines. Problem is, most of them were wrong.*

This suggests that rumor propagating pranksters are not the only ones who can employ counterintuitiveness to achieve their objective of achieving maximum distribution for their viewpoint, those who are interested in debunking rumors can also use surprise to gain people’s attention and unpeel layers of counterintuitiveness that have been carefully weaved by rumor-mongers.

### **Case 2: The Ahmadiyya Jamaat Split into Qadiani and Lahore Factions**

The Ahmadiyya Movement (Atkinson, 2002; Friedman, 2003; Lavan, 1974; Walter, 1918) was founded by Mirza Ghulam Ahmad (Dard, 1948) in the late nineteenth century in Northwest India. The son of a minor feudal lord, with claims to Turko-Persian pedigree, Ahmad gained early fame in Amritsar District as a defender of orthodox Islam against Christian missionaries and Hindu revivalist movements that were aggressively seeking to convert local Muslims. His early efforts at engaging Christian missionaries and Hindu Arya leaders in public debates were appreciated by the local *ulema*-religious leaders. Starting in the 1880s, however, he claimed that he was receiving revelation from God. He further claimed that he had been divinely appointed as a reformer of Islam.

Islamic tradition describes a hierarchy of reformers ranging from saint-like figures called *mujaddid* to prophets called *nabi* or *rasul*. A *mujaddid* introduces reforms in religious doctrine but a failure to pledge one’s allegiance (or *bayah*) to him does not throw one out of the circle of Islam. Prophets on the other hand, bring new laws and scriptures from God and have to be followed to achieve salvation. Claimants to the offices of *mujaddid* and *nabi/rasul* have been treated very differently in the history of Islam. Most claimants to the office of *mujaddid* (e.g., Shah Wali Ullah of Delhi) were tolerated by most other Muslims and even revered by some. All of those who claimed to be prophets, however, were vehemently opposed and their murder was religiously sanctioned by a majority of *ulema*. These include a series of tribal chiefs who declared themselves

prophets following the death of the Prophet Muhammad in 632 AD. They were militarily attacked, defeated and killed under the commands of the first successor (or *Khalifa*) to the Prophet Muhammad.

In 1882, Ahmad claimed that God had appointed him a *mujaddid* of the 14th Islamic century. His claim was not accepted by most Muslims or even his own wife and children. He was, however, able to convince some Muslims that Islam was under threat and the only way to save it was to reform it. By 1889 he had converged on the first great reform that he felt was urgently needed to save Islam from Christian missionaries. He wrote:

*Through His blessings, His kindness, and His forgiveness He has proved to me that Jesus, may peace be on him, neither died on the cross nor was raised to the heaven but instead was saved and came to Kashmir and died there. These are not just stories, they have been fully proved through a number of arguments as I have written in my book, ‘Jesus in India’ so I say to you with full force that I have been given the knowledge to break the cross as promised in Hadith.* (Page 168)

This claim ran counter to the traditional beliefs of most Indian Muslims. Just a few years ago, Ahmad himself had declared that he believed that Jesus had been physically raised to the heavens by God to save him the disgrace of dying on the cross and that Jesus will physically descend from heaven towards the end of times to lead the final victory of Islam over infidels. His new claim of Jesus having died a natural death in old age violated expectations raised by shared beliefs of Indian Muslims. The cultural counterintuitiveness model suggests that people remember a counterintuitive idea only if they can justify its counterintuitiveness, Ahmad presented a number of arguments to justify his culturally counterintuitive claim about Jesus’ death (M. G. Ahmad, 1909).

- (I) *Argument from necessity:* Jesus’ death is needed to blunt the Christian missionary argument that Jesus is a superior prophet to Muhammad because while Muhammad lies buried six-feet under ground, Jesus is sitting on the right hand of God.
- (II) *Argument from rationality:* Lifting people physically to the heaven and descending them back to earth is against *sunnatullah* i.e., the law of nature as laid out by God.
- (III) *Argument from tradition:* The prophet Muhammad and his companions had believed that Jesus had lived a full life and died a normal death but that these beliefs have been lost as Islamic doctrine had become corrupted over time. The process of knowledge-corruption was similar to the one through which Muslims believe that doctrines of the people of the book (Christian and Jews) became corrupted over time.

Since old Jesus had died and was not going to descend from heaven, the traditional Islamic prophecies regarding Jesus’ second coming had to be fulfilled by the birth of a new Muslim prophet who was similar in spirit to Jesus.

Ahmad claimed that God has told him that he was the *Promised Messiah*: Jesus returned in spirit.

*"The Messiah, son of Mary, prophet of Allah, had died and in his attribute thou hast come in accordance with the promise. And the promise of Allah was bound to be fulfilled"* (M. G. Ahmad, 1897)

He also announced that he would be establishing a formal community and accepting bayah. Those who were convinced by these arguments and justifications became part of the *Ahmadiyya Jamaat*. Studying what followed illustrates what happens when counterintuitive concepts become enmeshed in group processes.

Counterintuitive ideas become part and parcel of the identity of the group and its members. This happens, first and foremost, because a close association is created between the counterintuitive claims and the group especially in the minds of group members but also to a lesser extent in the minds of out-group members who are repeatedly exposed to the group's ideology and have to defend why they are not converting to it. Thus any mention of Jesus' natural death reminds Ahmadiyyas of their identity as members of the Ahmadiyya community. Once this association is firmly established, the group authority figures and high identifiers in the group have to express their devotion to the counterintuitive ideas in positive terms. The next generation following these role-models learns that believing in reality of these claims is an important part of group membership. Thus counterintuitive claims become institutionalized and even though they are no longer seem counterintuitive to most group members, they can persist because of this institutional support.

Conventionalization and institutionalization does not mean that cultural innovation stops. New ideas that violate people's cultural expectations have memorability advantages but now the memorability advantages must overcome the institutional forces of orthodoxy trying to prevent further innovation. This struggle can sometimes lead to lead to a schism in the group eventually leading to a group splitting up into two or more smaller subgroups. This is what happened about six years after the death of Mirza Ghulam Ahmad when the Ahmadiyya community split into two factions: *Lahori* and *Qadiani* (B. M. Ahmad, 2007). Following the death of the universally respected but administratively ineffective Moulavi Nur-ud-Din, conservative members of the movement declared Ahmad's eldest son Bashir-ud-Din as a Caliph. Progressive members of the community rejected his selection and argued that since Ahmad was not a 'full prophet' he was not to be followed by Caliphs as Prophet Muhammad had been. The progressives moved their headquarters to the metropolis of Lahore and became known as Lahoris. Those who remained in the village of Qadian and pledged allegiance to Ahmad's son as a Caliph are sometimes called Qadianis.

Over the next few decades Qadianis and Lahoris fought with each other to recruit more members and gain more resources. At the start, both communities possessed relatively comparable resources and seemed to be well

matched for the fight. The Lahoris were generally better educated, wealthier, and better connected than Qadianis. Furthermore, the Lahori leadership was experienced in running the Jamaat's organizations and publications. For instance, the leading Lahori leader Moulana Muhammad Ali was Sadr Anjuman's founding Secretary and the founding editor of the *Review of Religions*, the Ahmadiyya Jamaat's primary mouthpiece to the world. He had a graduate degree in English while Bashir-ud-Din the Qadiani Caliph had barely finished high school. The Qadiani group however, was composed of a larger number of more traditional-looking, less educated, and more devoted members. The biggest success of the Qadiani group came early as they were able to force the Lahori group to abandon Qadian and the Sadr Anjuman offices even though the Lahoris may have taken some of Sadr Anjuman's money with them (Shahid, 2007).

Two related points of debate and disagreement emerged among the Lahori and Qadiani group: the prophethood of Ahmad, and necessity of believing in Ahmad as a precondition for one's salvation. On both issues, Qadiani Caliph Bashir-ud-Din raised the stakes and declared that Ahmad had been a full prophet in every sense of the word and one could not be saved without a formal bayah on his or his Caliph's hands. This made all non-Ahmadi (and non-Qadiani) Muslims infidels, which meant that Qadianis could no longer pray with non-Qadianis, marry them, or take part in their marriage or death ceremonies. On all these issues the Qadiani position represented a clear departure from the position taken by Ahmad himself who when questioned about his claim to prophecy in light of the orthodox Muslim belief in finality of Muhammad's prophethood, denied that he had ever claimed to be a prophet. He said:

*"Can a wretched imposter who claims messengership and prophethood for himself have any belief in the Holy Quran? And can a man who believes in the Holy Quran, and believes the verse 'He is the Messenger of Allah and the Khatam an-nabiyyin' to be the word of God, say that he is a messenger and prophet after the Holy Prophet Muhammad?"* (Page 27)

Ahmadi had also been free to marry Muslims and take part in their social activities during Ahmad's lifetime. In fact, Ahmad himself had proposed to marry Muhammadi Begum, even though she was a non-Ahmadi at the time. Despite the advantages offered by doctrinal continuity, after passing of a century since the split, it is clear that the subgroup that ratcheted-up the counterintuitiveness won the day in terms of gaining resources. While millions of Qadianis are found around the globe, only a few thousand Lahoris remain. Qadianis today are also wealthier, better educated and no less urbane than Lahoris.

As Friedmann (2003) argues the Ahmadiyya split was a messy affair involving a number of issues besides doctrinal differences, our analysis suggests, however, that part of the reason for the Qadiani success lies in building up on the culturally counterintuitive claims of Ahmad. Once Ahmad's original claims became intuitive and well

integrated into the Ahmadiyya belief-system, further innovations were needed to keep the flock's attention. The ratcheting up of counterintuitiveness allowed Qadianis to gain more attention and win more recruits than their Lahori cousins who had decided to tone down some of Ahmad's most controversial claims.

## Conclusions

This article has presented two case studies of the spread of culturally counterintuitive ideas in two very different cultural groups. We believe that such cross-cultural case studies are essential for further development of cognition and culture research which has hitherto almost exclusively focused on in-lab quantitative studies. They not only allow us to validate our theoretical models and fully explore their consequences in the context of a real world phenomenon but they also offer new insights into the social phenomenon of interest. Qualitative studies are not suggested as a replacement for quantitative studies. The cultural counterintuitiveness model that provided the theoretical framework for the present studies has been developed and validated using quantitative empirical experiments. In lab empirical experiments are also in the works to better understand the issues of the interaction of the spread of counterintuitive ideas with development of group identity. The theoretical lens of social counterintuitiveness that we bring to the study of the Ahmadiyya split also suggests that it is the Qadiani doctrine that represents a departure from the traditional Ahmadiyya beliefs and not the Lahori doctrine as has been traditionally assumed by scholars of the Ahmadiyya Movement (Friedman, 2003; Lavan, 1974).

## References

Ahmad, B. M. (2007). *The Truth About the Split* (4th ed.). Tilford, UK: Islam International.

Ahmad, M. G. (1897). *Anjam Atham*. Amritsar, India: Riaz-e-Hind Press.

Ahmad, M. G. (1900). *Azala Aouham*. Amritsar, India: Riaz-e-Hind Press.

Ahmad, M. G. (1909). *Maseeh Hindustan Mein*. Amritsar, India: Riaz-e-Hind Press.

Allport, G., & Postman, L. (1947). *The Psychology of Rumor*. New York, NY: H. Holt and Company.

Atkinson, B. (2002). Ahmadiyat: A brief introduction to Ahmadiyat. *Review of Religions*, 97(3), 24-28.

Barrett, J., & Nyhof, M. (2001). Spreading non-natural concepts: The role of intuitive conceptual structures in memory and transmission of cultural materials. *Cognition and Culture*, 1, 69-100.

Barrett, J. L. (2008). Coding and Quantifying Counterintuitiveness in religious concepts: Theoretical and methodological reflections. *Method and Theory in the Study of Religion*, 20, 308-338.

Boyer, P. (1994). *The Naturalness of Religious Ideas: A Cognitive Theory of Religion*. Berkeley, CA: University of California Press.

Boyer, P. (2001). *Religion Explained: The evolutionary origins of religious thought*. New York, NY: Basic Books.

Boyer, P., & Ramble, C. (2001). Cognitive templates for religious concepts. *Cognitive Science*, 25, 535-564.

Clark, T. (2008). The 8 1/2 laws of Rumor Spread. *Psychology Today*, 10.

Dard, A. R. (1948). *Life of Ahmad : founder of the Ahmadiyya movement* Lahore: Tabshir Publication.

Difonzo, N., & Bordia, P. (2007). *Rumor Psychology: Social and Organizational Approaches*. Washington, DC: APA Press.

Ezzo, D. A. (2008). *Cannibalism in Cross Cultural Perspective*. Indianapolis, IN: Dog Ear Publishing.

Friedman, Y. (2003). *Prophecy Continuous: Aspects of Ahmadi Religious Thought and Its Medieval Background*. New Dehli: Oxford University Press.

Gonc, L., Upal, M. A., Slone, D. J., & Tweney, R. (2006). Role of Context in the Recall of Counterintuitive Concepts. *Cognition and Culture*, 6(3-4), 521-547.

Kapferer, J. N. (1990). *Rumors: Uses, Interpretations, and Uses*. New Brunswick, NJ: Transaction Publishers.

Lavan, S. (1974). *The Ahmadiyya Movement: A History and Perspective*. New Dehli: Manohar Book Service.

Paluck, E. L., & Green, D. P. (2009). Prejudice Reduction: What works? A Review and Assessment of Research Practice. *Annual Review of Psychology*, 60, 339-367.

Schank, R. C. (1999). *Dynamic Memory Revisited*. New York: Cambridge University Press.

Shahid, D. M. (2007). *Tareekh-e-Ahmadiyyat Jild 3* (2nd ed.). Qadian, India.

Sperber, D. (1996). *Explaining culture: A naturalistic approach*. Malden, MA: Blackwell Publishers.

Upal, M. A. (2005). *Role of Context in Memorability of Intuitive and Counterintuitive Concepts*. Paper presented at the Proceedings of the 27th Annual Meeting of the Cognitive Science Society, LEA.

Upal, M. A. (2007). *What is More Memorable Counterintuitive Concepts Interpreted Metaphorically or Literally?* Paper presented at the Proceedings of the 29th Annual Meeting of the Cognitive Science Society, Nashville, TN.

Upal, M. A. (2011). From Individual to Social Counterintuitiveness: How layers of innovation weave together to form multilayered tapestries of human cultures. *Mind and Society*, 10.

Upal, M. A., Gonc, L., Tweney, R., & Slone, D. J. (2007). Contextualizing counterintuitiveness: How context affects comprehension and memorability of counterintuitive concepts. *Cognitive Science*, 31(3), 415-439.

Walter, H. A. (1918). *The Ahmadiya Movement*. London, UK: Oxford University Press.