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The Crowd Psychology of the Hajj

**Thesis submitted by Hani Hashim Al Nabulsi to the
University of Sussex for the qualification of
Doctor of Philosophy in Psychology.**

May 2015

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Dedication

The author of this study would like to dedicate this work with great pleasure to The Saudi Arabian government (Ministry of Interior) for the support of their scholarship. I dedicate this study to them.

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GLOSSARY

These basic definitions of the Hajj are provided in order to assist the reader.

Arkan or ‘pillars’ - Arkan Al Islam – the pillars of Islam – are the basic foundations upon which Islam is established (Hooker & Richard, 1999). There are five pillars:

1. **Shahadah**: declaring there is no god except God, and Muhammad is God’s messenger.
2. **Salat**: ritual prayer five times a day.
3. **Zakat**: giving 2.5% of one’s savings to the poor and needy.
4. **Sawm**: fasting and self-control during the holy month of Ramadan.
5. **Hajj**: pilgrimage to Makkah at least once in a lifetime if one is able.

Du’a (Supplication) - In the terminology of Islam, *Du’a* is the act of supplication. The term is derived from an Arabic word meaning to ‘call out’ or to ‘summon’, and Muslims regard this as a profound act of worship. The Islamic prophet is reported to have said ‘*Du’a* is the very essence of worship,’ while one of the commands expressed through the Qur’an is for them to call out to Him: ‘And your Lord says: ‘Call on Me: I will answer your (Prayer)!’ (Quran, Surah 40, Verse 60). *Du’as* are collections of prayers of supplication.

Hadith - This means ‘something new’ or a ‘talk’. In Islam, *hadith* refers to that which is attributed to the Prophet (SAW; see below) as regards words, actions or approvals, physical features and characteristics.

Hajj (pilgrimage to Makkah) - The Hajj is the fifth pillar of Islam. The Hajj is a pilgrimage to the city of Makkah in Saudi Arabia. The Hajj is obligatory for every Muslim except those who are ill or have financial constraints.

Ihram - A state of dedication in which Muslims remove their worldly clothing and put on the simple, white attire of pilgrims. This symbolizes a state of purity and human equality.

Kaaba - An empty cube-shaped structure built as a house of worship by Abraham and Ishma’il, for the worship of the One God.

Islam – This means to submit yourself to Allah, by making your worship sincere and pure for Him alone, by obeying Him, and by absolving yourself of *shirk* (see below) and its people. Literally, it means ‘Submission to the will of Allah.’

Sa’i - One of the rites of the Hajj, in which pilgrims hurry between two hills, Safa and Marwah, re-enacting Hagar’s desperate search for food and water. This rite is carried out inside the mosque and is intended to replicate the act of running between the two hills.

Salah (prayer) - Prayer. Usually referring to the five daily obligatory prayers.

SAW - Also found in the form of SAWA or SAWAW is an acronym used after the name of Prophet Muhammad (SAW) specifically, and it is a form of showing respect. These variations of the acronym are a collection of phrases built on the same basic phrase, but with additions, as it gets longer. SAW – *Sallallahu Alaihi WA-Salam* – means ‘praise Allah and peace be upon him’.

Sawm (fasting) - The Arabic word for fasting is *sawm*. *The sawm* is fasting (refraining from eating, drinking and sex). Fasting during the Holy Islamic month of Ramadan is one of the five pillars of Islam. Fasting is also done outside of this month and is considered a very good form of voluntary worship in devotion to God. A voluntary fast can last as many days as the person wills, but it must not fall on an Eid day. Fasting isn’t just refraining from food and drink. The purpose of fasting is more spiritual than physical and it is a means of devotion to God as well as self-discipline. Fasting purifies and trains the body and soul together.

Shahabad (declaration of faith) - The *Shahabad* is a special sentence: ‘La illaha Ila Allah WA Muhammadun rasoolollah’. It means ‘There is no (other) Lord except Allah and Muhammad is the Messenger of Allah.’ This phrase must be pronounced aloud in front of witnesses in order for someone to be initiated as a new Muslim.

Shirk - Associating false gods with the One, True God, or adding partners in worship with Allah (God). This is a form of *kufur* (disbelief in the religion of God), and any person who does this is not a Muslim. A person who commits shirk is a *mushrik* (polytheist).

Tawaf - One of the rites of the Hajj, in which pilgrims move in a circular, anti-clockwise movement around the *Kaaba* (circumambulating the *Kaaba*). People usually do this during *Umrah* or Hajj. There are different types of *Tawaf*, such as *Tawaf al-Qudum* (upon arriving to Makkah), *Tawaf al-Ifadah* (when coming to Makkah from Mina after the day of Arafah), and *Tawaf al-Wada'* (Farewell *Tawaf*) before departing from Makkah.

The Holy Qur'an - An Islamic scripture believed by Muslims to be God's (Allah's) revelation to the Prophet Muhammad (*SAW*) (see below). It is believed to be the exact, unadulterated words of Allah. It is written in Arabic. The word 'Qur'an' derives from the Arabic verb *care* (to recite or to read). It is commonly written as the Koran or Qur'an.

Ummah - The entire Muslim community around the world, which comprises over one billion people of every race, colour, etc.

***Zakat* - (alms-giving)** An obligatory Islamic tax that is 2.5% of the annual (yearly) sum of all the money a Muslim earns. It goes to charity.

LUNAR CALENDAR:

Dhu al-Hijjah - The 12th month of the Islamic lunar calendar. This is when the Hajj takes place, from the 8th through the 13th.

Eid ul-Adha - Festival that takes place during the Hajj, on the 10th of *Dhu al-Hijjah*, in commemoration of the sacrifices of Abraham and his family.

Ramadan - The ninth month of the Islamic lunar calendar. This is when Muslims fast from dawn to sunset.

PEOPLE:

Abraham - a prophet and a person known by all Muslims, Jews, and Christians as the father figure of monotheism.

Hagar - Regarded as the mother of Abraham's son, Ishmael, who is regarded as the patriarch of the Arabs. In Hajj, Hagar's repeated attempts to find water for her son, by running between the hills Safa and Marwa, have become a Muslim rite (known as the *Sa'i*). As part of the two Muslim pilgrimage (the Hajj and Umrah), pilgrims are required to walk between the two hills seven times in memory of Hagar's quest for water. The rite symbolizes the celebration of motherhood in Islam, as well as the leadership of the women. To complete the rite, Muslims drink from the well of Zamzam. According to Islamic tradition the well was God's answer to Hagar's quest for water. Often Muslims will bring back the water, regarding it as sacred, in memory of Hagar.

Ishma'il - the elder son of Abraham, who helped Abraham build the *Kaaba* when he was thirteen years old.

PLACES:

Arafat - A plain north of Makkah. It is on this plain that humanity will be raised on the Day of Judgment for questioning and judgment. During the Hajj on the ninth day of the month of Zhu-l-Hijjah, Muslim pilgrims gather on this plain for one day.

Makkah (Makkah) - Transliteration of the Arabic name for Makkah, the sacred city of Muslims, in modern day Saudi Arabia, where the *Kaaba* is located.

Mina - During the Hajj the town of Mina must be visited. It is a few miles away from Makkah.

Muzdalifa - A small town where pilgrims stay overnight and pray during the Hajj.

Qibla - The direction that Muslims pray – facing towards the *Kaaba*.

Zamzam - The name of a sacred water well in Makkah. People who perform the Hajj drink from the water of this blessed well.

Glossary Sources:

1. Al-Saud, M. (2009). Morphometric Analysis of Wadi Aurnah Drainage System, Western Arabian Peninsula. *The Open Hydrology Journal*, 3, 1-10.
2. *Encyclopedia of Islam* (2011). Retrieved from http://www.archive.org/stream/NewEncyclopediaOfIslam/encyclopedia_of_islam_djvu.txt
3. Islamic-dictionary.com (2011). Retrieved from www.islamic-dictionary.com
4. *The Free Dictionary Online* (2011). Retrieved from <http://www.thefreedictionary.com>
5. Delaney, C. (1990). The Hajj: Sacred and secular. *American Ethnologist*, 17 (3), 513–530.
6. The Wonderful Library & Islamic Resource Centre (2011). Retrieved from <http://www.sistersbookroom.net/t1062-the-pillars-of-islam-arkan-ul-islam>.

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The Crowd Psychology of the Hajj

Summary

This thesis is the first study of the crowd psychology of the annual Hajj, or pilgrimage to Mecca (Makkah) in Saudi Arabia, to employ self-categorization theory (SCT). The thesis aims to document and understand the perspective of pilgrims from a social psychological point of view, since no one has done that before, as well as to understand the perceptions of the Hajj management. Specifically, the thesis focuses on crowd perceptions, feelings of safety and the reasons for these feelings, and relations between subgroups in the crowd and between pilgrims and management. A literature review in Chapter two highlights the history and culture of the Hajj and the issues in managing the Hajj. Academic perspectives on crowd psychology are discussed in chapter three. Chapters four and five present respectively a UK pilot study of pilgrims and a field pilot study of pilgrims and management. Chapter six (the main interview study with pilgrims) indicates that despite the inconveniences, participants felt safe, secure and wellbeing inside the Grand Mosque during Hajj. Chapter seven (the main interview study with Hajj management) explores the participants' understanding of crowd behaviour, crowd psychology and its relation to safety, danger and their own role. In Chapter eight (the major study of the thesis), a survey of 1194 pilgrims at the Hajj found that identification with the crowd predicted enjoyment of the crowd. Also, for those high in identification with the crowd, crowd density increased perceptions of safety. Perceived support was found to mediate these positive effects of social identity on feeling safe. Chapter nine critically explores the findings of the thesis and discusses them in relation to relevant literature. It also reflects on the implications of the study for the theory of crowd psychology, and considers what lessons there might be for the management of the Hajj. This chapter concludes the thesis and outlines suggestions for further research.

The Crowd Psychology of the Hajj

Chapter 1: Introduction and Thesis Overview

Crowd psychology in intergroup relations: A study of mass behaviour and perceptions at the Hajj

1.1. Introduction

January 12, 2006, began as a routine day at work. I was at my post in Mina, on the last day of the Hajj, watching the crowd of around two million pilgrims who had descended on Jamarat Bridge, Mina in Saudi Arabia, in order to perform pilgrimage. I was in uniform, and clearly on duty, and my role that day was to record sound and video footage of the crowd. I was a detached observer, collecting data. I could not know that later that day the pattern of crowd behaviour would be associated with a large-scale tragedy which resulted in the deaths of at least 346 pilgrims, and the injury of a further 289 people.



Fig. 1.1 Crowd on Jamarat Bridge during the Hajj 2006 large-scale tragedy.

Source: the author

By early afternoon I began to sense that there was a problem. As I had been a member of the Hajj management since 1992, my experience told me that the density of the crowd was

becoming unmanageable. There were also small-scale aggressions, such as shoving and pushing, as two million people tried to enter the eastern access ramps to Jamarat Bridge in order to take part in the ritual of *ramy al-jamarāt* ('Stoning of the Devil'). I could see that the situation was becoming critical. As the crowd crushed forward, the density exceeded 7 people per square meter, and at this point catastrophe was imminent.



Fig. 1.2 Crowd on Jamarat Bridge during Hajj 2006 at the time of the accident.

Source: the author.

The tragic accident in 2006 occurred shortly after 13:00 local time. The crowding caused the pilgrims to trip and fall, which rapidly resulted in a lethal crush. I was still recording proceedings at that point, but I decided to take practical action and use my experience of first aid to join the special response teams to assist with crowd injuries. I cannot describe the horror of walking amongst the bodies of 346 dead pilgrims, with others injured and traumatized. I did not know how long it would take me to get back to my station, and in the white-hot sun I was grateful for my small supply of water. At the centre of the chaos, I encountered an elderly Turkish woman who was sitting exposed to the glaring heat, on the baking concrete of the bridge. She was covered in sweat and her face was running with tears as she embraced the body of her husband, her arms cradling his head. She was absolutely still and silent, clearly suffering from shock. I spoke gently to her, feeling a wave of sympathy for her pain, even in the context of so much suffering all around us. She did not respond. I could see that she was dehydrated and I held out my water bottle with its dwindling supply. Seconds later I was in shock, as I felt something strike my face. It was the water bottle. The elderly lady had thrown it back in my face, quite literally. Not only did the elderly lady refuse

help from me, but, moments later, I saw that she had also refused the help of several others who were wearing uniforms, until, at last, she accepted water and assistance from a civilian medical volunteer. I realised at that moment something I had never considered before. I was in uniform, and therefore, to her, I represented the management of the Hajj, the management who she believed were responsible for the mass crush, and for the death of her husband. The civilian volunteer was not in uniform, and she did not consider him one of the agents of her husband's death. I had no previous relationship with this woman; she reacted to me extremely strongly purely on the basis of my social category membership. I could see that the relationship between the management of the Hajj and the pilgrims was far more complex than I had originally thought, and that in order to understand and perhaps prevent tragedies like this occurring again and be able to offer proper assistance to the crowd it would be essential to understand the psychological dimensions of crowd behaviour and management.

The argument of this thesis is that, though the sciences of physics, engineering, medicine, and risk management are crucial to the understanding of dealing with large crowds, none of this is of any use without a deeper understanding of crowd psychology. Until we understand the behaviours of people within crowds, and the psychology of those managing crowds, we will not be able to adequately prevent incidents such as the tragedy of January 12, 2006. This tragic loss of life at the Hajj, alongside other disastrous incidents, has brought issues of crowding and crowd safety to the forefront of public consciousness. Now, more than ever, there is an urgent necessity to undertake this research on crowd psychology in order to protect the health, safety, and dignity of pilgrims, and members of other large-scale crowds. My thesis considers the voices of those most deeply affected by the experience of the Hajj – pilgrims and management – and uses their insights to develop a new approach to crowd psychology. Though this documentation and analysis of the pilgrims' and managers' experiences and behaviours alone will not prevent further tragedies occurring, it is an important first step towards enhancing and developing practices that do this. The ultimate aim of this thesis is to provide an intellectual context in which practices are developed to ensure that the experience of that bereaved 80-year-old woman may never happen again. In order to develop better practices, and in order to change procedures and put a better training system in place, we need a much better understanding of the experience of the pilgrims and the first step in making this happen is to speak directly to pilgrims and analyse their experiences through the application of modern psychology.

I have been a member of the Hajj management team since 1992, and, through these years, the unity of the crowds who attend has been a source of inspiration and amazement to me. Therefore, it is not only the tragedies I wish to investigate, in fact quite the opposite: tragedies are rare and positive experiences are common. Thus, this thesis will look in closer detail at the singular experience of pure joy which many pilgrims experience as a result of being in the Hajj crowd.

The action of the crowd is amazing: despite diversity, language barriers, and extreme physical conditions, crowd members communicate with and support one another. It is this inspiring nature of the crowd, contrasted so cruelly with the incident above that inspired me to undertake this thesis. By using the concepts of social identity and self-categorization, I will attempt to flesh out, in psychological terms, the personal experience that I have recounted here and go on to study these phenomena in detail. This is the first stage in the process, an attempt to collect and collate experiential, perceptual material.

1.2 A Statement of the Problem

This thesis concerns crowd psychology, which is a field of social psychology. The management of events that are attended by large crowds, such as large-scale pilgrimages (e.g. the Hajj), draws upon recommendations from crowd modellers and engineers using principles of crowd dynamics. However, increasingly, crowd modellers, engineers and others are arguing that a fuller and more adequate set of principles for understanding, modelling, predicting and managing crowds requires a closer relation between crowd dynamics and crowd psychology (Still, 2014).

Through this project I seek to make a contribution towards this important theoretical and practical work by combining my background in engineering, crowd safety and management, and my practical knowledge of the role of crowd dynamics in the design, planning, and architecture. I aim to document and understand the perspective of Hajj pilgrims from a psychological view, as no one has done that before. However, this thesis is an academic, rather than a practical addition to the field. I have undertaken original research based on the foremost model of crowd psychology in contemporary social science. The social identity model (or SIM) (e.g., Drury & Reicher, 1999; Reicher, 1984; 1996; 2001; Stott & Reicher, 1998) of crowd behaviour suggests that people are able to act as one in crowd events not

because of ‘contagion’ or social facilitation, but because they partake in a common social identity. This common identity specifies what counts as normative behaviour, since social identity is a person’s sense of who they are and what they should do, based on their group membership(s). It therefore offers a general model for the psychology of crowds. Specifically, social identity is an understanding of myself in terms of my group membership which determines how I experience proximity with others in a crowd, how I behave towards them, what I expect of them, how we respond in turn to those outside the crowd, and so on (Reicher, 1984; 1987; 2001). Unlike classical theories of crowd psychology (e.g., Le Bon, 1895), which inclined to presume that collective behaviour was inherently associated with uncontrolled violence (due to a regression to instinctive drives or a pre-existing ‘racial unconscious’), the social identity model explicitly acknowledges variety in crowd behaviours by suggesting that different identities have different norms – some peaceful, some conflicting – and that, even where crowds are conflictual, the objects (targets) will be only those determined by the social identity of the crowd.

My academic and professional background in risk assessment, management of crowd safety and organization of the annual Hajj (pilgrimage) at Makkah as a senior civil engineer in the Ministry of the Interior led me to draw on that experience as the focus of my PhD research at Sussex. One of the reasons why I am well placed to research the Hajj is that I have been in discussion, and also collaborated in practice, with the world’s leading consultants on crowd dynamics at the Hajj¹ for a number of years, so I already have a well-developed theoretical as well as a pragmatic understanding of the Hajj event. I understand the issues (logistical management of large numbers; dangers of accidents at certain established danger points; health and safety concerns, psycho-physics of crowd flow in situations of density; political, cultural, religious, and social significance). Secondly, as a Muslim myself, and as an employee of the Interior Ministry, I have access to the event and to the authorities that would not be possible for outsiders. The third reason why I decided to take my research in this direction is the lack of psychological research on this huge event, despite its global political

¹ G. Keith Still is Professor of Crowd Science at Manchester Metropolitan University. Dirk Helbing is a physicist, and Professor of Sociology, in particular of modelling the behaviour of individuals in a social field. Hani Mahmassani, is a Professor and Director of the Transportation Center at Northwestern McCormick School of Engineering.

and cultural significance, and in spite of the well-documented history of accidents that have beset the Hajj in the past.

This thesis brings the latest psychological research principles to the study of the Hajj event in combination with the established practice-based knowledge of its dynamics and logistical risk factors and by doing so it offers the possibility of both improving safety and management at the Hajj and innovative, original research findings in the field of crowd theory.

1.3 Research Questions

The specific questions I propose to consider are based on the social identity approach to crowds theorised by Reicher, Stott and Drury. This has largely been concerned with crowd conflict, but has recently been applied to mass emergencies (e.g., Drury, Cocking, & Reicher, 2009a; Drury, Cocking, & Reicher 2009b), crowd density (Novelli, Drury, Reicher, & Stott, 2013) and crowd experience (Neville & Reicher, 2011).

The proposed research explores the crowd experience and crowd behaviour of participants at the Hajj, or annual pilgrimage to Makkah. This thesis undertakes original psychological research on this event that, even though, as discussed above, has massive, global and political significance, is under-researched. The few existing social scientific and psychological studies of the event neglect its essential crowd psychological aspects. Existing approaches to understanding the crowd at the Hajj either neglect to mention the crowd or pathologise the crowd in relation to ‘stampedes’ and the spread of diseases (see Uddin & Ozair, 2004). Therefore, this research seeks to develop our understanding of the crowd psychology of the Hajj through the application of insights from the relevant current literature on (i) crowding and spatial behaviour (ii) mass emergency behaviour, and (iii) collective conflict. Specifically, the current literature on crowd psychology raises the following empirical questions which have not yet been asked of the Hajj, and which will therefore guide my own research:

1.3.1 Crowding and spatial behaviour

Crowding is sometimes experienced negatively, or aversively, yet this is not always the case; therefore, how is the (dense) crowd experienced by Hajjis? What is the perception that Hajjis have of others in the crowd? How are positive or negative crowd experiences determined by

psychological factors? Do these experiences change according to location or time? How do the factors of psychological togetherness and social identity play a role in these experiences? Do these positive or negative experiences account for behaviours in any way? Following the Hajj, are identity and understanding affected by these behaviours (cf. Clingingsmith, Khwaja, & Kremer, 2009)?

1.3.2 Mass emergency and disaster behaviour

Do pilgrims feel safe on the Hajj? Do pilgrims bring expectations of danger to the event? What are they? In relation to the source of danger and response to danger, do Hajjis trust specific sources? How do Hajjis behave when faced with danger? Do Hajjis engage in helpful behaviour to others in need? Is there an expectation that they will receive help from others? Do Hajjis place their trust in management, staff and the authorities to react effectively to danger? What role do social identity and psychological togetherness play in these behaviours and experiences?

1.3.3 Collective conflict/harmony and intergroup relations

What are the Hajjis' perceptions of other groups on the Hajj? What are their views on management, authorities and other staff? Do Hajjis perceive management, authorities and staff as one or more social category? In relation to the needs, identities and concerns of the pilgrims, are management, staff and authorities perceived as fair and legitimate? What expectations do the pilgrims bring to the event in relation to these groups? Do those perceptions change? What is the role of social identity and sense of psychological togetherness with others in these experiences and behaviours?

For each of these areas, and based on recent insights from the social identity approach (see below), I will consider the intergroup aspects of crowd experience and behaviour by asking the following questions:

- a. How are Hajjis perceived by managers, planners and other staff? How do managers, planners and staff perceive issues of density and also the religious, spiritual, physical and social needs of the Hajjis?
- b. How do managers assess certain points of danger and how do they communicate and explain the accidents and danger on the Hajj? Is this through reference to (valid or invalid) crowd psychology? How do they assess the purpose and effectiveness of their

communications to Hajjis and to each other? Do managers perceive sources of resilience within the crowd itself – or do they see the opposite?

- c. How do managers perceive issues of legitimacy? When do they decide at which points they need to exercise control?

In each case, it will be useful to note points of agreement and disagreement between Hajjis' views and those of management, as recent research (Reicher, Spears & Haslam, 2010) suggests that these indicate how and why relations between crowds and managers may develop positively or negatively.

1.4 Thesis Overview

Chapter two, 'The Hajj: Culture, history and practical considerations', discusses the history and culture of the Hajj and considers the practical issues of managing the Hajj. Part of this chapter is from a crowd management perspective. This chapter draws the conclusion that it is necessary to address the field of psychology in order to understand the Hajj fully.

Chapter three, 'Crowd behaviour and psychology' goes on to explore academic perspectives on the Hajj crowd and crowd psychology in general. This literature review explores sociological and psychological studies of pilgrimage and the Hajj, and concludes that there is very little work in this area. The chapter then considers the field of crowd psychology, including perspectives on crowding and personal space, mass emergency behaviour, and crowd conflict. It develops the research questions, and finally focuses on the methodological issues of this thesis.

Chapter four is 'The crowd phenomenology of the Hajj: A UK pilot study'. This chapter explores crowd expectations, experience and crowd behaviour of participants at the Hajj through the use of a pilot study. The chapter describes the pilot study that was carried out in the UK in October 2011 using interviews and analysed with Interpretive Phenomenological Analysis (IPA). This pilot study consisted of interviews that were largely concerned with former pilgrims' experience at the Masjid al-Haram, and investigated their experiences, observations, perceptions of and behaviours at the Hajj. I was particularly interested in their perceptions of other people, especially other social groups, and those managing the event.

Five participants completed all conditions of this study. This chapter describes the qualitative nature of the research, which includes interviews and data analysis. This chapter explores my experience of piloting the interview schedule that I had developed, and also explains how this process allowed me to gather a rich dataset which allowed a substantial and insightful analysis of experiences.

Chapter five, 'Pilot field study of pilgrims and management', describes the pilot study, which was carried out in Makkah, Saudi Arabia in October 2011. This was a field pilot study in preparation for the main study. This chapter describes the qualitative nature of the research that includes interviews and data analysis (IPA). Twenty-seven interviewees were recruited. The chapter also explains the interview approach of the pilot and offers data analysis. This chapter aimed to:

- Investigate the feasibility of the interviews with (a) pilgrims and (b) managers during the event, in preparation for Hajj 2012, in terms of logistical considerations and other issues that might arise.
- Additionally, investigate the managers' perspective on the Hajj, to complement the experiences of pilgrims within the Hajj crowd (cf. Stott & Reicher, 1998). The study sought to sample selective representatives from different types of management in the management of the Hajj event in 2011, speaking English where possible. Nine interviewees were recruited.

Chapter six is 'Experiences of the crowd and safety at the Hajj 2012'. This chapter describes the first part of the Hajj study that was carried out in Makkah, Saudi Arabia in 2012. This was the main interview study with pilgrims, involving IPA of pilgrims' accounts. For the sample we selected 10 speakers of English, 10 of French, 10 of Persian, 10 of Turkish, 10 of Malay, 10 of Urdu and 10 of Arabic. This resulted in a total sample of 70 participants for this study. This chapter also examines pilgrims' experiences of the crowd. The chapter presents a selected sub-set of these that report experiences relating to concerns around safety or feelings of safety and the reasons for these feelings, and of pilgrims' perceptions of other groups and subgroups in the crowd, including their relations with management. In addition to that, it aims to determine the relationship between these experiences and their shared identity with the

crowd. This chapter therefore addresses qualitatively my research questions (1, 2, and 3) under all three headings: crowding/spatial behaviour, perceptions of safety, and intergroup relations.

Chapter seven is 'Perception and practices of 2012 Hajj management regarding crowd phenomena: Social psychological perspectives'. This chapter describes the second part of the Hajj study that was carried out in Makkah, Saudi Arabia in 2012. This was the main interview study with managers, using IPA of managers' accounts. The IPA of managers' accounts was used to examine their perceptions of the crowd, in particular their understanding of crowd behaviour, crowd psychology and its relation to safety, danger and their own role. This chapter therefore addresses questions 1.3.3 a, b and c qualitatively.

Chapter eight is 'Questionnaire survey of Hajj 1433 (October, 2012)'. This chapter describes the third part of the Hajj study that was carried out in Makkah, Saudi Arabia in 2012, and is the major study of the thesis. This study was a large-scale survey questionnaire, to address my three research questions (1, 2, 3) quantitatively. As well as indicating the strength and pervasiveness of perceptions of joy, safety, and relations with other groups, this allowed me to test certain hypotheses based on the social identity approach. For the sample, we selected 114 English speakers, 120 French, 120 Persian, 120 Turkish, 150 Malay, 150 Urdu and 420 Arabic. This resulted in a total sample of 1194 participants in this study.

Chapter nine is 'Discussion and Conclusions'. This chapter critically explores the findings of the thesis and discusses them in relation to relevant literature. It also reflects on the implications of the study for the theory of crowd psychology, and considers what lessons there might be for the management of the Hajj. This chapter concludes the thesis and outlines suggestions for further research.

1.6 Key findings

The findings of this thesis are discussed in more detail in Chapter nine, but I will offer a short summary of those findings here. This thesis aims to provide a theoretical account of the

crowd psychology of the Hajj. In order to do so it makes use of the social identity model (SIM). In response to the specific research questions that were asked in the pilot interviews, the following findings were made: Pilgrims experienced psychological unity: unity of feelings, unity in the terminology of supplication to God, the unity of rituals, unity in purpose, unity in action and collective self-organization and self-evaluation. They enjoy being in the crowd – despite the difficult physical conditions – and tend to help each other and expect others to help them.

According to participants in the Hajj, the experience of being in the crowd is overwhelmingly positive, and this is at least in part because of the prominent, and shared, awareness of Muslim identity, which is evidenced through shared rituals and dress. This positivity allowed participants to tolerate higher than normal levels of crowd density. The UK pilot revealed some converse reports of selfishness and aggressiveness in the crowd. In the pilot, management were described generally in positive terms, though interviewees could not always distinguish between different staff roles. The results were broadly in line with self-categorization theory.

The field pilot study at the 2011 Hajj interviewed participants, alongside nine members of Hajj management. This study replicated, to a large degree, the findings of the first (UK pilot) study. Participants described their Muslim identity as taking priority over their national identities during the Hajj rituals. Management described witnessing feelings of unity in the crowd and, furthermore, feeling part of the crowd. They felt that the majority of the crowd were respectful, with minor cases of disrespectful and aggressive behaviours, and, in some cases, ‘panic’ in the crowd due to potential risk factors. The findings, from the analyses of the pilgrims’ data, were in contrast to existing studies that view crowds as inherently aversive and psychologically dangerous.

Chapter six found that despite some participants describing feelings of danger at the Haram, most talked about feelings of safety. This sense of safety came from three sources: Hajjis feeling that competent management was in place, their relationship with others in the crowd, and their belief that God would protect them during Hajj. Each of these factors that create a sense of safety are related to the participants’ identities as Muslims. This is particularly

relevant to intragroup relations. Participants spoke of feeling unity with others present during the Hajj, and described cooperative behaviour among the crowd.

These findings support previous research relating to shared social identity with others in a crowd – defining these others as ‘us’ (or ‘in-group’), rather than ‘them’, has cognitive, behavioural and affective consequences (Reicher, 2011). Importantly, one of these consequences is an increased expectation of social support from others in the crowd (Drury, Cocking, & Reicher, 2009a; Drury & Reicher, 1999; Drury & Reicher, 2005).

There were some differences in the way the crowd at the Haram was experienced by English and Urdu speakers. The former were more likely to say that they felt safe due to shared identity and helpful behaviour among crowd members, while the latter more commonly reported feeling safe due to being present in God’s house. Both groups reported feeling unity of direction and purpose, feeling that they were involved in a collective spiritual experience, feeling safe at the Haram in general, feeling in harmony with others, experiencing cooperative behaviour, and observing appropriate and civilized behaviour among pilgrims who were performing *Tawaf*. However, it remains to be seen how far these findings can be generalized to a wider group of English and Urdu speaking Hajjis.

Although this study gave these pilgrims a voice and allowed them to describe their experiences in their own words, its applicability to a wider population remains limited, as it was a qualitative study with a limited number of participants. The next stage was to use these findings as the basis of a quantitative study, which would assess on a wider scale the factors that influence the relationship between crowd density and safety.

In Chapter seven, perhaps most importantly in terms of future management practice, the analysis found that field staff who have direct contact with Hajjis are more likely to be able to empathize with crowd members and understand their needs, and less likely to see them as homogeneous or irrational, than are those at higher levels of management who do not have direct contact.

The study presented in Chapter eight showed that those who identified strongly with the crowd, and felt a sense of shared experience, were less likely to feel unsafe as crowd density increased. In fact, there was shown to be a correlation between increased density and feelings of safety in those who identified strongly with the crowd. For example, those who strongly identified as Muslim felt safer in the company of other Muslims in the crowd, even when density levels increased to unsafe levels. Studies have shown that in situations of high crowd density dangers include falling and being trampled, or, far more commonly, of being crushed while upright (Fruin, 2002; Gill & Landi 2004). However, such dangers are reduced where others are considerate and perceived as ready to come to another's aid. It seems that even so-called 'critical' levels of density did not lead to discomfort or feelings of danger when there was a psychological bond between crowd members.

1.7 Conclusions

During the Hajj, more than three million Muslims all stand in one location, putting on the same clothes, sharing one aim, with one slogan, calling upon one Lord to a specific location (with fixed area and boundaries) for a specific purpose (to carry out the fifth pillar of Islam). For them it is a reminder of the Hereafter, when all the visitors arrive together in one seat in Arafat and elsewhere, with no distinction between them. All of them are equal in this situation and no one has a higher status than anyone else for a measurable amount of time (4-5 days); collectively pilgrims share a social identity and interest and actions in a logical way. Hajj is a representation of unity, because Hajj makes all pilgrims the same in their clothing, deeds, rituals, focus and the spaces they visit. And then no one is more dependent than anyone else: rich and poor are the same. Thus the pilgrims are equal in terms of rights and responsibilities. They are equal in this sacred place, and differences in nationality and colour do not matter; no one has the right to differentiate between them.

The original research undertaken in this thesis has already begun to engage with, and inform, debates in my field. I have published part of this thesis, work from Chapter eight, in the form of a peer-reviewed article in *The Proceedings of the National Academy of Sciences* (Alnabulsi & Drury, 2014). I hope that I may add further original material to my field, with the completion of this thesis.

Chapter 2. The Hajj: Culture, History and Practical Considerations

2.1 Introduction

This brief chapter outlines the most important principles of the ritual pilgrimage known as the Hajj in terms of its relationship to the research of this thesis. It traces the Hajj's relationship to Muslim history and civilization, whilst briefly exploring cultural, historical and practical considerations. In addition, this chapter considers the Hajj today in order to explore the effects of several factors including time, space, and the increased number of pilgrims on the Hajj. All of these factors create challenges for the administration as they manage the Hajj whilst maintaining the right to safety, security and comfort for pilgrims.

2.2 Islam

The meaning of the word 'Islam', in Arabic, is 'submitting oneself to God'. The word comes from the Semitic root 'silm' which means submission to a higher power or the peace that comes from that submission. Islam is a variant of previous monotheistic religions that can be tracked back through Jesus to Moses and Abraham. Therefore, Islam accepts Christianity and Judaism as true religions that were sent to humans by God. Islam is a religion based on revelations brought to humanity by the Prophet Muhammad (570 C.E - 632 C.E). It is a religious and social organisation founded on the precepts of Muhammad as preserved in the Koran and Sunnah.² These precepts generate instructions governing all aspects of the personal and communal lives of Muslims. Islam is a spiritual faith that is practiced in part through engagement in certain rituals (Ernst, 2004).

For centuries Muslims have been performing the ritual of the Hajj, with more than two million pilgrims from over one hundred countries converging on the holy city of Makkah

² The Arabic word *sunnah* means a clear and well-trodden path. Sunnah denotes the practices and teachings of Muhammad including his specific words, habits, practices, and silent approvals: it is significant because it addresses ways of life dealing with friends, family and government. For more on this see Nasr, Seyyed H., 'Sunnah and Hadith' in *World Spirituality: An Encyclopaedia of the History of the Religious Quest*. New York: Crossroad. pp. 97-109.

every year, making the Hajj one of the most important activities in the life of a Muslim (Bianchi, 2004). Makkah is believed by Muslims to be the holy land, the most beloved land to God. It is the place where the Prophet Muhammad (Pray God is upon him, SAW) was born in 570 CE and the place where God's message was first revealed to him. It is also the city to which he returned after the migration to Medina Menorah in 622 AD. There are many *hadiths* that describe the virtues of Makkah and its high status before Allah and his Messenger. One of these is the hadith of Abdullah bin 'Adi bin Al-Hamra, who reported that Prophet Muhammad said: *"By Allah, you are the best land of Allah, the most beloved land of Allah to Allah. Had I not been driven out of you, I would not have left you."*³

Islam is the second biggest religion in the world with over 1.6 billion followers. Muslims believe that God is unique and incomparable. They also believe that the purpose of existence is *Ibadan* (service to God). Muslims consider that Islam is the complete and universal version of a primordial faith that was revealed at many times and places before, including through Abraham, Moses and Jesus, whom they consider prophets. Maqsood states that:

The faith of Islam is based upon three basic concepts: the real existence of one true God; the real existence of an unknown and unknowable state of existence above and beyond, and before and after, this earthly existence; and the requirement of justice that if our place in that state depends ultimately upon the choices made by our free will to accept or reject the will of God, then it is his duty to let us know the principles of that will by sending revelations through his specially chosen messengers, the prophets (Maqsood, 2008, p. 47).

Islam is a complete way of life, governing dress, economics, business ethics, rates of taxation, justice and punishment, weights and measures, politics, war and peace, marriage and inheritance, family and domestic life, the care of animals and livestock, sexual relations within marriage, education, diet, cookery, social behaviour, and forms of greeting and rules of hospitality (Horrie & Chippindale, 2003).

The Holy Qur'an is the Muslim guide to Islam and core of the Islamic religion. Muslims consider that the Qur'an is the final revelation of God, and was authored by God, rather than by a human. The Qur'an is believed by Muslims to have been revealed by God fourteen centuries ago and it mentioned facts that could not have been known at the time, and that

³ Bukhari, *Sahih al-Bukhari*, Beirut: Dara al-kutub al-Ilmiya, 1975-1995.

have only been recently discovered or proven by scientists. These facts include human embryonic development, the geological concept of mountains, the universe, clouds, seas, rivers and internal waves, and other illustrated scientific facts (Peachy et al., 1997).

2.3 The Requirements (*Arkan* or Pillars) of Islam

Any person may become a Muslim by sincerely accepting Islam's basic requirements, the 'Five pillars of Islam', which are the foundation of Muslim behaviour. These pillars help Muslims put their faith into practice and are as follows:

- i. Declaration of faith (*Shahabad*): Allah is to be proclaimed God, and Muhammad is his prophet. By reciting this declaration, one enters Islamic faith;
- ii. Prayer (*Salah*): Muslims are required to pray five times a day. Each prayer takes a few minutes to perform. Prayer in Islam is a bond between the worshipper and God, there are no intercessors between God and the worshipper;
- iii. Alms-giving (*Zakat*): This requires giving a fixed proportion of your wealth to charity (Muslims are required to give away 2.5% of their earnings every year to those less fortunate, regardless of their religion);
- iv. Fasting (*Saum* during the month of *Ramadan*): Muslims fast for one month each year, during the Islamic month called *Ramadan*. They are not allowed to eat, drink or have sexual interaction during daylight hours;
- v. *Hajj* (pilgrimage to Makkah): If it is financially possible, Muslims are required to travel to Makkah once in their lifetime to perform the Hajj (Barnes & Branfoot, 2006).

The stress on financial ability is intended to ascertain that a Muslim takes care of his family first. The demand that a Muslim is healthy and physically capable of undertaking the pilgrimage is intended to exempt those who cannot stand the rigours of extended travel. Muslims may disagree over some of the finer points of Islamic law, or on some events in Muslim history, but the entire body of believers accepts the five pillars in their entirety (Horrie & Chippindale, 2003). The pilgrim's journey is the religious high point of a Muslim's life and an event that every Muslim dreams of undertaking.

2.4 The Importance of the Holy Mosque

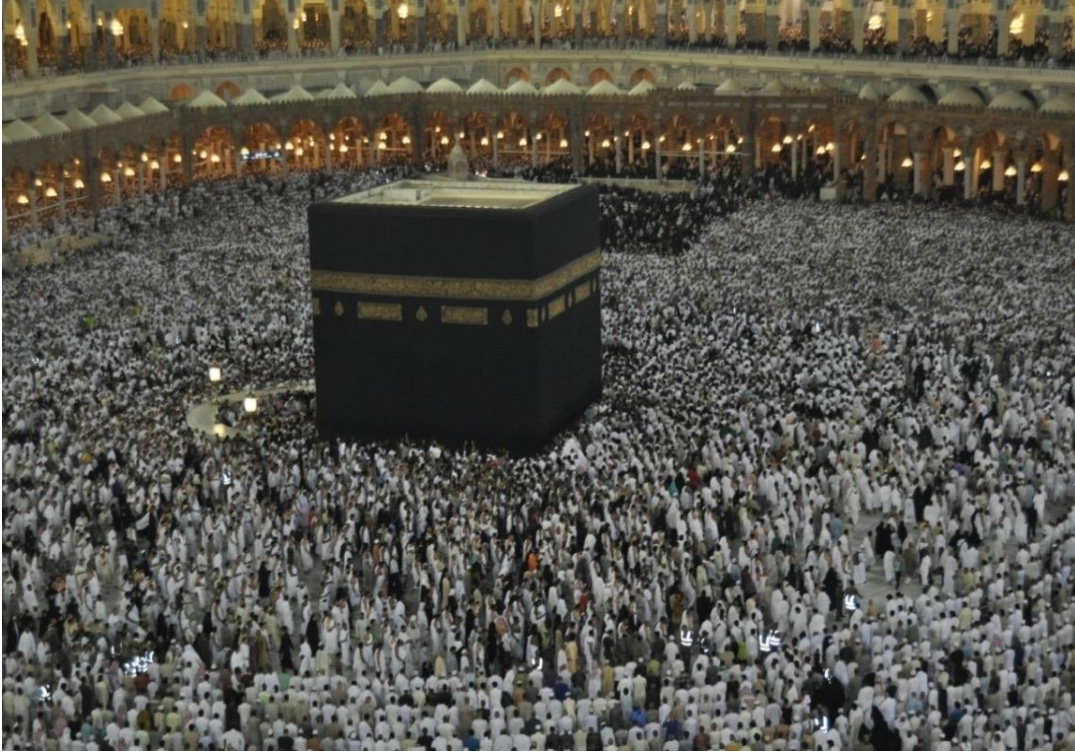


Figure 2.1 Pilgrims praying at the Haram (Holy Mosque) in Makkah.

The Importance of the Holy Mosque for Muslims is inestimable. The Holy Mosque (Al Haram) in Makkah is the holiest place on earth to Muslims. Five times each day, the world's one billion Muslims, wherever they may be, turn to Qibla (the prayer direction of the Holy City of Makkah) in their obligatory prayers. In addition, there is an annual visit by Muslims to this site for the Hajj. Therefore, each year the Holy City of Makkah is host to people of different cultures and nationalities. Each year, there is a mixture of two million Hajjis from all over the globe in this unique place (Al-Hanbali, 2009). The Holy Mosque structure covers an area of 356,800 square metres (88.2 acres), including the four outdoor plazas and indoor praying spaces (Ministry of Foreign Affairs, 2014). The Holy Mosque's total capacity is 2 million. If full, this means that the building can accommodate an average crowd density level of at least four people per square meter (4 ppm^2). Nevertheless, at certain locations, points of density have often exceeded this, and as people come closer to the Kaaba levels of 6-8 ppm^2 have been recorded (Ministry of Foreign Affairs, 2014).

2.5 Pilgrimage (The Sacred Journey)

Pilgrimages are common to many religions; they are spiritual journeys where an individual is encouraged to focus on faith (Coleman & Elsner, 1995). The destination of the pilgrimage is usually one that is considered particularly significant to the given religion.

About two million Muslims of diverse ethnicity, colour, social status, and culture go to Makkah each year from all over the globe.⁴ The annual pilgrimage begins in the twelfth month of the Islamic year, which is based on the lunar calendar and subject to change throughout the year. This is usually around November in the Western calendar. The Hajj unites the largest group of believers of different nationalities and cultures who come together at the same time in this unique place at a specific date, in order to carry out together a set of prescribed rituals.

A journey to Makkah outside the time of Hajj is referred to as *Umrah* (for example, this may take place at Ramadan). The English word ‘pilgrimage’, which stresses the journey to a sacred space, is not fully adequate to describe the Muslim’s Hajj or Umrah. Rather, there are sequences of rituals undertaken during the Hajj at clearly defined stages (Barnes & Branfoot, 2006).

All pilgrims wear similar simple white clothing (*ihram*) to symbolize their equality before God. For the same purpose they observe similar rules and say the same prayer simultaneously. There are no hierarchies, just modesty and devotion. This pilgrimage confirms the commitment of Muslims to God by emphasizing their willingness to leave material interests for him (Muhaiyaddeen, 2008). Muslims believe that the Hajj is a reminder of the grand assembly of the great day of resurrection, when people will stand on an equal basis before God, awaiting their ultimate fate.

⁴ About 2.8 million pilgrims performed the Hajj in 2010. 1.8 million pilgrims came from outside of Saudi Arabia and of the remainder 1 million were local residents, most of whom were foreigners working in Saudi Arabia (Source: Saudi Arabia’s Central Dept. of Statistics and Information <http://www.saudinf.com/main/c74.htm>). This figure doesn’t include the unregistered pilgrims. CNN’s estimate is 3.4 million pilgrims (Source: CNN, Nov 15, 2010).

As the prophet Muhammad said in the *hadith*: ‘God does not judge in accordance with your bodies and appearances, but he scans your hearts and looks into your deeds’ (*Sahih al-Bukhari*, 8:2). As Mawdudi noted in his book *Let us be Muslims*: ‘From the Arabic language the word *Hajj* means ‘to make a resolve to visit a holy place’ visiting the *Ka’bah* in *Makkah* is therefore called Hajj’ (Mawdudi, 1982, p. 243). Rafiabadi (2009) argues that in Arabic terminology, ‘hajj’ means making an intention and the journey to Makkah, with specific actions and duties in order to fulfill the fifth pillar of Islam. The purpose and symbolism behind the Hajj is that it enables individuals to submit themselves wholly to Allah and is intended purely as a place of worship and of seeking forgiveness (Coleman & Elsner, 1995; Peters, 1995).

2.6 The Steps of Hajj

Figure 2.2 outlines the steps of the Hajj journey between Makkah and Mount Arafat. There are sacred relics and religious signpost that helps to guide devotees of Allah. The Hajj is a series of richly detailed rituals, which include the following:

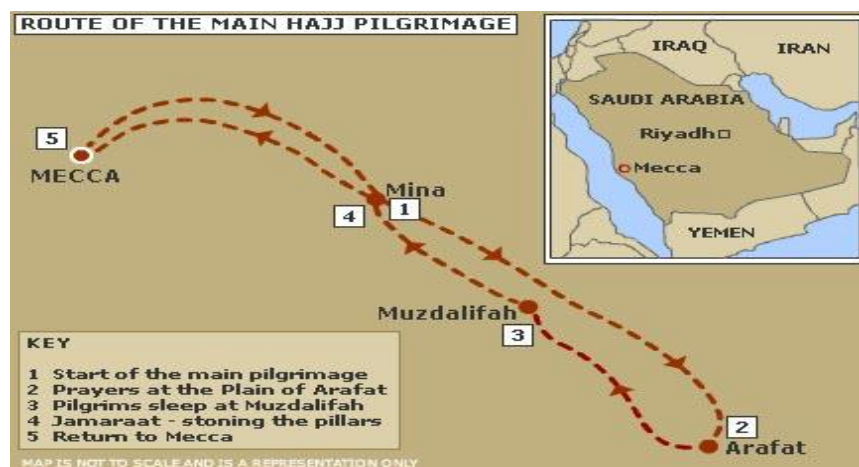


Figure 2.2 Route of the Main Hajj Pilgrimage. [Online image]. (2011). Retrieved November 6, 2013 from <http://www.bbc.co.uk/religion/galleries/hajj/>

On the 7th day of Dhu al-Hijjah, the pilgrims confirm their intention to pass on to the pilgrimage and the prohibitions of ihram (Al-Hasani & Al-Sharif, 2009, p. 220). Pilgrims come to Makkah prior to Hajj rituals and therefore there are massive crowds for the first Tawaf around the 7th of Dhu al-Hijjah.

On the 8th of Dhu al-Hijjah, first day of Hajj, the pilgrims go to the valley of Mina and camp there overnight. (Al-Hasani & Al-Sharif, 2009, p. 220).

On the 9th of Dhu al-Hijjah, all the pilgrims travel to the plain of Arafat, where they spend the entire day in devotion and offer various prayers and make their stand before God between noon and dusk. As the sun sets, the pilgrims start the *Nafrah*, pilgrims proceed to stop at Muzdalifa, between Arafat and Mina, where they collect small pebbles, and carry them to Mina, arriving by the morning of the 10th of Dhu al-Hijjah (Maqsood, 2008).

On the 10th of Dhu al-Hijjah, they return to Mina and throw seven pebbles at a pillar that symbolizes Satan's temptation of Abraham (The Qur'an describes how Satan tried to persuade Abraham to not ritually murder his son Ishmael, as commanded by God). After that, pilgrims then sacrifice a sheep, recalling how Abraham sacrificed a sheep that God had provided in place of his son. The meat is distributed to the poor, relatives and friends. Afterwards, they return to Makkah and perform a Tawaf and Sa'i. Then they cut their hair, which is an important step towards the completion of the Hajj (Hammoudi, 2006).

On the 11th of Dhu al-Hijjah, at noon (and again the following day), the pilgrims again throw seven pebbles at each of the three pillars in Mina. (Al-Hasani & Al-Sharif, 2009, p. 220).

On the 12th of Dhu al-Hijjah, the same process of stoning of the pillars is performed. Afterwards, they return to Makkah and perform a final Tawaf and leave Makkah (Al-Hasani and Al-Sharif, 2009, p. 220).

2.7 The Spiritual Significance of the Hajj

The Hajj has a form and content. It is not a single event; it takes place over many days and has many rites, accordingly. Its form is to have ihram (a garment worn by pilgrimages during Hajj), to perform Tawaf (circumambulation of the Kaaba) and Sa'i (walking between the two hills), to go to Mina, Arafat, Muzdalifa, to do the *Rajam* (throwing pebbles) at the Jamarat, and to sacrifice a sheep, goat, or camel (Al-Sawydani, Badarinath & Douglas, 1995).

The spiritual content of the Hajj includes love, sacrifice, devotion, patience, harmony, mercy, and unity. The Hajj has many benefits and meanings for Muslims. It could be posited that the form of the Hajj is enriched by God with all of the meanings he wants man to understand through worship. When pilgrims enter God's House, to which they have been invited, they answer the invitation and they come to the House where worship of God is asserted. Muslims believe that God wants this House to be the universal Mosque, where people of all races, colours and ethnicities feel united (Shariat, 2005).

The Hajj includes prayers and fasting and Zakat. It also means 'to cleanse by wholesome purity' (Maqsood, 2008, p. 73). This suggests that God wants man, through the Hajj, to experience a spiritual and dynamic journey. As a result, upon returning from the Hajj, he can apply general concepts acquired to make practical steps towards a methodology of all aspects of life (Shariat, 2005). In relation to this, Rafiabadi (2009) argued that the significance of the Hajj is that it's not merely an act to be performed, but a concept to be understood in its depth. There are several spirituals, intellectual and practical dimensions that we might consider when a pilgrim sets off to the Hajj. The pilgrim starts with Ihram, which means abstaining from certain foods, from dressing in certain ways and bodily embellishment. It also relates to abstaining from conflict and from the hunting of animals.

The *Tawaf* is meant to evoke each Muslim's consciousness that God is the heart and soul of their reality and the source of all meaning in life, and that each person is a part of the community of Muslim believers known as the *Ummah*.

According to Hagi (2010) the meaning and wisdom behind circumambulating the Kaaba seven times is as follows: 'The *Tawaf* (circumambulation) around the *Kaaba* is regarded to be the symbol of the summary of the universe and creation, and surrendering to the divine pre-ordainment. It describes the idea of oneness. Its meaning concerning the social life is not to leave unity and to try to maintain this unity. Its message regarding individual life contains deep truths.'

Drinking the *Zamzam* water gives a taste of the waters of Paradise. The Zamzam Well presents a fundamental wonder: water in a desert. Without it there would be no Makkah. Traditionally, each pilgrim takes a drink from it to refresh himself and to prepare for the rite that follows. The walking back and forth between the mountains of Safa and Marwah reenact

the steps of Hagar, looking for water in the desert to save the life of her infant son, Ismail. The day that Muslims spend on the plain of Arafat symbolizes humans waiting for the Day of Judgment. The throwing of stones at the three pillars at Mina represents when Abraham was fighting the temptation from Satan (Al Sawydani, Badarinath, & Douglas, 1995).

Algazali states that:

‘These acts are mysterious and afford neither obvious benefit to souls nor any natural sociability; nor is the intellect able to discover their meaning. Therefore, there is no impetus to perform them other than the mere command of God and the intention to comply with that command; it is a command that requires obedience pure and simple. In such obedience the intellect desists from its normal operations and the soul and the innate disposition detract from their proper social cause’ (Algazali, 2009, p. 127)

Accordingly, the Hajj is also training and exercise for complete obedience to Allah and for following orders unconditionally and observing a command and order as the Hajji performances are due to the divine command and responding to God’s call for the Hajj (Mawdudi, 2011).

2.8 Tawaf

Tawaf is one of the Islamic rites of Hajj. In the course of Hajj and Umrah, Muslims are to circumambulate the holy Kaaba seven times, in a counterclockwise direction, as shown in figure 2.3. The circling is believed to show the oneness of the worshippers in the adoration of the One God, as they act in harmony together around the Kaaba, while supplicating to God, then prays behind Maqam Ibrahim.

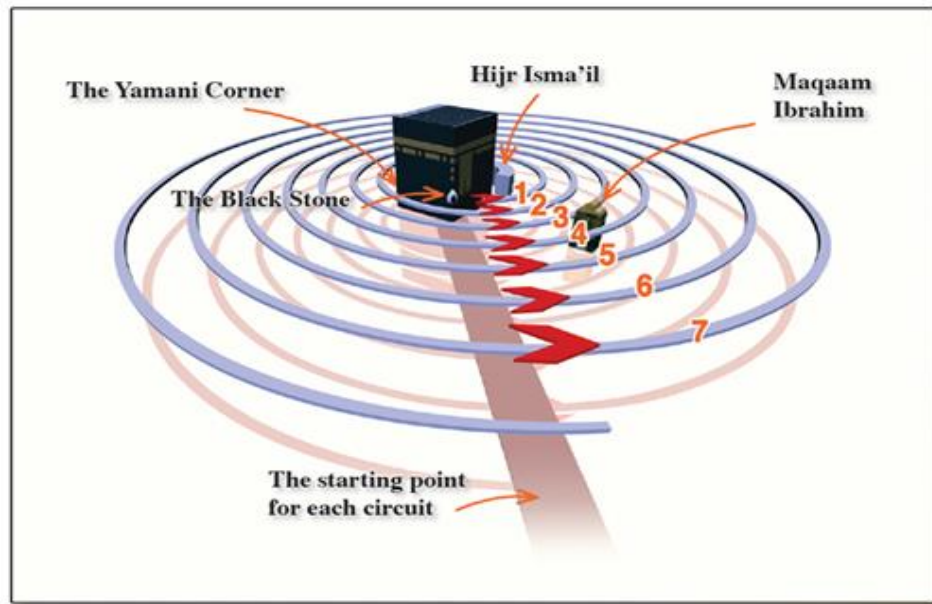


Figure 2.3 The circumambulation of the holy Kaaba seven times

The circle begins from the corner of the Kaaba (Black Stone), shown in figure 2.4. Muslims are to kiss or just touch the Black Stone, but this is frequently not possible because of the great crowds, hence it is acceptable for them to simply point or put up their hand to the Stone on each lap. At the conclusion of the circling, Muslims go to the Station of Ibrahim to pray, and then drink water from the sacred Well of Zamzam, before going to the next ritual of the Hajj, the Sa'i (Matthews, Anis & Daud, 1996).

There are several types of Tawaf that can be performed:

- Tawaf al-Qudum is performed by those not residing in Makkah once reaching the Holy City.
- Tawaf al-Umrah refers to the Tawaf performed specifically for Umrah.
- Tawaf al-Ifadah or Tawaf al-Hajj is performed after casting stones, sacrificing animals and shaving the hair.
- Tawaf al-Wada (Farewell Tawaf) is performed before leaving Makkah. (Matthews et al., 1996, pp. 127-159).

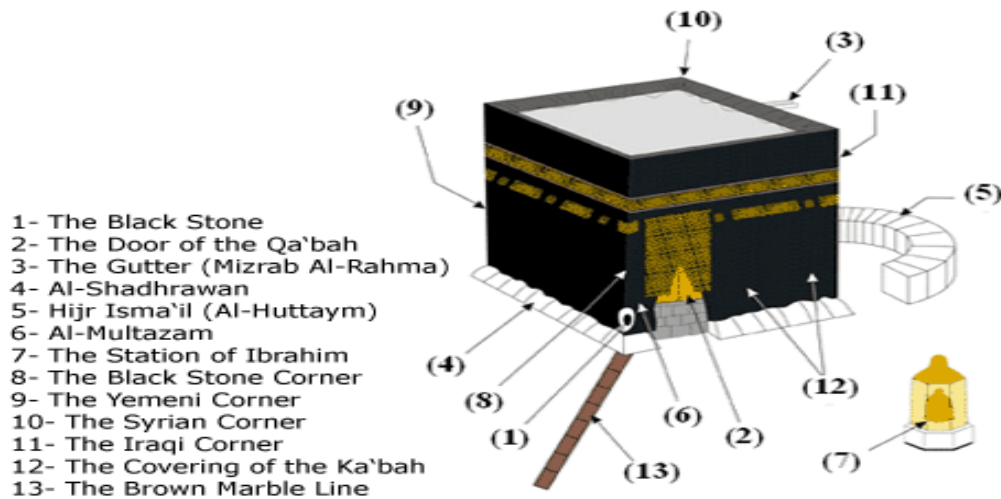


Figure 2.4 The Holy Kaaba detailed plan. [Online image]. Retrieved November 9, 2013 from <http://www.dalil-alhaj.com/en/qaabehpic.htm>

2.9 The History of the Hajj



Figure 2.5 A View of the Kaaba, 2012 Source: Wessam Hassanien

Once the building of the Kaaba was completed, God ordered Abraham to make a public proclamation of the pilgrimage to be performed there. Therefore, the origins of the Hajj in the Muslim faith can be traced back to the era of the prophet Abraham and his son Ishmael, which was around 2000 BC according to the Islamic hadith (Peters, 1995). As discussed, it is

believed that Allah ordered Abraham to construct the Kaaba, as shown in Figure 2.5. Allah described the Kaaba and its building in the Holy Qur'an verses as follows:

And [mention, O Muhammad], when we showed Ibrahim the site of the [Sacred] House [saying], Do not associate anything [in worship with Me and purify My House for those who perform Tawaf (circumambulate) and those who stand up for prayer and those who bow down and make prostration [in prayer, etc.] (From the Holy Qur'an, Surah Al-Hajj, 22-26).

During this early time the Kaaba was visited not only by Muslims but also those of other faiths, and even pagans. It was only during the Prophet Muhammad's time, 631 AD, at the end of the tenth year after the migration to Medina, that Muhammad carried out his first truly Islamic pilgrimage. This was the first Hajj to be executed by Muslims alone, and the only Hajj ever performed by Muhammad. He cleansed the Kaaba, destroyed all the idols, and re-consecrated the building as the household of God. It was from this period that the Hajj became one of the Five Pillars of Islam.

2.10 The Social Significance of the Hajj

Up to three million people come from all over the world of different races, colours, belonging to different lands and speaking different languages. The Hajj is not only an act of religious observance, but it also functions as an Islamic social conference and public demonstration of faith where diverse groups come together at the same time, repeating a single call, and proclaiming a single slogan. It is intended to show that there is no conflict in Islam between human beings on the basis of wealth, race, religious doctrine, language or region (Shariat, 2005). Therefore, it is believed, the problems and conflict of the world can be solved by social cooperation, which is dependent on understanding among nations:

And affirm to the people the Pilgrimage; they will come to you on foot and on every lean camel; they will come from every remote path. That they may eyewitness advantages for them and mention the name of Allah during the stated days over what He has given them of the cattle quadrupeds, then eat of them and feed the distressed one, the needy. (Holy Qur'an, 22:27-28).

The Hajj does not only offer a way to get closer to Allah, but also offers the pilgrim social, educational, economic and political benefits. In order to demonstrate equality, brotherhood,

and in order to submit to Islam, all the pilgrims communally, despite their various demographic attributes, wear the Ihram; this is the dress of unity, and conveys equality and universality. Pilgrims come together in one spot, and observe the same rituals and are expected to exhibit unity and discipline. This helps to eradicate artificial boundaries, and create a sense of society among pilgrims.

During the Hajj pilgrims from the East and the West are said to become acquainted with one another and consult each other on international and domestic affairs; they exchange views and experiences. This intellectual, political, and social interchange is said to lead to new projects, plans, and economic and social centres and bring together benefits from the experiences of others who come from different places. In addition, the entire global Muslim community is said to benefit from the increased circulation of knowledge, understanding, and economic benefits.

The Hajj is a social event and people attend before the start of the pilgrimage to pray in the Grand Mosque and they also stay after the pilgrimage to pray and to socialize with other Hajjis. Therefore the impact of the Hajj is not confined to the parameters of the pilgrimage, but rather spreads outwards in both directions.

2.11 Autobiographical Perspectives

Many Muslims have shared their experiences of the Hajj and how it has affected them. From a group of Australian pilgrims, to the famous civil rights activist Malcolm X and the German author Murad Hofmann, each has something significant to report from their experience.

For example, several Australian pilgrims submitted articles on their Hajj of 2006-2007 and passed on their experiences to others (Hajj Portal, 2011). According to a 30-year-old Australian female pilgrim, 'It was in times such as these where patience was required in abundance'. Moreover, 'You really have to leave your usual self behind when you go on the Hajj and make a promise to yourself that no matter WHAT happens, I will not lose my patience.' She concluded that 'Overall, I have to say that I had the best experience of my life and I wish I could go every year.' As the Hajj approaches near again, she wrote 'I feel a real urge to be back there again as memories come flooding back.'

According to Mohamed, a 30-year-old Australian pilgrim, ‘Hajj is a spiritual journey; the most fulfilling and rewarding journey most people will ever undertake.’ However, he stated, ‘It’s not a holiday.’ Quite to the contrary, ‘It will be a long hard journey full of tests [and] trials; moments of happiness [and] moments of sadness. Like anything else in the life, Hajj is not meant to be easy, and it’s not easy. Approach your Hajj journey in this manner.’ In this case he suggested that ‘the first thing you want to do after making your intention to perform Hajj is [to] put yourself in the right frame of mind; once you have that, you can concentrate on the rest of your trip.

The account below is from Murad Hofmann, a contemporary Muslim author and former member of the German diplomatic service, from his book *Journey to Makkah* (1998, p. 34):

It is not totally a question of duty: the journey to Makkah is a dream come true for every Muslim, and upon returning becomes his pride and joy. When one comes back one may well find the entrance to his/her house painted green, and from this point on enjoy the ultimate prestige. There is no Ph.D., no Master’s degree, no titles like ‘Your Excellency’ or ‘Professor’ (*ustadh*) that can possibly compete with the titillation every returning pilgrim is entitled to: Al-Hajj!

There are also some high-profile accounts of people attending Hajj, in particular from Malcolm X, an African-American Muslim minister, public speaker, and civil rights activist who became a Sunni Muslim in 1964 and later attended the Hajj.

It was during this time that Malcolm X changed some of his perspectives about black supremacy and social integration and moved from defying social convention to working alongside the civil rights movement in the United States (Goldman, 1979). He explicitly attributes his changed views (from Black separatism to a class perspective) to his experiences at the Hajj. While he was in Makkah performing his pilgrimage, he wrote that what impressed him the most about the Hajj is that ‘there were tens of thousands of pilgrims from all parts of the world. They were of all colours, ethnicities. But we have been all participating in the ritual itself, the one spirit of unity and brotherhood that my experiences in America had made me to believe never could exist between whites and non-whites.’ He also declared, ‘I have never seen by the sincere and true brotherhood practiced by all colours together, regardless of their colour coming together as one! It has proved to me the power of the One God’ (X, 1963, p. 454). What is interesting about this account is the emphasis on the Hajj as a *social*

experience. It was because Malcolm X was part of a practice involving many other kinds of people acting as one, he says, that he was spiritually and politically transformed. Thus, there is an indication here of the importance of the collective, *crowd*, aspects of the Hajj, which perhaps should be foregrounded in a social psychological study of the experience and nature of the Hajj.

Many scholars and authors write about the positive aspects of the Hajj, and, in fact, their focus on unity and cohesion is highly relevant to this thesis. However, although this is the case, there are also tensions, differences, and even conflicts present in the experience of the Hajj and within the religion of Islam. This variability is discussed in relation to the primary data later in the thesis and in critical terms, these conflicts are also addressed in the work of Moroccan scholar Abdullah Hammoudi, an anthropologist and professor at the American University of Princeton, who recorded many different details of the pilgrimage in his book *A Season in Mecca: Narrative of a Pilgrimage* (Hammoudi, 2005). Hammoudi's book gives a singular insight into the Hajj. The record starts with the tale of the writer himself, who resolved to carry out the pilgrimage in 1999. The author acknowledges that his pilgrimage is radically different from those historically carried out by earlier pilgrims. While those earlier trips focused on the hardships and difficulties of the road, and these are somewhat different to the difficulties faced by pilgrims today (many of whom stay in hotels), the author makes a case for continuity of experience both in relation to the physical hardships of the road and the internal meaning of Islam both of which are realised through the act of pilgrimage.

Hammoudi describes the Hajj in terms of adventure, human pressures, tensions, the negative behaviour of some pilgrims and the social tumult that encompasses everything from the early preparations to the final climactic scenes in the holy shrines of Medina and Mecca. He also refers to the intricate politics and amazing complexity of the entire pilgrimage experience. He pays particular heed to the effects of Hajj management's control over the Hajj, and, perhaps the more ambiguous ways that faith itself becomes a lucrative source of commerce for Saudi businessmen (Hammoudi, 2005).

2.12 The Hajj Management

The Hajj of today, almost precisely follows the same pattern of ritual and movement of the farewell pilgrimage of the prophet Muhammad (SAW). Yet, in contrast to the ease of the prophet's Hajj, and his trust upon and communion with his natural surroundings, today's pilgrimage is a vast, complex undertaking involving upwards of three million Hajjis and requiring robust planning, logistics and efforts to offer support and infrastructure, including instituting the most up-to-date technology and techniques to carry out the event (Al Yafi, 1991). The Hajj is the biggest gathering in the world that has organized acts and operations, and it requires components based on the movement of pilgrims from one holy site to another during the course of Hajj.

The management of Hajj logistics can be considered from a number of areas within its planning process and management framework. Today, although the rituals at the holy sites in and near Makkah have remained uninterrupted from the time of the Prophet, the setting for the pilgrimage and the facilities available to the pilgrims are a far advanced from those that existed at any time in history. Hardship was once expected and endured as part of the Hajj (Al Yafi, 1991), not so now. Pilgrims today undertake the pilgrimage in ease, receive a warm welcome on their arrival in Saudi Arabia, and are provided with the most modern facilities and most competent services possible. In the absence of the distractions that their forebears had to contend with, today's pilgrims are free to focus solely on the spiritual aspect of the Hajj (Dodge, 2009).

The preparation and administration of the Hajj event are extremely complex, and it takes twelve months to plan each one. During the twelve months before the Hajj, there is substantial planning by government agencies to support the many dimensions of the Hajj and in order to put in place actions and logistics in order to adequately grasp most major problems presented by the event (Al Yafi, 1991).

The Saudi Arabian government has broad responsibility for the protection of the area's visitors. The King of Saudi Arabia is known as 'the Custodian of the Two Holy Mosques'; this title highlights his responsibility for both Makkah and the Islamic holy city of Medina (Dodge, 2009).

Each of the millions of people who travel to Makkah for the Hajj have to negotiate a complex set of experiences, often in a language that they do not speak. As this is the case, there used to be a person called a *mutawaf* who spoke to people in their language and helped guide them through travel, passports and other formal and informal issues related to the Hajj. This has now been changed so that there is a *Tawafa* establishment. The Tawafa establishment means that this work has changed from individual to institutional work (Ministry of Hajj, 2013).

Six Tawafa Establishments are located in Makkah and the Holy Sites, each of them serving the pilgrims of the world region stated in its name.

According to Ministry of Hajj regulations, none of them are permitted to serve the pilgrims of another region, except in a very limited range and according to certain regulations within the frame of what is known as free choice. This most likely applies to first-degree relatives. According to (The Ministry of Hajj, 2013), these National Establishments are distributed, to handle more than one country, as follows:

- Tawafa Establishment for South East Asian Pilgrims.
- Tawafa Establishment for South Asian Pilgrims.
- Tawafa Establishment for Non-Arab African countries.
- Tawafa Establishment for Pilgrims of the Arab Countries.
- Tawafa Establishment for Muslims of Europe, the Americas, and Australia.
- Tawafa Establishment for Pilgrims of Iran.

(For more details of all the service providers supervised by the Ministry of Hajj see Appendix A).

All of these institutions work under the umbrella of the Ministry of Hajj. During the off-season, Hajj authorities remain busy coordinating difficulties from the previous season, infrastructure changes, reviewing, running workshops and outreach plans, and updating operational plans. Therefore the activities surrounding pilgrim care run year-round.

2.12.1 Number of pilgrims: Components of the Hajj

In the past, and as recently as the early decades of the last century, few people were able to make it to Makkah for the Hajj. This was because of the hardships encountered, the duration of time the journey took and the expense associated with it.

Pilgrims arriving from the far recesses of the Islamic world sometimes dedicated a year or more to the journey, and many perished during it due in part to the lack of facilities along the routes to Makkah and also in the city itself (Abu-Resize, 2005).

The circumstances of the Hajj began to improve with the progress of civilization and the development of transportation. During the time of King Abdul Aziz Ibn Abdul Rahman Al-Saud, the founder of the modern Kingdom of Saudi Arabia (1932), major programmes were introduced to ensure the security and safety of the pilgrims, as well as their wellbeing and comfort. Steps were also asked to establish facilities and services aimed at improving housing, wellness maintenance, sanitation and transportation (Ahmed, Yaseen, & Memish, 2012).

Today the Hajj is considered to be the biggest and longest-standing annual mass gathering (MG) event in the world. It is the site of some of the greatest crowd densities known to mankind (Memish, 2013). The high density of its dimensions has introduced a new level of complexity to the problem of ensuring the smooth functioning of the event and it has also had an impact on the spirituality and reverence of the performance of the pilgrims (Al Yafi, 1993).

According to a published paper presented at the European transport conference (Al-Zahrani, May, & Temple, 2013), the authors indicated that the city of Makkah welcomes close to 2.8 million Hajj pilgrims each year, together with 5.0 million annual visitors from outside Saudi Arabia who arrive to perform the rites of Umrah within Al Masjid Al Haram (the Great Mosque in the city centre). Many domestic visitors from Jeddah and rural areas also come to Makkah to perform Umrah. Unlike the Hajj pilgrimage, Umrah can be guaranteed at any time of year, although there is a major peak in demand during Ramadan.

Makkah is not just a topographic point for visitors, but it is also a substantial city in its own right with a current population of more than 1.5 million. Both the population of the city and the number of visitors are looking to increase strongly over the next 15-20 years. Al Zahrani, May and Temple (2013) state, moreover, that, by 2029, users of the city's transport system could include 2.2 to 2.9 million residents, 3.5 million Hajj pilgrims, 5 million international Umrah visitors, and a large, but unquantifiable, number of domestic visitors.

In reaction to past crowding problems and this forecast growth, the government has called for a number of steps to increase the content of the religious sites in and around Makkah. Although the government of Saudi Arabia reached agreement within the Organization of Islamic Solidarity for more than fourteen years to identify the recommendations by the number of pilgrims (one out of every thousand people) of each country, the number of Muslim pilgrims has increased greatly, with some past years seeing more than three million pilgrims. The number of overseas pilgrims is calculable and can be adjusted accurately and usually ranges between 1.2-1.5 million. No documented data is available to identify the number of pilgrims who have attended the Hajj since the emergence of Islam. Nevertheless, various historical books have indicated that the numbers were around 10,000 in 600 AD. This is an approximate number due to the absence of appropriate mechanisms of counting fourteen hundred years ago. However, historians were able to estimate the number from what is stated in historical sources; the number of pilgrims from the commencement of the time of the Prophet Muhammad until the mid-fourteenth century were a few hundred thousand subject to increases and decreases year after year depending on the security and political and economic development in different years.

The enrolment has started out in a scientific manner since the commencement of the fourteenth Islamic century. The statistical information available indicated that the lowest number of pilgrims ever recorded was 8500 in 1917 during the First World War. With the exception of that date the number of pilgrims has generally moved upwards as shown in the following table:

Table 2.1. The number of pilgrims coming to the Kingdom for Hajj - Source: King Khalid bin Abdul Aziz Database (First Edition) King Khalid Foundation - Developed by Harf Information Technology (Government Publications 1980).

Hijri Year	Gregorian Year	Number of Pilgrims
1345	1926	90,662
1346	1927	96,212
1347	1928	90,764
1348	1929	81,666
1349	1930	39,045
1350	1931	29,065
1351	1932	20,181
1352	1933	25,291
1355	1936	49,517
1367	1948	75,614
1370	1951	100,578
1371	1952	148,515
1372	1953	149,841
1373	1954	164,072
1374	1955	232,971
1375	1956	220,722
1376	1957	215,575
1377	1958	209,197
1378	1959	207,171
1379	1960	153,369
1380	1961	285,948
1381	1962	216,455
1382	1963	199,038
1383	1964	266,555
1384	1965	283,319
1385	1966	294,118
1386	1967	316,226
1387	1968	318,507
1388	1969	374,784

1389	1970	406,295
1390	1971	431,270
1391	1972	479,339
1392	1973	645,182
1393	1974	607,755
1394	1975	918,777
1395	1976	894,572
1396	1977	719,040
1397	1979	739,319
1398	1980	830,236

Table 2.1 shows the number of pilgrims attending Hajj from all Muslim nationalities and regions from abroad, not including pilgrims from inside the Kingdom of Saudi Arabia.

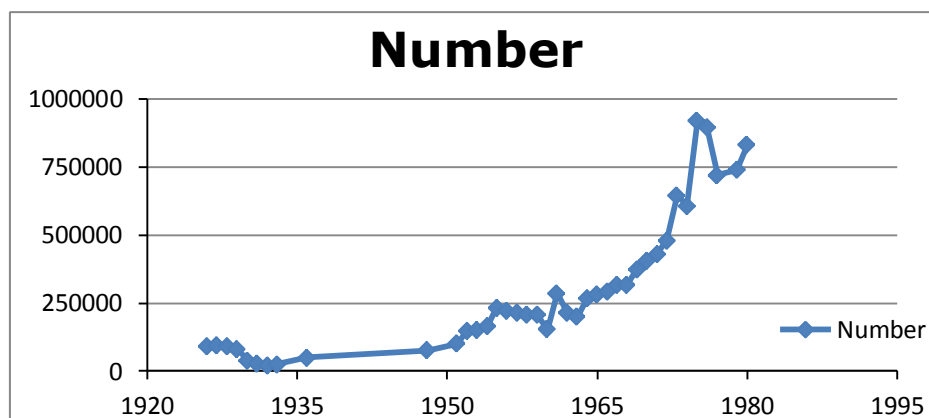


Figure 2.6. The number of pilgrims coming to the Kingdom for Hajj from 1980-1926 Source: King Khalid bin Abdul Aziz Database.

The chart above shows data on the rise in the number of foreign pilgrims from 1980-1926. The lowest number of pilgrims recorded (20,181) was in 1932, this was due to the economic effects on the citizenry of the Great Depression. The number of pilgrims recorded in 1975 (i.e., 918,777) was the highest reported number and that was due to the period of economic recovery, which was experienced by the Kingdom, which allowed the implementation of infrastructure and the development of facilities for the Hajj.

Table 2.2. The number of pilgrims coming to the Kingdom for Hajj for the last 10 years.
Source: Ministry of Economy and Planning, Central Department of Statistics and Information, Saudi Arabia (2012) Statistics for 2012 Hajj.

Gregorian year	Number of Pilgrims
2003	2,012,074
2004	2,164,469
2005	2,258,050
2006	2,378,636
2007	2,454,325
2008	2,408,849
2009	2,313,278
2010	2,789,399
2011	2,927,717
2012	3,161,573
2013	1,980,000
Total	26,848,370

Table 2.2 shows the number of pilgrims attending Hajj from all Muslim nationalities and regions, including pilgrims from inside the Kingdom of Saudi Arabia.

The above table shows over the past decade, the greatest number of pilgrims was witnessed in 2012 when 3.16 million performed Hajj and the lowest in 2013 with only 1.98 million pilgrims; the number of pilgrims dropped due to the government's decision to reduce the number of foreign pilgrims by 20 per cent and domestic pilgrims by 50 per cent because of the ongoing expansion projects in Makkah and Madinah up to Hajj 2015.

According to Aborzzizh (2005) the major factors that led to the increase in the number of pilgrims at high rates were:

1. Increase in the population of the Muslim world
2. Evolution of transportation
- 3 Security and safety in the movement to and from the Hajj

4. Short period of time for the performance of rituals of Hajj
5. Development projects for the Hajj facilities and infrastructure for the Hajj
6. Not charging any fees or government tax on pilgrims
- 7 The impact of audiovisual media

2.12.2 Challenges for Hajj Management and operations

Understanding the nature of challenges and operations from an early stage facilitates the management, whose task in ensuring a safe and prosperous environment for Hajj is highly dynamic and complex. This is embedded in the design of the Hajj's event development; the production phase considers how to facilitate the Hajj event and the fulfilment of the needs and expectations of pilgrims on their lifetime Hajj.

2.12.2.1 Health environment

The Hajj Management is responsible for supplying a secure and sound environment for those Muslims who live all over the globe and come to attend the Hajj. The pilgrimage experience brings millions together from about 190 different countries with a diversity of lifestyles, languages, and ethnic customs. The pilgrims also bring with them various health issues; such a large assemblage of people always brings its own risks as well. The regime of Saudi Arabia requires all pilgrims to receive certain vaccinations prior to arrival, to help prevent the spread of diseases such as meningitis, yellow fever, tuberculosis, influenza and Ebola virus (which has recently killed thousands in West Africa) and the Corona virus (which has killed 300 people in Saudi Arabia).

2.12.2.2 Transportation

Transporting the three million pilgrims from place to place is perhaps the biggest logistical challenge facing Hajj organizers. Unlike other public events (such as the Olympics), during the Hajj all pilgrims must perform the rites in certain places at the same time. It takes over 20,000 buses and thousands of taxis; once in Makkah many pilgrims also walk to and from the sites. In recent years, the Hajj organizers have extended the road system, and have implemented a light rail system to take 72,000 people every hour to and from the pilgrimage sites near Makkah, as shown in Figure 2.8. The trains connect Arafat, Mina, and Muzdalifah.



Figure 2.7. Elevations of Mashaaer Metro station in Arafat.

Source: Mashaaer Mugadassah Metro Project

2.12.2.3 Shelter

Pilgrims travel in groups organized in their home countries, and the agents are responsible for making lodging arrangements. In Makkah, options range from 7-star hotel suites to shabby tents, as shown in Figure 2.9, and everything in between.



Figure 2.8 The ‘Tent City,’ in Mina. Source: the author of this thesis.

Since 1995, the Saudi government has made a ‘Tent City’ in Mina that is composed of tents pitched to house millions of Muslims making the Hajj. More than one hundred thousand air-conditioned tents provide temporary accommodation to visiting pilgrims. The coated tents are

built to withstand temperatures of up to 700 degrees Celsius and they are wind resistant and have a 25-year life span.

Studies are underway to set up 60,000 fireproof tents in Arafat at a cost of SR 2 billion, and expand Mina to house seven million pilgrims as part of the government's effort to improve services to the guests of God (Ministry of Municipal and Rural Affairs government report 1997).

2.12.2.4 Food and water

Providing food and water to such a massive number of people is an extraordinary task. Food preparation is done on a huge scale. These meals are produced in hundreds of kitchens and distributed among the pilgrims. The Hajj accommodates more than 3 million pilgrims and there is a need for 100 million bottles of water. The hajj produces the largest amount of desalinated water in the world in the pilgrimage season to feed and hydrate such a massive number of people. The General Manager of the General Establishment for Water Desalination West Coast, Mohamed Farhan al-Ghamdi, has stressed that: 'The ruling body has met its obligation to deliver desalinated water supply Hajj guests of complex Shuaiba plants, has provided 677 thousand cubic metres per day to feed Makkah and the holy sites, without interruption or incidents' (Sabq online newspaper, 2013). Food vendors bring in extra staff and supplies for the season, and government agencies give out water and prepared meals after ensuring the compatibility of food and drink with quality and safety standards set by the Municipality of Makkah (Zain Al-Abideen, 2001).

2.12.2.5 Safety and security

You might imagine that such a spiritual experience as the Hajj would be crime-free. Alas, that is not the case, and theft is commonplace. To help ensure order and public safety, fifty thousand extra police officers and soldiers are assigned to the holy city during the pilgrimage days. Over 3,000 CCTV cameras feed to the public safety control centres. Local telecommunication companies have recently started giving away free SIM cards to pilgrims upon arrival, to help ease communication among travelling groups.

There is usually a little intergroup conflict as certain groups can act in a physical or aggressive way towards others (i.e. some refer to 'groups from some African and Indonesians countries'), and, historically, certain groups have used the Hajj to protest (e.g. some Iranian

groups). There are also possible ‘squatters’ – that is, people who attend the Hajj but not through official channels. As these squatters are unaccounted for, it is impossible to know their number and this has an impact on the planning and safety of the Hajj. The authorities cannot predict what number of squatters may be sleeping on the streets during the Hajj. The authorities certainly have an important job to do, but there is not often major conflict.

2.12.2.6 Crowd accidents

There have been some serious crowds crushes during the Hajj that have resulted in the loss of a number of lives – table 2.3 lists the major crowd accidents which have occurred. Most Hajj events run without serious crowd incidents; I know this from my 22 years experience working in Hajj risk management. Nevertheless, high-density crowd risk has become a salient characteristic of the Hajj because of the number of people herded into a relatively small space. A large scale gathering such as the Hajj is associated with unique crowd risks in the excruciating heat and humidity. As a result The Saudi government has spent more than \$200 billion to engineer the Hajj environment and minimize crowd risk (Ministry of Municipal and Rural Affairs, 2013). The underlying principle of crowd safety is to ensure that participants are safe during both emergency situations as well as normal conditions, and developing actions according to the analysis of the causes and prevention of previous crowd disasters. In respect of this Fruin has argued that:

“At occupancies of about 7 persons per square meter the crowd becomes almost a fluid mass. Shock waves can be propagated through the mass sufficient to lift people off of their feet and propel them distances of 3 m (10 ft.) or more. People may be literally lifted out of their shoes, and have clothing torn off. Intense crowd pressures, exacerbated by anxiety, make it difficult to breathe. The heat and thermal insulation of surrounding bodies cause some to be weakened and faint. Access to those who fall is impossible. Removal of those in distress can only be accomplished by lifting them up and passing them overhead to the exterior of the crowd. (Fruin, 2013, p. 102)”

Fruin’s above quote introduces a crucial question for the safety of mass events – why do deadly crowd disasters happen? Most crowd accident investigations have confirmed that human conduct was the cause: stampedes, trampling, crushing, panic. As a member of Hajj management myself, I am aware that it has always been the case that pilgrims have been routinely blamed for incidents of this kind. For instance, in the crowd stampede incident of 2006 Hajj, ‘unruly pilgrims’ were blamed for the crowd incident that led to the loss of lives (Reported by the news media, for example BBC News 12 January 2006). In a recent study by Helbing and Mukerji (2012) a different line of argument was introduced and this study

confirmed that human behaviour wasn't the reason, but that only physical forces (turbulent waves) in the crowd were the aftermath of the tragedies of mass events. Furthermore, these forces have been discussed in more details in a very recent book published by Keith Still in 2014, *Introduction to Crowd Sciences*:

"Crowd forces can reach levels that almost impossible to resist or control. Virtually all crowd deaths are due to compressive asphyxia and not the "trampling" reported by the news media. Evidence of bent steel railings after several fatal crowd incidents show that forces of more than 4500N (1,000lbs) occurred. Forces are due to pushing, and the domino effect of people leaning against each other". (Still, 2014, p. 81).

And:

"Compressive asphyxia has occurred from people being stacked up vertically, one on top of the other, or horizontal pushing and leaning forces. In the Ibrox Park soccer stadium incident, police reported that the pile of bodies was 3m (10ft) high. At this height, people on the bottom would experience chest pressures of 3600-4000N (800-900lbs), assuming half the weight of those above was concentrated in the upper body area". (Still, 2014, p. 81).

And:

"Horizontal forces sufficient to cause compressive asphyxia would be more dynamic as people push off against each other to obtain breathing space. In the Cincinnati rock concert incident, a line of bodies was found approximately 9m (30ft) from a wall near the entrance. This indicates that crowd pressures probably came from both directions as rear ranks pressed forward and front ranks pushed off the wall". (Still, 2014, p. 81).

Fruin's work also indicates a similar line of argument stating that:

"Experiments to determine concentrated forces on guardrails due to leaning and pushing have shown that the force of 30% to 75% of participant weight can occur. In a US National Bureau of Standards study of guardrails, three persons exerted a leaning force of 792N (178lbs) and 609N (137lbs) pushing. In a similar Australian Building Technology Centre study, three persons with a combined leaning a pushing posture developed a force of 1370N (306 lbs). This study showed that under a simulated "panic", 5 persons were capable of developing a force of 3430N (766lbs) ". (Fruin, 2013, p. 99).

Based on the above, the authors suggest that the answer to the question 'why do deadly crowd disasters happen?' lies more in the realm of physics than psychology. Those who organize such events (the security, police and crowd managers) need to know about the effects of physical forces in the crowd in order to adopt precautions in their prevention measures. According to (Alnabulsi & Drury, 2014), the period in which the number of pilgrims attending the Hajj doubled from 1 million to 2 million (i.e., 1982-2010) also the large number

of major crowd disasters (1994, 1998, 2001, and 2004), which imply links between crowd density and risk to crowd safety (Alnabulsi & Drury, 2014).

There have been non-psychological approaches to deal with crowding and crowd incidents, and this has included changes to the design of the Jamarat Bridge. In this case the solution was a technological one, rather than a psychological one.

Table 2.3 Crowd Incidents during the Hajj since 1983 (Alnabulsi, 2009)

YR	Day (Hijjah)	Time	Location	Number Dead	Number Injured
1983	10	Not available	Ground floor (basement)	Not available	Not available
1988	12	Not available	At small Jamarah	34	Not available
1990		Not available	At small Jamarah	20	Not available
1994	12	13:25 PM	North of small Jamarah	266	98
1997	12	15:10 PM	North side of the Entrance	22	43
1998	12	1:30 PM	North side of the Entrance	118	434
2001	10	8:12 AM	North side of Jamarat al-Aqba	35	179
2004	10	8:45 AM	North side of Jamarat al-Aqba	249	252
2006	12	13:30 PM	North side of eastern entrance	363	249

Table 2.3 above shows that most of the crowd accidents occurred on the Jamarat Bridge where the media claims ‘panic’ or ‘stampede’ was the case of an accident. (Alnabulsi, 2009).

2.13 Conclusions

In conclusion, this chapter has briefly explored the history and culture of the Hajj from different perspectives with a focus on the Hajj’s relationship to Muslim history. By taking account of the huge historical, cultural, and ritual importance of the Hajj, this chapter begins

to address the complex challenges that Hajj management face in administering and facilitating the Hajj. Of particular significance is the fact that the development of the Hajj is concurrent with the development of the Muslim religion; the two are inextricably intertwined. Muslims have been performing the Hajj for centuries and will continue to do so in ever-increasing numbers. Islam is the second largest religion in the world and has over 1.62 billion followers; of these followers roughly two million attend the Hajj each year. These large numbers pose a challenge for the management.

The chapter has highlighted that the Hajj and other religious pilgrimages perform a complex set of functions. This chapter has considered several first person accounts of the experience of the Hajj, and these experiences range from concern at the violence or passion shown by pilgrims to a sense that the Hajj is not just about strengthening faith, but also about helping to generate social cohesion within a religious group and creating positive effects on an individual psychologically. In many accounts, pilgrims come away with pride in having successfully performed a ritual dedicated to God and in belonging to a huge family of people that share the same religious beliefs. The pilgrim has acquired a sense of brotherhood, humility, and strength of belonging to the Islamic social group.

The Hajj is a complex constellation of historical, social, cultural, and religious aspects that cannot be disentangled. In spite of this, there is evidence of a great sense of cohesion amongst followers of Islam, and the Hajj provides an opportunity for equality and togetherness before God. The fact that the long and complex history of the Hajj has led to, and is contained within, the current iteration of the event, and reports from Hajjis and management that the event is ultimately a social experience, indicates that the social (group or crowd) aspects of the experience seem to be integral to the event. However, even though the ritual aspects of the Hajj have remained unchanged for centuries, the crowd numbers and needs have grown year on year. This chapter has reflected on the contemporary challenges that face the Hajj management, including concerns around practical issues such as food and shelter and more extreme concerns such as disease, safety, crushing, and accidents. As there has been surprisingly little examination of this from a psychological perspective, this aim of this thesis is to uncover the social, psychological meaning of the Hajj and in so doing undertake original research in the field. Now I will explore academic perspectives on the Hajj crowd and crowd psychology in general.

Chapter 3: Crowd Behaviour and Psychology: Literature Review

3.1 Introduction

In the previous chapter, it was suggested that the Hajj and other religious pilgrimages are not just about strengthening faith, but also about helping to generate social cohesion within a religious group and creating positive effects on an individual psychological level. Social (group or crowd) aspects of the Hajj experience seem to be integral to the event, but there has been surprisingly little examination of this from a psychological perspective. This chapter will delve into the available literature that can help us understand the psychological dimensions of crowds.

The chapter begins with an overview of social science approaches that have been used to study the Hajj: sociological and anthropological perspectives and psychological perspectives. The section on the former commences with a discussion of the theories of Emile Durkheim, who proposed that religious rituals are a communal experience that increase the bonds between people and encourage participants to view themselves as belonging to an in-group comprised of other members of their religion. Sociologists have viewed the Hajj in these terms, and commented on the powerful effect that being in such a large, uniform crowd has on individual perceptions of group membership. There have also been a small number of inquiries into the psychological aspects of the Hajj, but these have largely neglected the social, psychological processes that occur within the Hajj crowd during the pilgrimage.

The next section of the chapter outlines the approach to crowd psychology to be adopted in this thesis, that is the social identity approach. This approach includes social identity theory (Tajfel & Turner) and self-categorization theory (Turner et al., 1987). It also includes the specific application of these approaches to crowd behaviour (e.g., Reicher, 1984, 2001).

As there is so little existing literature on the crowd psychology of the Hajj, the rest of the chapter develops the theoretical and empirical framework for my research by reviewing previous theories of crowd psychology in three specific areas, and examining how far they

can be used to make predictions about crowd behaviour and crowd experiences at the Hajj. The first section addresses the literature on crowding and personal space. Recent studies have suggested that whether a crowd is experienced as positive or negative, and how much personal space an individual needs, depend on the extent to which the perceiver views himself or herself as part of the crowd. In a setting such as a prison, crowding can be inimical to the psychological and physical health of individuals. However, in another context, greater density can be experienced as positive and lead to increased cooperation between members of the crowd; this has been demonstrated by empirical studies.

There then follow two sections that provide an overview of theories and research on mass emergency behaviour and crowd conflict. The relevance to the Hajj of the former should be clear in light of the disasters that have occurred during Hajj as numbers of participants have increased over the past few decades. The link between crowd conflict research and the Hajj becomes clear in light of the conception of the Hajj as an intergroup phenomenon, like crowd conflict (Reicher, 1996), with Hajjis constituting one group and the Hajj management and emergency services constituting the other. Such a distinction is not always apparent, but becomes salient when there is a failure of management or an emergency within the crowd.

Research questions relating to crowding and spatial behaviour, mass emergency and disaster behaviour, and crowd conflict, are then presented, followed by a discussion of methodological issues concerning the study of crowds. The arguments discussed within the chapter are then summarized.

3.2 Sociological and Psychological Studies of Pilgrimage and the Hajj

The purpose of this section is to survey what has been written about psychological issues in the Hajj and in mass religious pilgrimages more generally. It begins with a discussion of sociological and anthropological perspectives, particularly Emile Durkheim's contribution to the understanding of mass religious events such as the Hajj, and continues by examining existing psychological perspectives of the Hajj.

3.2.1 Sociological and Anthropological Perspectives

Emile Durkheim is commonly regarded as the ‘founding father’ of sociology. In his efforts to establish the discipline as a science, he argued that the observer or researcher must attempt to remain as neutral as possible, although he acknowledged that a truly objective stance is unattainable. Among Durkheim’s contributions to the understanding of human behaviour was his insistence on the potency of what he referred to as ‘social facts’. These are norms, rules, objects, or concepts that do not arise from the behaviour of individuals, but from the wider society, and that have an influence on how members of that society behave. One’s actions as an individual, then, are bound by the social facts that are inherent in our society. Further, society itself can be seen as being constituted by the totality of social facts that exist within that society. Despite the existence of individual urges and desires, we are beholden to our awareness of a ‘collective consciousness’ that determines the beliefs and morals which serve to unify the members of a society (Giddens, 2013).

One manifestation of collective consciousness is religion. Durkheim placed great emphasis on the social origins of religion, arguing that the most important function of a religion is to guide morals and social behaviour. Among the pro-social benefits of religion are social cohesion, and the provision of the means of human interaction and communication. Thus, religion is a way of bringing people together, physically and psychologically. Acts of collective worship are not mere instances of large numbers of individuals expressing their belief in a love of God, but are a communal experience, increasing feelings of togetherness within a society (Pickering, 2009).

Durkheim’s conception of religious ritual-as-social event has been applied to the study of the Hajj by Schumm and Kohler (2006). According to these authors, the Hajj is unrivalled among world religions as an expression of communal worship and as a force for increasing social cohesion. The pilgrimage to Makkah is exceptional not only for its scale, but for the continuity and symbolic unity of how it is performed: the Hajj has been always in the same location, during the same month in the Islamic calendar, and the ritual acts are clearly prescribed. In effect, this helps to ‘increase social cohesion [more] than the somewhat similar type experiences shared among Christians and possibly even among Jews.’ (Schumm & Kohler, 2006, p. 131)

In Victor Turner's classic social anthropological analysis of pilgrimage he argued that in the pilgrimage, people's relations with each other are transformed such that 'individual responsibility is now extended from the domain of kin and neighbourhood' to the 'generic human "brother" and "neighbour"' (Turner, 1973, p. 207). He termed this solidarity *communitas* and this is important in the experience of ritual. Olaveson (2001) compared Turner's and Durkheim's understanding of the social psychology of collective participation in religious ritual. Turner's work claimed that traditional identities (based upon social structural position) were less important than usual during pilgrimage. He argued that *communitas* involves a 'spontaneously generated relationship between levelled and equal total and individuated human beings, stripped of structural attributes' (Turner, 1973, p. 216). In fact, his idea was that *communitas* bridges what the routine structures of everyday life separate (Messerschmidt & Sharma, 1981, p. 572). Turner maintained that this was possible because pilgrimage places people in a liminal space, free from structural constraints. Indeed, for Turner, in contrast with everyday existence, social relations in pilgrimage are characterized by anti-structure – i.e., that which tends 'to ignore, reverse, cut across, or occur outside of structured relationships' (Turner, 1974).

3.2.2 Psychological Perspectives

The Hajj remains largely unexplored by psychologists and few academic texts can be found discussing psychological aspects of the Hajj. I used Google Scholar to investigate the scholarly data available on psychological aspects of the Hajj. My search demonstrated that The Hajj remains largely unexplored by psychologists and few academic texts can be found discussing psychological aspects of the Hajj. Google Scholar was the most efficient and comprehensive tool to use in my search for material on psychological aspects of the Hajj, being the most inclusive search engine (compared for example to PsycINFO). It is also an accessible interface for finding information; it is comprehensive and up-to-date, provides a variety of results, and monitors contemporary research.

In general terms, search results in Google Scholar can include scholarly literature citations, peer-reviewed publications, theses, books, abstracts, other literature, articles from academic

publishers, professional organizations, pre-print repositories, universities and other scholarly organizations.

In specific terms, I used the following search terms to investigate the field: ‘psychology’ and ‘Hajj’, and found almost nothing on the psychology of the Hajj. Few of the results had any relevance to my interest in the crowd psychology of the Hajj (e.g., clinical and medical studies, psychology of religion). Thus, it is evident that further research is essential. Below I briefly review a summary of the existing psychological literature on the Hajj.

From a psychological perspective, religion and ritual acts can have powerful functions. Fontana (2003, p. 1) wrote that world religions have ‘motivated men and women to develop moral and ethical systems, to philosophize on the nature of the self and on the meaning and purpose of life and to speculate on the destiny that awaits us beyond the grave.’ It is thus suggested by Fontana that an individual’s consciousness is altered through religious rituals, acts, and prayer. It is this contemplation that offers many people around the world the opportunity to find comfort, and thus a psychological calm. The Hajj, then, can also be seen to perform these precise functions, as it encourages the individual to contemplate wider issues about life and death as well as prompting individuals to assess their own morality. In this way the experience of Hajj has a powerful and distinct impact on the individual’s psychological sense of self and well being.

One study that approached the Hajj from a psychological perspective, albeit by economists, was carried out by Clingingsmith, Khwaja, and Kremer (2009), who assessed the psychological impact on Pakistani pilgrims of performing the Hajj pilgrimage to Makkah by interviewing 1,605 participants after the Hajj. They compared pilgrims with a matched sample who applied to attend, but who lost out in the lottery.⁵ Their findings showed that, among pilgrims, attending the Hajj led to feelings of unity, equality and harmony with fellow Muslims, as well as more favourable attitudes toward women, and increased belief in peace and harmony with adherents of different religions. It also provoked a change from localized to globalized Islamic beliefs and practices, and advance tolerance and peaceful relations.

⁵ The lottery is a method used by Pakistan to allocate visas for the Hajj to ensure fairness.

Clingingsmith et al. (2009) suggested that these changes were probably due to exposure to others and that interaction between different groups could help to build common intentions and identity. In addition, the authors noted, pilgrims accentuated their similarity by wearing a common dress during the experience of Hajj, and adopting a common title, El Hajji, on completion (the most famous example being Malcolm X, who adopted the title 'El-Hajj Malik El-Shabazz' upon returning from Hajj), which may contribute to closer conformity to Universalist Muslim values as opposed to local traditions and customs. This study, however, focused on psychological outcomes; the researchers took no measures and made no observations of interactions with the crowd and so the study does not address the social psychological processes that occur within the Hajj. It was not a study of crowd behaviour or crowd psychology as such.

Other research has measured the effect of performing Hajj on levels of depression (Sohrabi et al., 2013), finding that carrying out the Hajj pilgrimage can have measurable effects on this psychological condition. Surveys were completed by 50 Iranian pilgrims, before and after the pilgrimage to Makkah in 2011. Scores on the Beck Depression Inventory were significantly reduced in the 'after' measures, as compared to 'before', suggesting that the Hajj could decrease the intensity of depression. Such a positive outcome could be explained as a consequence of the thought of being nearer to God, along with other elements such as social support and certainty. In the Hajj gathering there is an exercise of strict self-discipline and control where sacred things are honoured and the lives of even plants and birds are made inviolate and everything lives in safety. In addition, it has a moral, behavioural function: the stations of the Hajj are entrances through which pilgrims pass, coming from all over the globe to the sacred House. In this sacred land the pilgrims meet to live a spiritual life, performing a rite that exposes the exalted value (equality, brotherhood and unity) of Islam (Murad, 2011). Once again, however, this was a study of outcomes, not processes and it did not observe or measure any behaviours of the crowd in the Hajj that might also have contributed to these positive outcomes.

Spiegelman (2005) wrote a theoretical study of the four stages of the pilgrim's journey during the Hajj. Each stage was accompanied by a psychological reading taken primarily from depth

psychology. There were also comparisons to Judaism and Christianity. In Spiegelman's argument, the psychology of the Hajj related to modern, psychological interpretations of traditions and rituals, with particular reference to ego-centrism, sense of the self and desire to reunite with the divine. Spiegelman seemed to suggest that modern problems with addictions and taboo desires could be sublimated through devotional acts, particularly through observance of the Hajj.

Interestingly, as I have indicated, none of these studies of psychological transformations and functions said anything about the most obvious social, psychological feature of the Hajj itself: that it is a *collective* act of worship involving huge crowds. What literature does exist on the nature of the crowd during the Hajj concerns the physical environment in which the Hajj takes place, as well as questions of safety and management (e.g., Helbing, Johansson, & Al-Abideen, 2007). There are some useful ideas within the literature for understanding the Hajj, but no empirical study of the kind I am proposing has been carried out.

As there is virtually no literature on the crowd psychology of the Hajj, we need to begin by looking at existing crowd psychology research and examining how far it can be used to make predictions about crowd behaviour and crowd experience at the Hajj. In doing so, this review will draw from the relevant current literature in three areas: (i) Crowding and spatial behaviour, (ii) Mass emergency behaviour, and (iii) Collective conflict.

In order to demonstrate the appropriateness and relevance of crowd psychology to each of these three areas, I will firstly set out the general approach to crowd psychology to be deployed in the thesis.

3.3 Approach to crowd psychology: The social identity approach

This thesis has adopted the social identity approach to crowd psychology. This includes two theories: social identity and self-categorisation theories. The social identity approach (Tajfel, 1979), and specifically self-categorization theory or SCT (Turner, Hogg, Oakes, Reicher, & Wetherell, 1987) has been used widely by psychologists, most notably by Reicher, to

demonstrate the modes and circumstances that frame people's perceptions of themselves as being participants in a crowd. In contemporary social psychology, the social identity approach is the most commonly used framework employed for understanding crowd behaviour. Therefore, this is the most appropriate area for me to create hypotheses for my research. This section will outline the social identity approach and explore how it has been used to explain basic principles of crowd behaviour. In the sections that follow (that concern different areas of application) I will then add to this by describing some of the relevant research evidence in support of this approach.

3.3.1 Social identity theory

Tajfel & Turner (1979) define social identity as a person's sense of who they are, based on their group membership. Tajfel also argued further that the groups (e.g., social class, gender) to which people embrace that they belong to can be an important source of self-esteem and pride. These groups offer a sensory faculty of societal identity and a cognitive sense of belonging to the wider social world to members. It is a theory of intergroup relations – i.e., of how two groups relate to each other.

According to Reicher, Spears and Haslam (2010) social identity defines who we are as a function of our similarities and differences with others, but is, jointly with others, a foundation for shared social action. Social identity is therefore something that ties us to the social world. It provides the pivot between the private and social order. Within this framework, social science researchers have specified detailed processes that present practical insights into the ways that groups form in society.

Although broad in its outlook, social identity theory is not a theory of group processes. For that purpose self-categorization theory (SCT) was developed.

3.3.2 Self-categorization theory

Social identities are comprised of categorizations of self in contrast to other individuals or groups; this is elaborated in self-categorization theory (SCT; Turner et al., 1987). What self-

categorization theory does have described the conditions under which collections of people will be perceived, or perceive themselves, as a group, and also describe the consequences for the self as a result of perceiving people in group terms (Haslam, 1997). Turner developed the first principles of SCT in 1982 and it posits that there are three strands of self-categorization that are most commonly used. The individual, on a personal level can self-categorize as 'I'. The individual at a higher level has an understanding of a wider social self, and self-categorizes as 'we', and this is in opposition to a salient out-group of other people. At an even higher level, there is self-categorization as 'we humans', and this is in comparison to the out-group of non-humans (an example of this might be 'nature').

One of the results of self-categorization is an emphasis on the differences between in-group and out-group, and a similar reduction of differences between members of the in-group; this was referred to by Turner et al. (1987) as 'depersonalization'. This does not, as might be assumed, represent a loss of self, but rather demonstrates a refiguring of self in terms of the self's relation to the group. Some consequences of depersonalization might include shared perception, adherence to group norms, and, ultimately, in-group bias. Some other theories treat groups either as a function of interaction between people, and identity as part of a cognitive structure, but the theory of SCT radically suggests that groups are psychologically real and identities are not simply based on individual cognition but rather on the broader reality of groups.

3.3.3 SCT in the crowd: Reicher's (1984, 1987) social identity model (SIM)

Reicher (1984a, 1984b, 1987) applied SCT principles to crowds that he defined as groups where people had no formal means of decision-making and were face to face in a novel situation. He argued that people are able to act coherently in crowd events not because of 'contagion', but because they share a common social identity. This shared identity indicates what qualifies as acceptable conduct. This is in radical contrast to earlier, classical theories, which mostly associated collectivity with uncontrolled violence (i.e. due to a regression to instinctive drives or even a pre-existing 'racial unconscious'), in fact, the social identity model acknowledges the inherent variety of crowds by suggesting that different identities have different norms – some aggressive, some peaceful – and that, even where crowds are in conflict, the objects will be only those determined by the social identity of the group.

In studies conducted by Reicher (1984a; 1984b – see below) he concluded that factors that should lead to de-individuation did not always lead to specific behaviours, for example, it is only in the social context that the effects that anonymity has on an individual can be understood. As we have seen (above) de-personalization refers to a change towards a group level of self-categorization, where the self and others are regarded in terms of their group identities. This particular idea stems from SIM, or social identity theory, where the self consists of multiple identities – a personal identity and social identities – that together shape an individual's identity. SCT attempts to describe circumstances under which an individual sees other people and themselves as one coherent group (Turner, 1999).

In sharp contrast to older classical theories of the crowd (such as that of Le Bon and de-individuation theory – see below, 4.5.1, 4.5.4), Reicher's SIM suggests that, in fact, anonymity has consequences for the importance of personal versus social identities. In fact, immersion in a group can enhance the social identity and de-personalize the perception of others, rather than loss of self, and this can lead to more conformity to the in-group stereotype, rather than disinhibition (Reicher et al., 2010). In a group, visual anonymity can obscure interpersonal differences and individual features. An enhanced effort to perceive the group as an entity and to conform occurs as an individual person becomes less visible within a group. If we accept that there is a basis for regarding self and others as members of a group then it follows that anonymity within the group can enhance the shared social identity. However, it is key to remember that anonymity does *not* automatically influence social identity (Lea, Spears, & de Groot, 2001). In fact, in some situations where group membership is clearly identifiable then this may more easily lead to a social identification (e.g. gender, disability, and ethnic group).

3.3.4 Crowds as dynamic intergroup phenomena: The elaborated social identity model

One further model, the Elaborated Social Identity Model (or ESIM) (Reicher, 1996; Drury & Reicher, 1999; Stott & Drury, 1999) draws on social identity theory (Tajfel, 1979) and self-categorization theory (Turner et al., 1987). This theory stresses that in order for collective action to take place it is necessary that group members share (or at least perceive themselves to share) a common social identity. What makes ESIM distinct from the SIM and SCT more

generally is its insistence on intergroup interactions as the catalyst behind crowd processes. As Drury and Reicher (2005) point out, crowd behaviour is often defined by the presence of an out-group, typically the police, and it does not take place in isolation. Crowd behaviour is therefore an intergroup process.

The ESIM was developed specifically to explain how peaceful crowds can become involved in the conflict (see 4.5, below). In order to explain this process, ESIM stresses three key factors: concepts, conditions, and dynamics (Drury & Reicher, 2009).

In terms of *concepts*, the ESIM suggests a far more dynamic relationship between social identity and context than had been previously been suggested by SCT. In this account, *identity* refers to the way an individual understands his or her position in relation to others (and the actions that flow from this position), while *context* is understood in terms of other groups that act as external forces that enable or contain an individual to act in a certain way. In the ESIM, then, ‘context’ is understood in terms of relationships between groups. There is interrelation to the way in which responses occur here – the way in which one group responds to a situation will have a direct influence on the way another group responds to it, which in turn has an influence on the first group.

The *conditions* for conflict are two forms of asymmetry: an asymmetry of *categorical representations* (i.e. Competing constructions of appropriate behaviour, based on social identities) and an asymmetry of *power* (between the crowd and out-groups). A crowd and out-groups may have conflicting understandings of appropriate behaviour, but this contrast can only develop into overt conflict when one group (such as the police) has the power to impose its definitions and constructions of appropriate behaviour on the other (for example when the police charge or ‘kettle’ a crowd).

The *dynamics* of crowd conflict, according to the ESIM, include out-group action being experienced as *illegitimate* by the crowd in-group, and as treating the in-group in what is experienced as an *indiscriminate* fashion. This indiscriminate action unifies and as a result

empowers the crowd in-group, around a newly established norm of conflict (Drury, Reicher & Stott, 2012).

Because, for the ESIM, crowd events are characterized by the way that intergroup relationships occur, it is important to look at the perceptions and actions of the other group, whether they are the police, other emergency services, or any other type of group. This approach to understanding crowd processes is key to the current thesis.

3.3.5 The social identity approach: Key points

What I take from the social identity approach in relation to my own research topic is as follows. Firstly, there is the concept of social identity itself; this suggests that we each have multiple identities, and, further, that group gives us identity. Second, there is the idea that context can affect the level of self-categorization and that ‘depersonalizing’ or self-stereotyping has a number of behavioural consequences (e.g., conformity, adoption of norms, attraction to fellow group members and conflict with out-group members). Thirdly, there is the idea that shared social identity allows people to act together, coherently in novel crowd situations. Finally, based on the ESIM, is the idea that crowd events are intergroup encounters and that we need to look at the (changing) actions and perceptions of both groups to understand crowd behaviour. Before using these ideas to derive my research questions, I will now examine how the previous psychological literature has treated the crowd in three distinct areas and indicate how the social identity approach can be applied to each.

3.4 Crowding and personal space

In discussing psychological and physiological effects of being in a crowd, crowding has traditionally been linked to negative responses and effects, for example, increased feelings of claustrophobia when shopping (Aylott & Mitchell, 1998) and increased stress for commuters (Evans & Wener, 2007). Reviewing the literature, Smith and Mackie (2007) noted that confining many people in a small space could raise blood pressure, increase aggression, and reduce levels of contentment.

Ethnologists, environmentalists and biologists have published a considerable amount of literature on the subject of population density. They argued that high density living causes tension, anxiety, divorce, family conflict, aggressiveness, schizophrenia, neurosis, murder, rape and even war (Freedman, 1975, p. 1). Freedman posed the question that, given the negative consequences associated with high population density, how could people living in such circumstances survive? He points to evidence indicating that high density living (crowding) does not necessarily lead to reduced cooperation and other antisocial effects in humans, and does not automatically produce any sort of mental, physical, or social pathology. On the contrary, individuals who live in high-density populations are just as happy, healthy and dynamic as those from lower density environments (Freedman, 1975, p. 7).

There have been a number of serious incidents as a result of crowding. People have been killed or suffered serious physical injuries at events such as concerts (e.g. a The Who concert in 1979 in which 11 were killed and 23 injured), sporting occasions (e.g. The 1989 FA Cup semi-final at Hillsborough, Sheffield, in which 96 fans were killed and 766 injured), and other gatherings (e.g. The 21 deaths and more than 500 injuries caused by crushing at the 2010 Duisburg Love Parade). There have been investigations and changes in policies to minimize the risks; however, despite the risks and negative effects of crowding, many people enjoy being in crowded spaces and feeling the close proximity to strangers, for example, at nightclubs and religious festivals (Cassidy, Hopkins, Levine, Pandey, Reicher, & Singh, 2007). The architectural design of spaces can influence how individuals feel about proximity to others (Chan, 1999). Thus, the idea that crowding can be regarded as enjoyable has emerged as a new line of inquiry and researchers are examining the conditions under which crowding has negative versus positive effects.

3.4.1 The ‘psychological crowd’

The term ‘psychological crowd’ goes back to the late nineteenth century, an epoch when there was prevailing concern with the dangers of rioting. As a consequence, there were widespread studies and theories regarding the behaviour of the people within the crowd and the psychological causes and effects of crowd involvement. The most salient of these studies were Gustave Le Bon’s *The Crowd: A Study of the Popular Mind* (1895). Le Bon suggested that when people become part of a crowd, they lose their individuality, autonomy and

personal judgment and morality, becoming caught up in the crowd's collective and often irrational influence. Since then, a different concept of the 'psychological crowd' has been developed and current researchers in the field of crowd behaviours (e.g., Reicher & Drury, 2011) distinguished between a 'physical crowd' or aggregate – i.e., a group of people in the same location of a mall, each with their own personal identity – and a 'psychological crowd' – i.e., a group of people united by a common social identity as part members of a particular category.

According to this view, Reicher & Drury (2011) indicated that a physical gathering is different than a psychological crowd. The authors explained that a gathering may contain no psychological crowds or it may constitute a single psychological crowd, or even several psychological crowds (i.e., if, fans of different football teams were together in the same event). Sometimes, events transform a gathering into a psychological crowd. In the same study Reicher & Drury specified three types of psychological transformations that occur. First, A cognitive transformation (Tajfel, 1978; Tajfel & Turner, 1979) is the shift from thinking of themselves in terms of personal identity to social identity (a shift in identity rather than a loss of identity). As a consequence, the authors explained that, behaviour becomes more socially meaningful because it reflects a social meaning system of social identity. This explains the patterning that others have noted in their studies of crowds. In urban uprisings (Reicher, 1984), football crowds (Stott & Reicher, 1998), environmental protests (Drury & Reicher, 2000). Second, psychological transformation is a relational transformation is the shift in societal relations when people redefine themselves, to the same category as other members as they become part of a collective self. They argue that there are two facets to this: social validation and social solidarity that lead to the transformation of social relations in the crowd that creates the conditions for effective coordinated action. In more detail the authors explained that social validation occurs when those who share a common identity, seek agreement with each other, and trust and respect each other have their views validated as they share a common perspective and experience with others. The shift in social solidarity was illustrated by their study of crowd behaviour among those affected by the London Underground bombings of July 7th, 2005 (Drury, Cocking, & Reicher, 2009). When the bombs exploded, common fate led people to come together both psychologically and behaviourally, to see themselves as one, to help and comfort others. Even where this put them in personal danger, they exposed themselves to risk in defending fellow crowd strangers

against outside attack. The third psychological transformation is an affective transformation: here the authors' argument was that the cognitive and relational transformations help explain the emotional experience that takes place for participants in crowd events. It is the ability of crowds to realize (marginalized) social identities that make crowds such affective, passionate affairs and which make people feel so attached to the groups that these crowds represent (Reicher & Drury, 2011).

3.4.2 What is crowding?

Crowding is a multifaceted term that refers to the packing of people into a small space that occurs in places such as households, public spaces, and wider populations (Smith & Mackie, 2007). Some definitions of crowding highlight physical density, while others define it in terms of how people experience such density. Freedman (1975) argued that crowding referred to physical density, which could be objectively observed by measuring the amount of space that each person or group has in a given setting. However, crowding has also been defined as a psychological state that is linked to a person being exposed to a dense environment (Cox, Paulus, & McCain, 1984). Novelli (2010) addressed both definitions of the term, and emphasized that it does not necessarily have to be a negative experience. Thus, the presence of other people can be experienced as a joy and something that a person seeks and desires.

3.4.3 Animal Studies

Animal studies were among the first studies used to test the effects of crowding. Some of these studies suggest that crowded conditions affect behaviour in a negative way. Some of the most frequently cited studies are those of Calhoun (1962; 1970). Calhoun conducted studies on the domesticated Norway rat. The rats were allowed to breed freely and this inevitably increased their crowd density. As the density increased, so did the social pathology. Calhoun referred to the phenomenon of the rats grouping together as 'pathological togetherness' (Calhoun, 1962, p. 139). He noted that infant mortality was high and adult males displayed abnormal sexual activity and cannibalism. He categorized these behaviours as a 'behavioral sink' (Calhoun, 1962, p. 139). Calhoun argued that these pathological behaviours served to limit the rat population, not simply as a temporary measure, but as a long-lasting effect. When two healthy female rats and four healthy male rats were removed from the situation, they failed to reproduce normally and their offspring didn't survive. Therefore, he argued that this

was evidence that populations exposed to high density may eventually become extinct (Calhoun, 1962).

It is interesting to note that similar problems have also been observed with other groups of animals such as monkeys and baboons. Elton and Anderson (1977) imposed space restrictions onto a group of baboons and that led to intragroup aggressive displays and vulnerable ranking members of the group became particularly withdrawn from the group. ‘Social disintegration’, as well as individual pathology, was the end result of crowding. However, it was difficult to draw any clear conclusions due to limitations of the research. These limitations included the possibility that some of the observed effects were due to the fact that the animals were exposed to new environments, or that the effects could have been due to the research variables or the experimental design, or because the animals were exposed to strangers: any of these could have been the underlying reasons for the changes in behaviour rather than the high density (de Waal, Aureli, & Judge, 2000). In addition, certain pro-social behaviours that reduced aggression also increase when the density increases, for example the amount of grooming between animals (Paoli, Tacconi, Borgognini, Tarli, & Palagi, 2007).

Overall, the results from animal studies suggest that the relationship between density and behaviour is multifaceted. Higher density alone is not necessarily negative. Rather, the effects of high density are mediated by other social conditions (Freedman, 1975). These social conditions will be addressed in this thesis.

3.4.4 Urban density studies

Many problems have been associated with high density in urban settings such as increased rates of crime and juvenile delinquency (Freedman, Heshka, & Levy, 1975). A problem with many studies of crowding is a reliance on correlational data, so therefore it is not possible to draw conclusions regarding the character of the relationship. Correlational data means that it is not possible to conclude if one variable is the underlying cause of a change in the other variable. Thus, other factors such as urban design and quality of housing may affect the level of psychological distress that a person experiences in a high-density environment (Chan, 1999). A person may feel less inclined to withdraw from household members if they have the possibility to be separated from the members in the household despite a high level of density.

The availability of a choice to be alone may strengthen the bond between the people living in the household. Consequently, the underlying problem may not be the density per se, instead when the density leads to people withdrawing from other members of the group or household, social relationships break down and this causes problems.

3.4.5 Laboratory experimental studies

There have been several laboratory experimental studies that have shed light on crowd density behaviours. In a study by Aiello, Thompson, & Brodzinsky (1983), participants reported the highest stress and discomfort level in a high-density condition. Interestingly, however, those participants in high-density conditions demonstrated greater pleasure when shown comedy clips than did participants who listened to the same clips in less crowded environments. This finding hints at the possible potential that crowded environments could facilitate positive emotions. Similarly, Schultz-Gambard (1977) found that despite high density leading participants to feel more stressed, when participants rated the room as more unpleasant and less comfortable, they simultaneously felt more positive towards other crowd members when they felt they belonged to a common group. This idea will be explored extensively in the thesis in the chapters that follow.

In another study by Griffin and Veitch, which was conducted in the laboratory, participants exposed to high density reported higher levels of negative affect, evaluated the room more negatively, and rated the experimental procedure as less pleasant, less worthy, and less interesting, than participants exposed to low density (Griffith & Veitch, 1971). Research has likewise shown that experimentally manipulated density can result in decreases in both altruism and interpersonal attraction. Veitch and Arkkelin (1995), and Sherrod (1974) showed that while crowding did not immediately impact on job performance, participants who had previously been exposed to crowding were more likely to display frustration on a subsequent (non-crowded) task. These studies have tested the effect that crowding has on negative mood. In contrast, Prerost (1981) found that rather than contributing to an increase in negative affect, crowding inhibited participants' positive mood.

3.4.6 Prison studies

A considerable amount of literature has been published on prison crowding. An increase in jail populations raises questions about the potential for increased violence as jails become crowded. Certainly, prisons provide an ideal backdrop for research into institutional crowding and more specifically into the density-pathology relationship when escape is not possible.

In a cross-institutional study, Cox, Paulus and McCain (1984) found that population increases in prisons that had not increased the size of their facilities were then directly connected with increases in a wide range of negative outcomes including disciplinary problems, death rates, suicide rates, and commitment to psychiatric units. The opposite pattern emerged when prisons saw their populations decrease. Like many of the researchers who investigated the impact of density in animals, Cox et al. (1984) attributed these pathological effects of the frequent social interactions and subsequent over-stimulation and tension that come with increased density. This stands in contrast to the social withdrawal explanation that is put forward in the household crowding literature. All the same, this discrepancy makes sense as the nature of social relations in prisons and households might be required to be qualitatively different – thus, social interaction might be a source of support in a home environment, such as a university hall of residence but cause distress in a hostile prison environment (Novelli, 2010).

Negative effects of crowding in prisons have also emerged when studies have focused on inmates within institutions as opposed to making between-institution comparisons. D'Atri (1975) carried out a study on inmates in three U.S. prisons. In each of the prisons, inmates were housed in either small cells (single or two-person cells) or large dormitories. The convicts in the student residences were found to experience higher blood pressure than those in the smaller cells – a finding attributed to the stress of 'crowded' living (see also Paulus, McCain & Cox, 1978). D'Atri, Fitzgerald, Kasl and Ostfel (1981) expanded on this finding with a longitudinal analysis. It was found that inmates who moved from single-occupancy cells to multiple-occupancy dormitories experienced a rise in blood pressure per unit area, whereas the blood pressure of inmates who stayed in single cells remained the same. This added further support to the hypothesis that these physiological effects were due to the crowded environments. In addition to physiological changes such as raised blood pressure,

there was also evidence to indicate that crowding might be connected to a range of other pathological effects. One striking example was that general illness complaints were more frequent for participants housed in dorm rooms as opposed to single cells (McCain, Cox, and Paulus, 1976), and for those housed in the more densely populated of two prisons (Wener & Keys, 1988); this could be indicative of differences in factual or imagined illness.

Franklin, Franklin and Pratt (2006) meta-analysed 16 such prison studies and concluded that prison crowding does not inevitably lead to inmate misconduct, whilst Gaes (1994) claimed in a literature review that evidence of a direct link between crowding and inmate violence is weak, and suggested that it seems more likely that other variables, such as prison management practices, could mediate any density effects.

Based on the evidence that has been discussed so far, it seems that while on the one hand, there is evidence of a relationship between crowding and pathology, including illness, stress and anti-social behaviour, on the other hand there is evidence to suggest that this is by no means an inevitable outcome.

3.4.7 Personal space

From the previous section, it appears that research findings are inconsistent, with varying responses to crowding. Therefore, exposure to crowding can evoke variable responses. This section will present the concept of personal space as one effort to explain this variation (e.g., Evans & Wener, 2007; Freedman, 1975; Worchel & Teddlie, 1976; Worchel & Yohai, 1979). Personal space was originally studied during the 1950s in relation to territoriality (e.g. Hediger, 1955). However, the concept was later developed to incorporate human social conduct, and was described by Sommer (1969, p. 26) as: "an area with invisible boundaries surrounding a person's body into which intruders may not come". According to Novelli (2010, p. 44), 'The logic behind applying the concept of personal space to crowding is that crowding will be experienced negatively when (a) a perceiver becomes negatively aroused by a personal space intrusion, and then (b) attributes that arousal to others in the environment.' (e.g. Worchel & Teddlie, 1976). Goffman (1971, p. 30) summed this up in his description of personal space as 'the space surrounding an individual where within which an entering other

cause the individual to feel encroached upon, leading him to show displeasure and sometimes to withdraw.’

Research has suggested various factors that might contribute to whether an individual is comfortable within a dense crowd, including culture, location, and gender. One researcher looked who into this in detail, Leibman (1970, p. 220, cited in Novelli, Drury, & Reicher, 2010, p. 224), noted that people are more tolerant of reduced personal space when surrounded by ‘one’s own kind’. However, this is a vague term that begs the question – what constitutes ‘one’s own kind’? (Novelli, Drury, & Reicher, 2010). Self-categorization theory attempts to provide an answer.

3.4.8 Applying self-categorization theory

We have seen that one important feature of the evidence in crowding that the different theories and methodological approaches have failed to make sense of is the fact of variability in responses to crowding.

Novelli (2010) suggests that SCT can be used to understand the diversity of responses to crowding, i.e. the conditions under which identical conditions of crowding can be enjoyed, and when it is experienced as something aversive, by the same person. SCT defines the self as existing at both group or collective and personal levels. This view is a step away from some of the assumptions in the ‘personal space’ literature. When individuals see themselves as sharing social identity, other group members are valued as an extension of their own psychological self and they value the closeness of other people. In contrast, when an individual is focusing on his or her personal identity, intrusion into one’s space is not desired and it is stressful when personal boundaries are crossed (Novelli, 2010). Likewise, if the people self-define at the group level, but the other people are seen as members of different groups, there is again intrusion.

Novelli, Drury and Reicher (2010) conducted two experiments using minimal groups (Tajfel, Flament, Billig, & Bundy, 1971) to investigate the impact of group relations on personal space. As hypothesized, their findings supported a self-categorization account of personal

space and crowding, and built on the research of Turner et al. (1987) to make sense of our experiences of closeness to others. In the first experiment, participants were asked to arrange chairs for themselves and another participant who was yet to arrive, and were either told that this other participant was a member of their own group (the intragroup condition), a member of the other group (the intergroup condition), or were not informed of the other participant's identity (the interpersonal condition). Those in the intragroup condition placed the chairs significantly closer (i.e., they sought less personal space) than those in the other two conditions (between which there was no significant difference). The findings were replicated in a subsequent study with a higher n and an improved experimental design. The researchers concluded that preferred distance is not a constant, but instead is a variable function of group relations, and also noted that while such effects are noticeable even within minimal groups, one would expect them to be even more pronounced within 'meaningful' groups. Field research on actual crowds, using a survey methodology, has validated these conclusions. Novelli, Drury, Reicher and Stott (2013) surveyed participants at two crowd events (a music event and a demonstration march). Among participants at the music event, identification with the crowd predicted feeling less crowded, and also moderated the relation between feeling less crowded and positive emotion. For those at the demonstration, identification with the crowd predicted central (most dense) location, and the positive relationship between identification and positive emotion was mediated by location.

To sum up, SCT suggests that crowding contributes to a person experiencing frustration when he or she is focusing on personal identity; however, when shared social identity is salient, crowding is not regarded as a problem (Novelli, 2010).

3.4.9 Conclusion

This part of Chapter 3 has provided an overview of the differing approaches within the literature to the study of crowding and personal space.

While traditional perspectives have focused on the negative effects of crowding, more recent studies, including observations of humans in various settings, including prisons and high-density housing, suggest that crowding can be readily accepted or even experienced positively, according to the variables operating in a given setting. Self-categorization theory

has added to the understanding of how the salience of social identity over personal identity can lead to crowd membership being viewed as a positive experience, even when personal space is severely limited.

Nevertheless, further research is necessary in order to understand the nature of the relationship between personal identity, social identity, environmental conditions, and perceptions of crowdedness. To better understand the psychological processes at work within the Hajj crowd, we need to examine the conditions under which crowdedness is experienced positively or negatively in densely packed crowd, which is one of the aims of the present research.

3.5 Mass Emergency Behaviour

Research regarding crowd behaviour during emergency situations has found differences in responses during emergency scenarios: some crowds become display antisocial behaviour, or behaviour that has been termed ‘panic’, whereas others respond normally, responding to dangerous situations by supporting other people, regardless of the fact that they place their own life at risk (Drury, Cocking, & Reicher, 2009).

A considerable amount of literature has addressed mass emergency behaviour, with three major types of approaches informing the research (e.g., Drury & Cocking, 2007; Cocking & Drury, 2008). These are: theories of mass panic; affiliation and normative approaches; and the social identity approach, which is based on SCT. I will discuss each in turn.

3.5.1 Theories of mass panic and critique

The first attempt to explain crowd behaviour when faced with threat or disaster goes back over 100 years ago when crowd science first emerged. This theory is based on Le Bon’s (1908) conceptualization of the crowd as emotional and less intelligent than individuals acting alone. The term ‘panic’ is commonly used in popular discourse as well as in the academic literature of different professional and scientific fields. In this context, ‘panic’ refers to ‘inappropriate (or excessive) fear and/or flight and highly intense fear and/or flight’ (Mawson, 2005, p. 96).

Mass panic is a frequently referenced cultural discourse that proposes how people will respond to seriously risky and stressful events. Panic is commonly connected to the social response to a disaster (Dynes, 2003), although the conception of ‘panic’ is diverse both in the scientific literature and in popular culture. The belief that crowds will react to adverse situations with mass panic is also often held by those charged with coordinating events and responding to crisis (Drury, Novelli & Stott, 2013). Fritz and Williams (1957) and Quarantelli (1954, pp. 267-275) both identified the possibility of the occurrence of panic when (a) people perceive an immediate, severe danger, (b) there are limited escape routes from the risk, (c) they believe they must escape quickly and (d) there is a lack of communication to keep them informed of the risk situation.

The traditional concept of mass panic argues that, when a crowd is faced with an emergency situation or disaster, social connections among crowd members break down (Quarantelli, 1954; Strauss, 1944) resulting in careless, unconscious, irrational, over-emotional and self-centred behaviour (Schultz, 1964), and selfish, disorganized and dangerous behaviour (Smelser, 1962). The crowd is said to be particularly susceptible to panic because of contagion (Ross, 1908, p. 73; McDougall, 1920, pp. 36-38).

Reviews of behaviour in emergencies (Drury & Cocking, 2007) showed that the actual behaviour of crowds in reaction to disasters conflict with the anticipations of the panic model in at least three ways. (1) Unsociable or selfish behaviours are rare, even when the context fits all the prerequisites for panic – if these behaviours take place, they remain localized in time and place, and do not spread to others in the same situation. (2) Evacuations are often organized and orderly, with people queuing to get away (rather than stampeding), despite the clear threat of destruction. (3) And co-operation and helping behaviour are common and crowd behaviour is often socially structured. Therefore, contemporary theory tries to account for this prevalence of social, co-operative behaviour.

3.5.2 Affiliation and normative approaches and critique

This section will briefly outline two types of theories that have been used to explain cooperation within emerging crowds: The affiliation approach and the normative approach.

The affiliation approach (Mawson, 2005) proposes that, when threatened, rather than display selfish tendencies and irrational panic (as argued by mass panic theory), people seek familiarity as a generic reaction to collective threat. Data from several studies on mass emergency behaviour have found that family members try to remain together, evacuate as a group and are concerned with holding on to life collectively (Sime, 1983; Shacham & Lahad, 2004). Mawson suggests that whether crowd members display affiliation or flight behaviours is influenced not only by the level of risk, but also by the social context; i.e. there is a need for familiarity; people seek the familiar, which calms them down and prevents them simply fleeing the danger. In emergency situations the typical outcome is concentrated affiliation behaviour, and when flight does occur, it is out of the ordinary.

The normative model (Johnson, 1987; 1988; Aguirre, 2005) argues that human behaviour in emergencies is structured by everyday social roles and norms. Thus, there is conformity to the social, organizational and place-related rules of everyday roles and responsibility (e.g., gender) and retention of small-group social structure (Drury, 2012).

Sime (1983), Johnson (1987), Cornwell (2003), and Drury (2007, 2009 & 2011) have all reported on fatal crashes that have occurred during mass emergency events, showing that the crowd behaved mostly in an altruistic, orderly, non-competitive way, despite news reported 'panic' and selfish behaviours. It can also be seen that results of mass emergency and evacuation studies have found that social groups (e.g., family groups) remain intact in an emergency. Moreover, people put themselves at risk of injury and even death in their search for other people who are dear to them.

According to Drury and Cocking (2007), despite the fact that these models are more compliant with reality than 'mass panic' theories, they have come to be criticized. Certainly, they failed to explain the altruistic and helping behaviour (and sometimes self-sacrifice) often

observed in large crowds, between people who did not have any prior connection. With regard to purely normative explanations, Drury, Cocking and Reicher (2009b) questioned how 'normative' it was to risk one's life to help strangers, as has been documented in numerous emergency scenarios. These authors argued that, from a social psychological perspective, it has not been specified under which conditions particular norms operate in emergencies and disasters.

A study of the London bombings on July 7, 2005 by Drury et al. (2009b) analysed interviews with 90 survivors and 56 witnesses. This study set out with the aim of analysing survivors' actions and experiences in order to determine the relative prevalence of mass behaviours associated with either psychosocial vulnerability (e.g. mass panic, 'selfishness') or collective resilience (e.g. helping others, unity). The findings suggested that 'selfish' behaviours were rare and that mutual helping was more common. Furthermore, the authors claimed that 'there is evidence for (a) a perceived continued danger of death after the explosions; (b) a sense of unity amongst at least some survivors, arising from this perceived danger; (c) a link between this sense of unity and helping; and (d) risk-taking to help strangers.' (Drury et al., 2009, p. 66). They concluded that these facts provide evidence of 'collective resilience', referring to self-categorization theory. In this context, a common fate entails a redefinition of self (from 'me' to 'us') which is a basis for shared social identity and hence enhanced concern for others in the crowd, even strangers (Drury et al., 2009, p. 66). The next section describes how self-categorization theory has been applied to explain cooperative behaviour in emergency situations

3.5.3 Applying self-categorization theory to mass emergencies

The social identity approach and self-categorization theory approach to mass emergencies are proposed to afford the ground for understanding collective sociality in mass emergency behaviour (Drury et al., 2009a). As we have seen (section 3.3.6), a basic assumption of self-categorization theory is that shared social identity influences social behaviour (Turner, 1987). Each social identity is based on categorization process; who 'we' are is determined by our understanding of our group and on the context, particularly in contrast with the relevant 'other'. The benefit of this approach is that it makes sense of collective behaviour in situations where people do not know all the members of the group (e.g., in cases of national

identity and war), where people will act according to their category membership even if they do not know or necessarily like all their associate in-group members as individuals.

According to Novelli, Drury, Reicher and Stott, (2013) the social identity approach and self-categorization theory have been used to explain a varied range of group behaviour, with the finding that people are attracted to their in-groups and social categories irrespective of the individual members; greater output occurs amongst work groups who have a shared identity in contrast to those who do not; people demonstrate greater commitment to collective action the more they identify with their group; there is greater helping of fellow category members than of non-members; greater leadership and social influence occurs where the source is seen as a typical rather than an atypical group member; higher expectations of mutual aid occur amongst people after defining themselves as group members than before; and the more that people identify with the group, the more they are able to access group-based sources of support and reduce their stress levels. It can also be seen that communal experience of risk or emergency may convert particular individuals into a social group with a shared social identity; this shared social identity provides crowd members with a sense of unity and expectations of mutual support and explains helping behaviours observed amongst unfamiliar crowd members (Cocking, Drury, & Reicher, 2009).

The self-categorization approach has been implemented in mass emergencies studies (e.g., Drury & Cocking, 2007; Cocking & Drury, 2008). These studies provided explanations of crowd behaviour in such events (e.g., cooperation and coordination behaviour and helping in emergency situations) and argue that the common experience of threat of emergency can transform a physical crowd into a psychological crowd. Qualitative and descriptive quantitative analyses were run on interviews with 21 survivors of 11 emergencies (e.g., the sinking of the Jupiter, 1988, and Oceanos, 1991; Harrods bomb, 1983; Fatboy Slim Brighton beach party 2002; Ghana football stadium crush, 2001; and Hillsborough crush, 1989) comparing high- versus low-identification emergency mass emergency survivors. The analysis generally supported the two claims (1) that shared identity in an emergency crowd enhances expressions of solidarity and reduces personally selfish behaviour and (2) that such a shared identity can emerge from the shared experience of the emergency itself, creating new bonds between people (Drury et al., 2009a).

The idea that shared social identity enhanced helping among strangers in an emergency situation was tested in a virtual reality simulation experiment (Drury, Cocking et al. 2009). The technology was argued to be suited to the simulation study of mass evacuation behaviour, because of the practical and ethical constraints in researching this subject. This work described three studies in which a novel virtual reality paradigm was utilized, in which participants had to run from a burning underground rail station. Study 1 was carried out in an immersion laboratory. An immersion laboratory is an artificial environment created to ensure that participants who are in the environment will have their physical and sensory experiences altered, by displaying images on the surrounding walls, not just a computer screen. In an immersion laboratory, awareness of the physical self is transformed through the artificial environment. This environment can evoke partial or complete suspension of disbelief in participants and this enables realistic reactions to stimuli encountered in the virtual or artistically produced environment. Study 1 demonstrated that collective identification in the crowd was associated with helping behaviour. In Study 2, high-identification participants were more helpful and exhibited less anti-social behaviour than did low-identification participants. The group size and identification were experimentally manipulated, and similar results were obtained in the case of Study 3. These results therefore supported the idea that (emergent) collective identity motivates solidarity with strangers.

3.5.4 Conclusions

One of the significant findings by Drury, Novelli, and Stott (2013b) has shown that there was a convergence of the perspectives of disaster management offices, and public health organizations, (1) that mass emergency behaviour is typically characterized by resilience (coordination and cooperation amongst survivors); (2) that resilience is a good thing; and (3) that it can be helped by the right emergency management activities – or undermined by improper ones. This view was supported by empirical research. A careful reexamination of the mass emergency behaviour literature, empirical social science studies and disaster research yields a clear impression of the fact that the crowd can be a source of strength to its participants through the presence and salience of shared identity (Drury & Winter, 2004). Therefore, the evidence suggests that collective behaviour in emergency situations has been often prosocial and adapted and characterized by cooperation among survivors (Aguirre,

Torres, Gill, & Hotchkiss, 2011; Donald & Canter, 1992; Fritz & Williams, 1957; Johnson, 1987; Solnit, 2009).

Group membership can provide the mutual support, coordinated activity and other features of resilience that enable people to cope psychologically with mass emergencies and disasters; moreover, pre-existing social bonds are not necessary for cooperative behaviour, as individuals in the crowd tend to come together not only psychologically but also behavioural merely by virtue of sharing a ‘common fate’ in relation to the emergency or disaster.

A shared social identity is the basis of collective behaviour, and can explain social support and coping, survival and wellbeing in even the most extreme scenarios. The social identity (SI) model suggests that membership of a psychological crowd (see section 3.3.1) can be beneficial in emergencies, rather than being part of the ‘problematic’ crowd (see section 3.3.1). The crowd can be seen as a source of strength and part of a ‘social cure’ (Jetten, Haslam, & Haslam, 2012) to both the tragedy and its poor management (Drury, 2012). This is in stark contrast to earlier theories of mass emergency behaviour that centred on the notion of ‘panic’ and suggested that crowds behave irrationally when threatened by adverse circumstances.

The relevance of this material and these conclusions of my research is that, as I have already described in Chapter two, the Hajj has been beset by accidents and mass tragedies in the past. These past disasters have affected some of the participants in my research. Also, the role of social identity as a basis of support applies to everyday stresses, such as the levels of density found during the days of the Hajj.

3.6 Crowd Conflict

The aim of this section is to give an outline of psychological theories of crowd conflict, how they have evolved significantly since the early, classical models, and to determine the relevance and usefulness of this work for my own study. Crowd psychology as a discipline has always been preoccupied with violence, and much of the theoretical work and research is on this topic. Many of the themes we will see in this section echo themes we have already

seen in the crowding and emergency literature, but it should be noted that conflict was the original area of study that has subsequently informed other areas.

3.6.1 Le Bon in Context

Gustave Le Bon was an eminent psychologist and sociologist in his time. Regardless of his importance as an early theorist of crowd behaviour, his theories are now discredited in favour of more recent theories, in particular the elaborated social identity model of crowd behaviour. In spite of that, classical models including Le Bon's are still considered in this section, so that the progress of academic thinking can be shown.

Le Bon's main idea was that being in a crowd transforms an individual (Le Bon, 1895). He argued that there is a 'group mind', which is based on a 'racial unconscious' and formed spontaneously when people become part of crowds. The 'group mind' influences an individual's thoughts, emotions, and actions, and it is different from an individual's mind. Le Bon proposed four key concepts about the crowd: submergence (loss of self), suggestibility (vulnerability to influence), the 'racial unconscious' (the source of primal, instinctual drives that come to the fore in crowd situations), and contagion (the spread of behaviour and sentiments among crowd members).

According to Le Bon (1895), being in a crowd increases the capacity for violence and lowers the intellectual capacity of the individual. Crowds are unconscious and this unconsciousness is their major strength; however, an individual's lack of responsibility for their actions is a problem and the larger the crowd, the more certain a person becomes that they are right. Le Bon's dim view of the crowd can be seen in the following, oft-quoted assertion:

by the mere fact that he forms part of an organized crowd, a man descends several rungs in the ladder of civilization. Isolated, he may be a cultivated individual; in a crowd he is a barbarian – that is, a creature acting by instinct. (Le Bon, 1895/1968, p. 32).

Le Bon suggested that leaders should use his ideas to gain the power and control of crowds, and his work was claimed to have influenced political leaders and dictators of his time (Le

Bon, 1895). Le Bon regarded the sense of power among crowd members as an illusion and the crowd was described as a conservative force (Drury & Reicher, 2009). Destruction rather than progress is the main characteristic of the achievements of the crowd.

There are several problems with Le Bon's description of crowd members: a crowd may not necessarily be homogeneous; rather the members differ in how willing they are to deviate from norms (Brown, 1986). In addition, studies suggest that a crowd acts according to the thoughts and intentions of the members and often the members try to support and help each other (McPhail, 1991). Le Bon analysed and described the emotional character of being in a crowd; however, he lacked tools to analyse situations and behaviour. His theory does not explain the behaviour of different types of crowds, for example peaceful crowds. Furthermore, Le Bon relied on secondary material rather than first-hand observation or experimentation, and was highly selective in the sources that he chose to support his theories.

The most basic problem with Le Bon's theories is that he predicted mindless violence as a genetic tendency, a prediction that is not supported by evidence available from subsequent empirical studies. By examining crowd behaviour in isolation, removed from its social context, Le Bon neglected the particular motivations and pressures; internal and external that influence a crowd's actions (Reicher, 1996). Nevertheless, it should be noted that Le Bon was writing at a time when the prevailing view of crowds was that they were a problem. His negative view of collective behaviour can therefore be viewed, at least partly, as a product of contemporary prejudices.

3.6.2 Sigmund Freud

Le Bon's thoughts on the psychology of the crowd were considered highly relevant to the society of his day, and were of vital importance in the early age of group psychology: Sigmund Freud's *Massenpsychologie und Ich-Analyse* (1921; English translation *Group Psychology and the Analysis of the Ego*, 1922) was based in large part on Le Bon's work. According to Freud, when an individual became a member of the crowd, this served to unlock their 'unconscious mind'. The super-ego, or moral centre of consciousness, is displaced by the urgings of the charismatic crowd leader. As a result of individuals' deep-hidden primitive instincts to regress to primal behaviours when in a crowd, the leader was able to release

unconscious and uncivilized impulses in the crowd members from the id part of their psyche – akin to a person's instinctual drive. Freud stated that one must rebel against the leader (re-instate the individual morality) in order to escape from it.

As with Le Bon's ideas, Freud's theory has been criticized for its conception of all crowd behaviours as abnormal, pathological and instinctual, with members' actions controlled by the innate emotional forces of the id, ego and super-ego. Consequently, since behaviour is beyond their conscious control, individuals are absolved of their personal responsibility and, hence, anti-social behaviour is rendered inevitable (e.g., Hogg & Vaughan, 2002).

3.6.3 Allport

Floyd Allport rejected the idea of a group mind, suggesting that the concept of mind could not be separated from an individual. According to Allport (1924, p. 295), 'the individual in the crowd behaves just as he would behave alone only more so.' The theory was based upon instinct and learning theory and he reduced crowd behaviour to a study of individual behaviour and motivation. Allport's convergence theory suggested that like-minded people are drawn together and that people in crowds express their drives according to their previous conditioning histories. In contrast to Le Bon, he argued that crowd members do not behave according to some mysterious force (the group mind); rather crowd members behave in ways that have an individual biological origin. Preexisting tendencies shape and influence collective behaviours – this line of thinking leads to ideas such as rioters being considered criminals, social deviants, belonging to a certain underclass, or ethnic group (e.g., US Riot Commission, 1968). However, like Le Bon, he predicted mindless violence as generic crowd behaviour.

Overall, research does not support Allport's suggestions; for example, riots are less likely to take place in groups that are more marginal. Research conducted by Tilly, Tilly, & Tilly (1975) found that social disorganization was correlated with low levels of rioting. In addition, they found that riots took place in areas that were stable and where a social network could support the rioters. Despite the difference in the theories suggested by Le Bon and Allport, several similarities can be detected. Both theories suggest that behaviours are linked to fixed personal characteristics and tendencies to act in a certain way, and both Le Bon and Allport

remove crowd actions from their social context (Reicher, 1996). Both theories neglect the behaviour of others outside the crowd (e.g. the police) in the explanation of crowd behaviour.

3.6.4 De-individuation

De-individuation theory is a modern equivalent of Le Bon's theory, in that it rests on the assumption that being in a crowd can lead to loss of self. It was developed to explain the observation that when a person is part of a crowd, they become capable of carrying out acts that rational individuals would normally not approve of or take part in (Reicher, 2001). De-individuation suggests that if the conditions are favourable, an individual will experience a lowering of self-regulation of their feelings and behaviours. Moreover, they will experience less powerful control mechanisms based on feelings such as guilt, fear, and shame. Thus, there will be a lowered threshold for anti-social behaviour and an individual may be more prone to engage in violent and anti-social activities. Several studies seemed to identify anonymity as a de-individuation factor – for example, in an experiment individuals showed more hostility towards their parents the more anonymous they felt (Festinger, Pepitone, & Newcomb, 1952).

The results of other studies, however, have argued against the theory of de-individuation. The literature fails to look at the context of behaviour or to distinguish anonymity when in a group from anonymity when isolated (Reicher, 1984b). In certain cases anonymity may lead to lowered aggression (Johnson & Downing, 1979; Lea, Spears & de Groot, 2001).

The de-individuation approach to crowds assumes that a person has a single identity and a set of standards that underlie all their behaviour, yet a person's character is seldom fixed (Reicher, 2001). In addition, it is assumed that being part of a group, especially a large group or crowd, will lead to lowering of personal standards, which may result in anti-social behaviour. This assumption is not supported by most of the experimental studies. Postmes and Spears (1998) carried out a meta-analysis of the available empirical evidence, finding that effects of anonymity were explained more fully by situation-specific norms, rather than abandonment of general social rules.

3.6.5 Emergent norm theory

Turner and Killian (1987) suggested that to understand crowd behaviour, it was necessary to examine the group's norms rather than explore an individual's behaviour. This theory was an attempt to include the social aspects of group behaviour. They argued that crowd behaviour was not irrational, instead it was based upon social norms – heterogeneous actors with different backgrounds come together, and crises force them to change their perceptions of the situation (Aguirre, Wenger, & Vigo, 1998). A crowd is composed of people with mixed interests and motives, and crowds start as a collective, which may have vague and undefined norms. A norm is not a precise rule; rather, the group decides how to act depending upon 'an emergent revised definition of the situation' (Aguirre et al., 1998, p. 302).

According to this approach, norms develop through several interactional processes. During the initial phase of an event or situation, crowd members engage in a process termed 'milling', during which time they attempt to make sense of the situation in which they find themselves. When information is not freely available, rumour may contribute to the emergence of norms within the crowd. Also significant during the process of milling are the actions of 'keynoters' – prominent members of the crowd, who play an important role in establishing the norms that will come to define the crowd. For example, if one such prominent person decides to break a window, other members of the crowd may decide to join in.

A criticism of the emergent norm theory is that collective behaviour sometimes emerges and changes very quickly, and an extended period of interaction may not always be necessary (Reicher, 1984). Reicher (1996) suggests that emergent norm theory has an individualistic slant and that this is inadequate for explaining cultural variations in crowd norms. Furthermore, in reality, crowds are rarely without pre-existing norms, as they will have gathered for some specific purpose (Reicher, 1987). Nevertheless, the theory is an advance on previous formulations of crowd behaviour, in that it stresses the importance of crowd norms and acknowledges the instructional nature of crowd processes.

3.6.6 Gaming approach

Game theory offers an individualistic approach to explain crowd behaviour. Berk's model of crowd action consisted of five steps, from a crowd member seeking information to finally decide a suitable course of action (Berk, 1974). The collected information was used to make decisions regarding possible scenarios and a person lists his or her options and then he or she determines their preferred order of the probable outcomes of the actions. In game theory the probability of an act is determined by a person making a calculation of the payoff and the support they think they might receive versus costs of any action (Berk, 1974). Thus, an individual is more likely to engage in actions that will receive the support of the mass and a person may act in ways that he or she previously feared because that behaviour was not regarded as appropriate by the other group outside the crowd (Brown, 1986). An individual's behaviour while supporting the individual's standards upon which the behaviour is based can be psychologically transformed as a result of being in a crowd.

A weakness with this theory is that it is almost impossible to predict costs and benefits of a certain behaviour or action unless one knows the identity of the participants (Reicher, 2001). An underlying assumption is that an individual tries to gain something from being a member in a larger group of people. It is assumed that the individual actor is the only subject of utility. There are several criticisms of game theory as applied to the behaviour of crowds; however, this is a more sophisticated analysis than earlier theories that only predicted mindless violence. The possibility that crowd behaviour is rational is proposed by game theory. However, there are other types of rewards than an individual may value and strive towards than personal self-interest (Drury & Stott, 2011).

Despite the criticisms of using game theory to explain crowd behaviour, it was an improvement on earlier theories that simply predicted mindless violence. Significantly, the game theory approach proposes that crowd behaviour is rational.

3.6.7 Evidence for Reicher's (1984, 1987) Social Identity Model

From the 1980s onwards, irrationalist theories of crowd conflict began to be supplanted by the social identity approach, particularly through the work of Reicher.

A key study that lends weight to the social identity model is Reicher's (1984b) investigation of the St Paul's riot. This study demonstrated that crowd behaviour, even during a violent riot, was enabled and limited by shared social identity. On April 2, 1980, an area of Bristol caught nationwide attention and became the precursor to a number of inner city riots that took place in British cities during the 1980s (Reicher, 1984b). A police attack on a Black-owned café in the St Paul's area was followed by attacks against the police and later selective attacks on property. The roots of this riot could be found in decades of discrimination and social inequality, which, combined with strained relationship between the community and the police, resulted in the crowd taking matters into their own hands.

This riot was self-regulated – the targets included only the police (and certain 'non-local' shops such as a bank branch and post office). There were also geographical constraints to the actions of the crowd. The crowd self-identified as members of St. Paul's community, but they were in an antagonistic relationship with the police (Reicher, 1984b). These elements were reflected by the restraints of crowd violence observed during the riots. There was a sense of community and recognition of other participants that was central to the pleasure and positivity of those who took part in the riots. 'Outside' shops such as the benefit and rent offices were targeted whilst 'local' premises were protected. The demographic of the crowd was majority Black and this helped to forge a collective identity (Reicher, 2001).

3.6.8 Evidence for the Elaborated Social Identity Model (ESIM)

While the SIM focused on identity as a determinant of collective behaviour, it was observed that sometimes crowd events themselves determined identity. The ESIM focused on this dynamic relation.

Stott and Drury's (1999) study of the poll tax riots illustrated the concepts, conditions and dynamics above (3.3.4). The introduction of the Poll Tax in 1990 led to a series of riots in Britain (Waddington, 1994). The tax, introduced by the Conservative government in 1990, led to riots; the largest of which took place in London the day before the introduction of the tax – the demonstrations ended in violent behaviour and looting. The poll tax riots can be

described in terms of the ESIM, where the context for the protesters was the way the police acted by forming cordons and initiating baton charges (Reicher, 1996). In Whitehall, crowd members described the behaviour of 'disruptive' minorities as non-threatening and unrepresentative. Police, however, interpreted the same actions as dangerous and representative of the crowd as a whole; and, in response, they acted against the crowd as a whole. These police actions can also be understood in the context of the police's understanding of their relationship with the protesters, who were regarded as a hostile and threatening crowd that had to be stopped. This perception of a crowd was based upon the idea that all crowds are dangerous, and in a riot, all crowd members are seen as equally dangerous. The police officers may have regarded the crowd composition as initially heterogeneous, but also perceived that an anti-social minority was trying to influence ordinary people in the crowd. However, the tactics for dealing with crowds were based upon seeing the crowd as homogeneous, and there were no strategies for identifying different subgroups in the crowds or potentially more dangerous individuals (Stott & Reicher, 1998).

This police intervention provided a common context for members of the crowd, and therefore was the catalyst for a change in crowd members' self-categorization. This shifted the power relations between protesters and police, and fellow crowd members came to be perceived as more similar to the self, which in turn led to higher expectations of support from others within the crowd. Crowd members now felt that it was possible to act against the police without fear of being arrested. Thus we can see how the interaction between two groups can lead to changes in the way members of each group, categorize themselves, and how they behave in the context of a crowd event.

3.6.9 Conclusions – the need for an intergroup perspective

A theory, seeking to explain crowd behaviour must consider the complex nature of human social behaviour and the relationship between the individual and society (Reicher, 2001). Many psychologists have attempted to explain crowd behaviour by the de-contextualization of crowd action. Crowd behaviour has been explained in terms of internal processes, which disregards the role of groups such as the police in the development of events. Drury and Stott (2011) argue that crowds are integral to social and political participation, while Reicher and Potter (1985) say that a mistake has been to ignore the solidarity and positive feelings of

crowd actions. Crowd behaviour should not be analysed in isolation because crowd events are intergroup encounters.

The key point to take from the crowd conflict literature is that crowd events are intergroup relationships. In order to understand crowd behaviour and experience (both positive and negative) we need examine the perceptions of both the crowd and those who manage the crowd event.

3.7 Research Questions

This thesis is a test of three specific, related framework questions oriented to develop our understanding of the crowd psychology of the Hajj through the application of insights from the relevant current literature on (i) crowding and spatial behaviour, (ii) mass emergency behaviour, and (iii) collective conflict/intergroup relations.

Specifically, the current literature on crowd psychology raises the following empirical questions which have not yet been asked of the Hajj, and which will therefore guide my own research.

3.7.1 Crowding and spatial behaviour

How do Hajjis experience the crowd, given that crowding is sometimes (but not always) an aversive experience? How do Hajjis view others in the crowd? What are the psychological factors determining positive or negative experiences as part of the crowd? How and when is density a positive experience? Does the experience vary over time and location? What is the role of social identity and sense of psychological identification with the crowd in these experiences? How do these positive or negative experiences in turn affect behaviours? And do they affect understandings and identity after the Hajj (cf. Clingingsmith et al., 2009).

3.7.2 Mass emergency and disaster behaviour

Do Hajjis feel safe on the Hajj? What expectations of danger do they bring to the event? Which sources do they trust in relation to the source of danger and respond to danger? How do they behave when faced with danger? Do they help others in need? Do they expect others to help them? Do they trust the authorities, management and staff to respond effectively? What is the role of social identity and sense of psychological identification with the crowd and with others in these experiences and behaviours?

3.7.3 Collective conflict and intergroup relations

What are Hajjis' perceptions of other groups on the Hajj? What are their perceptions of the authorities, management and staff? Do they see them as one or more social category? Are they perceived as fair and legitimate in relation to the needs and identities of Hajjis? What expectations did Hajjis bring of these groups to the event, and do their perceptions change? What is the role of social identity and sense of psychological identification with the crowd and with others in these experiences and behaviours?

For each of these areas, and based on recent insights from the social identity approach (see above), I will address the intergroup aspects of crowd experience and behaviour by also asking the following questions:

- How do managers, planners and staff view Hajjis? How do they perceive issues of density and the needs of Hajjis (religious, spiritual, physical, social)?
- Where do managers see points of danger and how do they explain danger and accidents on the Hajj? Through reference to (valid or invalid) crowd psychology? How do they perceive the purpose and effectiveness of their communications? Do they perceive sources of resilience within the crowd itself – or the opposite?
- How do managers see issues of legitimacy? At which points do they perceive they need to exercise control?

In each case, I will be interested in the points of agreement and disagreement between Hajjis' views and those of management, since these are suggested by the recent research to indicate how and why relations between crowds and managers may develop positively or negatively.

3.8 Methodological issues in the study of the crowd

When choosing a methodology for a research project, it is essential to match the method to the objective. That is to say, the methods chosen must be suitable for addressing the research questions that the researchers hope to answer. A wide variety of methods have been employed to gather data for psychological studies, including laboratory experiments, observation, case studies, questionnaire, and interviews. Some of the data available about crowd psychology come from studies that have used either laboratory research or surveys carried out after the event in question. A problem with the former is that data is gathered in an artificial setting, and results may therefore have limited validity.

The current research does not use laboratory experiments, though these are the favoured method of social psychology. There are several reasons for this. Although experiments offer a high level of control, by allowing the researcher to manipulate variables, and provide the opportunity for replication, there are several disadvantages associated with this approach. Most importantly, in the context of the present study, laboratory experiments suffer from artificiality. Researchers cannot hope to exactly match conditions found in the 'real' world, and therefore such studies have a lack of ecological validity. This is central to the concerns of this study, as we are attempting to glean information about the Hajj, a massive event that is far removed from the confines of the laboratory, where participants' behaviour may be limited or altered in comparison to how they respond in the outside world.

Surveys carried out subsequent to the crowd event suffer from the time gap between the phenomenon of interest and the time of data collection. The current research employs a combination of qualitative and quantitative methods: semi-structured interviews and self-report questionnaire data. Crucially, research is carried out in the field, during the Hajj event itself, so that primary data will be collected from pilgrims as the participants are actually experiencing the crowd.

By interviewing Hajjis, we hope to gain some perspective on the phenomenology of the Hajj. In other words, how do those who comprise the Hajj crowd experience the Hajj? Among the strengths of the semi-structured interview is that it provides flexibility to probe and explore responses, including issues that had not previously been considered by the interviewer. Interviewing also captures participants' experiences in their own words, privileging the uniqueness of the experience. Interview transcripts will then be analysed using interpretative phenomenological analysis (IPA; Smith, 2004). Such an approach is valuable in the early stages of a project, and for topics where there is little previous research. This qualitative approach allows for exploration of the topic, and for the establishment of key areas of interest, before later large-scale, quantitative research allows us to test specific hypotheses about the Hajj crowd with a large number of participants.

The philosophical foundation of IPA is phenomenological and idiographic. Three key areas of philosophical knowledge have informed IPA: phenomenology, hermeneutics and ideography, and the approach draws on the theories of Husserl, Heidegger, Merleau-Ponty and Sartre. Participants are seen as experiential experts, storytellers rather than respondents (Smith, Flowers & Larkin, 2009). IPA aims to explore in depth the processes through which individuals make sense of their experiences, and focuses on individual subjective accounts of experience (Smith, Jarman & Osborn, 1999).

The researcher is central to the process in attempting to make sense of that other personal world through a process of interpretive activity; the analytic account is formed by the joint reflections of both participant and researcher (Smith, 2004), referred to as a 'double hermeneutic' (Smith & Osborn, 2003). The researcher is making sense of the participant, who is making sense of x, thus illustrating the dualistic role of the researcher as being both like and unlike the participant. On one hand the researcher is similar to the participant in terms of being a human being relying on everyday human resources to make sense of the world; however, the researcher only has access to the participant's experience through the reports of the participant, thus the participant's meaning making is first order and the researcher's sense making is second order (Smith et al., 2009).

A qualitative approach employing IPA allows for a focused, in-depth examination of the phenomenology of the Hajj crowd. Hajj management staff is also interviewed to gain insight

into their perspective of the Hajj crowd. As discussed previously, crowd phenomena do not develop in isolation, but can be viewed (according to the ESIM) as intergroup processes. It is important for us to understand what occurs during Hajj in terms of how management staff view Hajjis, and also in terms of the interaction between the two groups: pilgrims and management.

How the world is experienced, though, is not necessarily what the world is really like (Willig, 2008), and results of small scale qualitative studies are less generalizable to a wider population than are those gleaned from large scale quantitative studies with representative samples. Quantitative methods tend to employ a larger number of participants in the hope that the findings may more readily be extrapolated to a wider population. However, what is lost in quantitative research is the ability to capture the nuances of the subjective experiences of the person or group being studied. Therefore, this study employs a mixed-method approach, otherwise known as ‘methodological triangulation’ (Denzin, 1978).

I will say something about my strategy for use of IPA. Jonathan Smith, the founder of IPA, sets out in a number of publications a very clear set of guidelines for how to carry out IPA. While some of the specific techniques (coding and theme development) are similar to other methods (such as thematic analysis), the method makes some distinctive epistemological assumptions. Moreover, while there are arguments that a strict form of IPA should be followed and that any deviation from this is not IPA, it has also been argued that there are different forms of IPA and that the approach can be adapted (Fade, 2004). In the present case, the concern is for me, a single researcher, to look at experiences in a mass event where, through my contacts and resources, I can gather a relatively large number of accounts. Therefore my strategy for the four chapters describing qualitative analysis is as follows. In the first place, I shall follow the basic IPA principle of describing the interviewee’s world through the lens of the researchers describing qualitative analysis is as follows. In the first place, I shall follow my aim of seeking to cover as many themes in as many interviews with sub-groups of people as I can practically analyse, the analysis will depart from most published versions of IPA by privileging breadth over depth. The analysis will seek primarily to document and describe – since this is an important task in its own right – and in-depth analysis will be saved until the quantitative study (in Chapter 8).

Therefore, in addition to qualitative data gleaned from interviews, the present study employed a large-scale questionnaire survey. The aim of mixing quantitative and qualitative approaches is that both in combination offer a comprehensive overview of the situation and ensure that there are no ‘gaps’ in the data. Statistics and survey results do not explore the motivation behind certain preferences and behaviours, which was a necessary starting point for the research. The qualitative material not only suggests the phenomena to be explained (e.g., processes behind reported feelings of joy) but also provides depth to the ‘facts and figures’ and can reveal other information not previously predicted by the researchers.

In the present case, IPA was thought to be compatible epistemologically with a questionnaire survey, since each is thought to tell us about ‘cognitions’ (in contrast to some other qualitative methods, such as discourse analysis for example, which is concerned with constructions achieved through language).

By gathering qualitative and quantitative data I was able to establish a holistic and contextual understanding of the Hajj crowd as a psychological crowd (Jick, 1979). I gleaned information on the types of experiences and perceptions that pilgrims and managers have during the Hajj and on the strength of relationships between Hajjis and other Hajjis and between Hajjis and management.

3.9 Summary and Conclusions

There is currently a lack of Hajj studies in relation to crowd psychology. In fact, the Hajj is a unique event that needs its own careful area of research in order to interrogate traditional views of crowd behaviour that are not entirely relevant for the context of the Hajj. The traditional view of crowd behaviour is that the group adversely affects the individual, because of its essentially irrational, volatile nature. This view was typified by the writings of Gustave Le Bon, who saw in the crowd a regression to an uncivilized, hostile state, which he contrasted to the well-adjusted, prosocial behaviour normally displayed by modern man. When in the crowd, a person relies on primal ‘instinct’, which he equated with barbarism. The group is thus a conduit for irrational, destructive, self-defeating behaviours.

The social identity approach and self-categorization theory in particular allow us to view group processes in a more nuanced way. When viewed in the light of these approaches, the group can be seen as potentially a source of safety for group members, in that people who identify with the group's shared social identity are more likely to expect help and give support, and are more likely to be able to coordinate with other people because of shared understanding and shared goals. The result is that these people are more likely to cope with adverse circumstances because they can rely on other people to support them.

Collective identity, then, has the potential to help prevent stress and injury. We can define this as resilience – the ability to cope with stressful, distressing, or dangerous situations. In this new way of looking at resilience, the group is the basis for resilience. Pursuing this line of thought further, such a way of viewing the group links it with the idea of community – 'community resilience' is increasingly being used to describe the extent to which a particular community is able to cope with emergencies, by harnessing local resources.

In other words, the crowd can be thought of as like a community, despite the former term referring to a here and now collective and the latter designating a stable and established set of relationships. When the crowd is a psychological crowd, and not merely a physical crowd, it can have the same properties as a community, providing support and resilience, as well as collective self-regulation and well being.

The crowd event under question in the current study, the Hajj, is not the type of event in which there is an expectation of conflict. On the contrary, it is a celebratory crowd, a ritual crowd in which the constituent members have come together for a common purpose. It might justifiably be asked, then, what such a crowd might have in common with the riot crowds discussed in this chapter, for instance the residents who took part in the St Paul's riot in 1980.

The relevance of studies of crowd conflict is that this literature tells us that crowd events are typically intergroup events. In the St Paul's riot, there were two discrete and distinct groups: the local community and the police who were sent to quell the disturbances. Whether a peaceful crowd stays peaceful is partly a function of its relationship with other groups, and given that a police action was the catalyst for the St Paul's riot, it is unsurprising that events

escalated and violence was directed towards the police. The ESIM approach built on such observations and focused on the intergroup nature of crowd events.

While Hajjis are not typically in a position of opposition to the Hajj management and emergency services, they nevertheless represent a group that is distinct from those whose role it is to facilitate the safety of the Hajjis. That the Hajj is an intergroup event becomes apparent when there is a failure of management. When management succeeds and events are proceeding smoothly, the management staff is invisible, even though they are always there. It is only in moments of crisis that the presence or absence of management staff becomes a concern for crowd members. The management is always highly aware of both groups.

The key hypotheses were that as the crowd density increased, so reported levels of safety would decrease. Additionally, I expected that each of the following variables would increase reported enjoyment in the crowd and feeling safe in the Hajj crowd: social identification (on different identity measures), expected support, and management competence (as intergroup measures). (There were three ways of looking at social identification: identification with others in the crowd, social identification as a Muslim, and perceptions that others identify as Muslims; cf. Neville & Reicher, 2011.) Management competence was included as a predictor of safety on the assumption that pilgrims' beliefs in the ability of Hajj personnel to handle the events effectively would make them feel safer.

I also expected that social identification would moderate the effects of density on reported levels of safety. There was expected to be a relationship of moderation for both identification with the crowd and perceptions of others' identification as Muslim (since each of these bring up directly to shared identification with others in the crowd), but no moderation effect for participants' own identification as Muslim (since this corresponds to the identification with a social category).

A first supplementary hypothesis for this moderation is that the negative relation between crowd density and safety should only apply for those relatively low in identification. A second supplementary hypothesis is that density will actually increase reported safety for those high in identification with the crowd. The third supplementary hypothesis is that the logical expectation is that, if safety is in part a function of perceived support from those one

identifies with, the more of these others present (measured in increased density), the greater the degree of safety. Fourthly, the cause for this moderation effect is because identification with the crowd and perceptions that others identify as Muslims both increase perceptions of support, which in turn increase reported safety. Lastly, if the hypothesized social, psychological mechanisms behind (at least some of) the safety of the crowd were correct, we would also require them to help explain demographic differences in safety. Our distinct hypothesis was that any differences among national groups in reported safety would be an indirect consequence of both identification with the crowd and perceived support.

It is important to consider the Hajj in the light of findings relating to intergroup relationships, such as studies on crowd conflict, because the Hajj management is vital in determining people's safety and how they experience the Hajj. Since there is almost no psychological research on the Hajj, in the next chapter I will use a crowd psychology perspective to explore crowd processes during this large-scale religious event.

Chapter 4: The Crowd Phenomenology of the Hajj: A UK Pilot Study

4.1 Introduction

An objective of this project was to examine the crowd phenomenology of the Hajj (pilgrims' accounts of their experiences, in their own words).

The Hajj (which is the annual Pilgrimage to the House of God and around Makkah) is a phenomenal gathering, one that grants pilgrims an experience not available to them in the course of their ordinary lives. Attending the Hajj far surpasses the experience of reading about the pilgrimage in books. Muslims consider the Hajj a treasure house of symbols that carry infinite, fluid meanings. The Hajj gives pilgrims the opportunity to practice the high principles, values, and objectives underlying the rules of Islam in the formation of the individual and the nation. It is the climax of the pilgrim's spiritual life, and it is said to be a model of the unity of the community, based on a companionship in faith that overlooks narrow considerations of race, tribe, tongue, or colour.

As we saw in Chapter three, recent social identity research suggests that even dense crowds can be experienced positively, depending on the salient identity (Novelli, Drury, Reicher & Stott, 2013). As a result of this, I undertook research that sought to examine social identity processes among Hajj pilgrims. The first step in the objective of this project was to explore the crowd phenomenology of the Hajj. This was effected through collecting primary data by interviewing former Hajjis, or pilgrims, from the UK, thereby gathering accounts of their experiences, and behaviour, in their own words. The pilot study interview schedule enabled me to test the data collection methods to provide appropriate, comparable qualitative data in preparation for the field study.

I developed the themes structuring the interview in this pilot study in order to investigate the collective Hajj experience. This was a starting point for my thesis to begin looking at the under-theorised area of the social psychology of the Hajj. The study considered several aspects including how social relations are embodied through the experience of the Hajj. The interview structure aimed to elicit participants' feelings about several aspects of Hajj including: the experience of being greeted by others; the types of influence of social identity

that accrue on Hajj rituals; and the way that identity processes relate to group behaviour. This information helped me to examine whether pilgrims' collective experiences of the Hajj changes the ways in which pilgrims see themselves and relate to the experience itself. Above all, this thesis aims to evaluate the safety of this event through examining first-person participant accounts.

Additionally, I will explore the experience of collective self-realization based on the work of Reicher and Haslam (2006) who indicated that powerful emotions flow from collective self-realization that leads to the strengthening of shared social identity and resilience. In explaining crowd behaviour, I employed the concept of social identity as developed through social identity and self-categorization theory (Tajfel, 1978; 1981; Tajfel & Turner, 1986; Turner, Hogg, Oakes, Reicher & Wetherell, 1987; Turner, Oakes, Haslam & McGarty, 1994). Most significant to my research is the distinction that has been made between personal identity, which refers to the unique characteristics of the individual, and social identity, which refers to an individual's self-understanding as a member of a social category (Tajfel, 1978; Turner & Giles, 1981).

The study uses Interpretative Phenomenological Analysis (hereafter described as IPA; Smith, Flowers & Larkin, 2009) to analyse the results. This approach has various strengths that mean that it is suited to the current study. IPA provides insight into how people interpret and understand their experiences. IPA is particularly useful for studying questions of self and identity, and, although it is idiographic in nature, and is thus concerned with individual, subjective accounts of experience, initial research using IPA might lead to useful generalizations following further research. One of the strengths of IPA is that it acknowledges the researcher's role in meaning making: an interviewer attempts to elicit the subjective meaning that the participant attaches to certain aspects of experience. In turn, the interviewer will interpret the participant's responses, thereby actively participating in the process of understanding.

Interview questions were largely concerned with pilgrims' experience at the Masjid al-Haram, or Holy Mosque (hereafter described as the Haram), which is the location for several of the key rituals of the Hajj, including Tawaf in which Hajjis walk around the Kaaba seven times in an anti-clockwise direction, and Sa'i in which pilgrims walk or run seven times

between the hills of Safa and Marwah (see Chapter 2 and Glossary). The reasons for choosing to focus on the Haram are both practical and theoretical.

The practical reasons include the following: the Haram is the starting point and end point of the Hajj experience – pilgrims gather at the Haram before the start of their Hajj rituals, during Hajj, and upon completion of the rituals before they leave and it is therefore the most important location for Hajj activities; the Haram is the busiest location, accommodating up to two million Hajjis at a time; the Haram holds a unique position within the hearts of Muslims, who consider it to be among the holiest sites in Islam.

In theoretical terms, the Haram is important because this thesis is concerned with crowd experience and crowd safety during the Hajj, and, as the busiest location visited during Hajj, safety is paramount at the Haram. I also wanted to explore whether feelings of social unity serve to reduce participants' fears about safety during the Hajj, and whether these feelings increase helpful behaviour and lessen the risks involved in gathering so many people together in one place.

A further objective of the study was to gauge the participants' experiences of interaction with official staff during the Hajj and their opinion of the staff. This is important, because good relations and communication between Hajjis and official personnel is essential in order to ensure the smooth and safe running of the Hajj, and to minimize adverse effects when things do go wrong.

4.2 Methods

This part of the project consists of an interview study with former Hajjis concerning their experiences, observations, perceptions and behaviours at the Hajj. I was particularly interested in their perceptions of other people, especially other social groups, and those managing the event. To achieve this I visited the Al Medina Mosque in Brighton (24 Bedford Place, Brighton), spoke to the Imam and preacher of the mosque and explained my research aims requesting some ex-pilgrims as participants for this study. The Imam arranged for me to meet participants and offered space for the interviews. As a result, all interviews were

conducted at Sahara Restaurant (Western Road, Brighton) in coordination with the imam and preacher of the Medina Mosque in Brighton.

At the beginning of the interview I introduced myself by saying that I was a PhD student in social psychology at the University of Sussex, UK. As part of this degree, I was undertaking a research project that examined the crowd experience and crowd behaviour and its management during the Hajj.

4.2.1 Participants

Five participants completed all conditions of this study. Of those five, four were male and one was female. The ages of participants ranged from 27 to 53 years ($M = 41$, $SD = 9.6$ years). The participants had different career backgrounds (Two businessmen, a teacher, a student and a retired person). Participants were all former pilgrims that fulfilled the criteria for this study (two of the participants had been to the Hajj more than one time, and three had performed Hajj only one time.) In addition to that, two of the participants had witnessed a major accident at the Hajj. The participants were all British citizens. The participants were ethnically diverse.

4.2.2 Semi-Structured Interview Themes

The interview was structured as follows. The themes and questions from the schedule are presented below:

Meaning of the Hajj

- What are the channels of communication practiced by you to get different information about the Hajj?
- Has your expectation of Hajj been informed by the stories of your relatives who made obligatory Hajj, or by Islamic scholars, or by friends?

Experience of the Hajj

- Describe your feelings whilst you were amongst the Hajj crowd.

Self & others

- How would you describe yourself in terms of relations with others?

- When you were with the crowds did you feel that you were part of the crowd or did you feel that the crowd was, for instance, from Africa and you were from England?
- Would most other people at the Hajj describe themselves in the same way?
- Do you see yourself as similar or different to those who are performing Hajj?
- Can you describe your relationships with the Hajj crowds?
- Do you feel close to other pilgrims who were in the crowd?
- Do you feel any sort of bond with other pilgrims who were in the crowd?
- Did you feel that you and the other pilgrims were affected by the crowd or all having the same experience?
- Do you feel a sense of unity with other pilgrims who were in the crowd?

Relations with others

- Did people talk to each other in the crowd? If so, describe.
- How did they communicate with others Hajjis who don't speak the same language?
- Did you find other people on the Hajj to be supportive?
- Did you enjoy their company?
- Did you feel at any time the need to focus attention on competing with other groups?
- Have you noticed any disruptive activities in groups (e.g. aggressiveness)?
- How did other Hajjis respond to this?
- Have you noticed anybody acting selfishly or in a bad/aggressive manner?
- From day one to the final day of Hajj, did your feelings toward these people change?

On the way to Al-Haram, perceptions of other groups

- On your way to Al-Haram which groups were the most in number?
- Were they friendly with you?

Experiences at Al-Haram – crowding

- How did you feel about the other people around you at the Haram?
- Did you feel united with other people inside the Haram?
- Did you feel that other people got in your way?
- Did you behave harmoniously with other people around you?
- Did you see anyone over-reacting as a result of excessive crowding in the Haram? If so, please describe what you saw.
- Did you see anyone behaving selfishly during the large gathering at the Haram? Can you give me an example of such an act?
- Did anyone show out-of-control behaviour? If so, in what circumstances? If so, please describe this behaviour.
- Did you see anyone in the crowd behave in such a selfish way that things got out of control?
- Did you see anyone becoming overly emotional during worship activities within al-Haram? If so, please describe how this behaviour affected you as individual and how it affected your group at the Haram.
- Were there times when you felt that it was too crowded? Or were you comfortable with the level of crowding?

Relationships between staff and the public

- How did you perceive your relationship with the Haram staff?
- Did you feel that the measures taken by staff in leading pilgrims out of the Haram was adequate?
- How did you feel about the quality or clarity of information that is broadcast or sign systems used?
- Did you have faith in the ability of emergency services to respond successfully to any incidents at the Haram?

- Do you feel that the number of staff was adequate to ensure effective crowd management?

Following interviews, each interviewee was shown ten pictures of different personnel at the Hajj and asked to describe the function of the staff member, their own thoughts about the staff, and their experiences of them. All interviews were recorded using a digital Dictaphone with the participants' consent. All were transcribed and the average length of the interview was 55 minutes.

4.2.3 Data Analysis

Participant accounts of Hajj crowd experience and behaviour were analysed using Interpretative Phenomenological Analysis (IPA). The analysis utilized a standard IPA technique for analysis across cases. I began the coding by identifying key words with a focus on experience – i.e., what seemed to be experientially important to the participant. The next stage in the analysis I undertook was to organize these key words into themes where the key words seemed to belong together in meaningful patterns based on my interpretations of the interviewee's concerns. This was an iterative process as I went back and forth between the transcript and coding in order to maintain my analytic claims. Finally, I organized the themes into subordinate themes, or clusters, for simplicity of presentation. The following analysis presents examples from each field.

4.3 Analysis

Below is a table summarizing all themes and clusters identified in the material:

Table 4.1 Summaries of all themes and clusters of UK pilot Study

Cluster 1	Meaning of Hajj
Theme 1	Opportunity for self-change
Theme 2	Submission
Theme 3	Self-control

Theme 4	Religious collective self-affirmation
Cluster 2 Spirituality	
Theme 1	Collective Social Experiences
Theme 2	Spiritual qualities in interaction
Theme 3	Emotional significance of Kaaba
Theme 4	Spiritual (versus non-spiritual) aims
Cluster 3 Understandings before & after Hajj	
Theme 1	Expectations Before Hajj
Theme 2	Expectations of danger
Theme 3	Change in expectations
Cluster 4 Perceptions of the crowd: in general	
Theme 1	Distinctive cultural groups & diversity in the crowd
Theme 2	Inconveniences
Theme 3	Potential of danger
Theme 4	Unity
Theme 5	Crowd equality
Cluster 5 Relations among Hajjis	
Theme 1	Friendly relations with others & social interaction
Theme 2	Supporting needy strangers
Theme 3	Cooperation
Theme 4	Joy from being part of the crowd
Theme 5	Shared emotion
Theme 6	Group affiliation
Theme 7	Communication in the crowd
Theme 8	Individual conflict
Theme 9	Cultural difference & self-control
Theme 10	Collective conflict over the buses
Cluster 6 Experiences at Haram	
Theme 1	Limited space
Theme 2	Fair competition
Theme 3	Feeling safe
Theme 4	Feeling unity
Theme 5	Potential of danger
Theme 6	Selfish individuals

Theme 7	Courtesy
Cluster 7 Perceptions Of Hajj Management	
Theme 1	Well managed
Theme 2	Effective information and signage systems
Theme 3	Adequate number of staff
Theme 4	Faith in the ability of emergency services
Theme 5	Relations with police
Theme 6	Hajjis and local Saudis
Theme 7	Hajjis and Haram staff
Theme 8	Well managed
Cluster 8 Identity	
Theme 1	Social identity
Theme 2	Shared social identity

4.3.1 Cluster One: Meaning of the Hajj

The themes in this cluster concern the subjective meanings of the Hajj for participants. This encompassed meanings that individuals attached to the experience as well as the perception that individuals had of their collective experience.

4.3.1.1 Opportunity for self-change

Amongst the participants, there was the sense that pilgrims have the chance to change themselves through relinquishing their egos when performing Hajj. One participant said:

*It really brings you down to earth. It makes you feel very humble.*⁶ (UP11HA01)

4.3.1.2 Submission

The word *Islam* means ‘voluntary submission to God’ and participating in religious activity entails submission and acceptance of God’s will. . Most Muslims believe that Allah or God has instructed them that the best provision that they should take with them on Hajj is good conduct as they are guests of God. Thus God has indeed set a great test for the believers: are they going to follow and avoid idle talk, argue and disagreements or will they harm people with words or behaviour? It is difficult to maintain a positive attitude and patience under the

⁶ UP= UK pilot, 11= 2011, HA= Hani (name of interviewer) & 01= First interviewee.

circumstances of extremely large crowd, limited space, slow transportation and an uncomfortable, harsh environment. Pilgrims' behaviour is of the utmost importance at all times of the Hajj and thus the test is not to let bad behaviour ruin their good deeds. One participant described a sense of resilience based on the acceptance that rewards are not achieved without struggle:

I knew these were tests from Allah; you don't get pilgrimage without any tests from God. (UP11HA02)

4.3.1.3 Self-control

Performing the Hajj brings with it responsibilities and tacit expectations of how to behave. Two of the participants framed these expectations in terms of politeness or prosocial behaviour:

I knew that I had to interact as nicely as possible with everybody and be patient. (UP11HA02)

You don't get into confrontation; you are here to perform Hajj. (UP11HA04)

Other considerations are discarded in favour of a focus on Allah:

Leave the mundane... and devote themselves to worshipping God. (UP11HA03)

4.3.1.4 Religious collective self-affirmation

A key idea that emerged from the data was that of a shared spiritual experience. This sense of a collective experience fostered a sense of belonging within the participants:

The kindness and warmth you have between Muslims, the unity you feel with the Islamic nation. (UP11HA01)

The sense of belonging is already in place before travelling to Makkah for the Hajj, but is enhanced by the experience of being surrounded by fellow Muslims:

As a Muslim the Hajj means the pinnacle of worship to align congregational sense and a reaching of a spiritual level with other fellow Muslims and realizing the unity of Allah through the unity of people coming together to one place. (UP11HA02)

4.3.2 Cluster Two: Spirituality

Because the Hajj is a religious pilgrimage, it is to be expected that spirituality figures as an important theme of participants' responses. This cluster groups themes concerning spiritual qualities that were detected in interaction with other Hajjis, the spiritual significance of the *Kaaba* which forms the centrepiece of Tawaf (see Chapter two), one of the key rituals that make up the Hajj, and participants' perceptions of the extent to which others prioritized spiritual aims during the Hajj.

4.3.2.1 Collective social experience

According to participants, this sense of sharing in a spiritual experience can lead to more cooperative and helpful behaviour. A very high level of tolerance is felt when performing Hajj:

Without any fights or any arguments, being completely devoted to Allah and being patient. (UP11HA01)

Sharing (e.g. Food, transport) is a common theme that emerged:

Nobody speaks the same language, but they know this person wants a lift and they're going the same way you pick them up, you put them in your car or in your bus (UP11HA03)

4.3.2.2 Spiritual qualities in interaction

Pilgrims at Hajj events enjoyed good relations with each other. One participant indicated that:

What I experienced is, you're sitting down and someone put some dates in front of you, another one just passes some yoghurt, someone gives... So it's kindness; I didn't find any of selfishness (UP11HA04)

4.3.2.3 Emotional significance of Kaaba

Muslims believe that the Kaaba (a stone cubicle structure in the centre of the Haram – see Chapter two) is the oldest holy building in world history for the worship of God. Muslims believe that it was built by Adam, and then rebuilt by the Prophet Abraham (Ibrahim) and his son, prophet Ismael (peace upon them). It has enormous emotional significance for Muslims, and this is reflected in the answers of the participants, which all reflected intense emotion:

Just thinking about it now brings tears to my eyes. It's overwhelming. It's so beautiful, so simple, so sophisticated, yet at the same time it's a square box. (UP11HA01).

The emotion was heightened by being a shared experience with other Hajjis:

When you touch the Kaaba and you put your hand on the Kaaba, and everyone around you cries and then it gives that feeling, obviously you think of, you know, it's very emotional... you just enter another world, completely another world. (UP11HA04)

Another theme that recurred in the responses was that the feeling of being close to this holy site could not be captured in words:

I can't describe the feeling and the tears and the emotion – it's indescribable. (UP11HA04)

Participants were also keen to stress that the Kaaba, and the feelings associated with it, are unique:

You see it in pictures, you see it in videos, but now it is right in front of you and the feeling and the emotion is like no other that you can ever experience (UP11HA03)

4.3.2.4 Spiritual (versus nonspiritual) aims

One of the participants reflected on the reasons for going on the pilgrimage and contrasted 'pure' spiritual/religious reasons with more worldly/material concerns. They speculated that the spiritual feelings associated with the Hajj might be diluted if one were using the trip for other reasons too:

If you are going to Hajj for Allah and only for Allah... But if you had the double intention of going there... and finding the best shops and the best things to bring back home and sell even, then I don't know if they'd have the same experience (UP11HA02)

This preoccupation with non-spiritual matters according to these two participants contaminates the spiritual experience of the pilgrimage:

One or two people I even saw on their mobile phones chatting whilst doing Tawaf [laughter] and that defeats the object. (UP11HA01)

I've come across people who are as much excited about going to Kaaba as they are about going to the local mall. For me, I was trying to avoid anything commercial. (UP11HA02)

For these participants commercialism is incongruent with the spiritual and religious purpose of performing Hajj.

4.3.3 Cluster Three: Understandings Before and After the Hajj

This cluster contains themes that describe the participants' expectations before performing the Hajj, and whether these expectations were met. Expectations discussed here are positive (for instance, excitement at taking part in the Hajj and seeing Makkah) as well as negative (specifically, expectations of danger).

4.3.3.1 Expectations before Hajj

As the most important event in any Muslim's spiritual life, making the pilgrimage to Makkah obviously carries with it expectations. Participants described feeling excitement before travelling to Makkah. There were two main sources of expectations, which were personal testimonies and depictions in the media.

Hearing from [my father's] experiences was quite inspiring and made me want to go. Plus satellite TV; we're fortunate to have that these days and also reading. (UP11HA01)

Talking with people, literature, [Islamic television] channel, stories from my family (UP11HA02)

4.3.3.2 Expectations of danger

'Danger' meant different things to different participants. Two participants spoke of their fears of overcrowding:

The crowds I thought before I went would be a problem. You tend always to hear the negative stories unfortunately of other people who return from Hajj. (UP11HA01)

Others had also heard negative reports about other potential threats:

You hear a lot of stories. I personally have not witnessed a robbery or whatever. They say people see; yes, some people go there and steal. (UP11HA04)

4.3.3.3 Change in expectations

One participant spoke of how prior expectations were exceeded by the actual experience of carrying out the Hajj:

It was far more than I expected, spiritually, mentally, physically as well it was quite demanding. (UP11HA01)

Another participant, who attends Hajj frequently, described how the experience differs each time:

Every year I learn something different. (UP11HA04)

4.3.4 Cluster Four: Perceptions of the Crowd: General

The themes in this cluster are concerned with participants' perceptions of others in the crowd, including whether particular cultural or ethnic groups were more noticeable than others, the problems created by large crowds (including potential danger), and the sense of unity and equality that participants felt.

4.3.4.1 Distinctive cultural groups & diversity in the crowd

One participant described viewing the Hajj as a chance to meet people from other cultures whom one would not normally encounter:

This is a unique chance for us to meet other people... who you've never seen before and you're never going to see them but you will remember them. (UP11HA03)

Participants were asked which nationalities appeared to be present in greatest numbers. Certain groups appeared to be more prominent at the Hajj, either because of sheer numbers or because they were more noticeable in some way:

Indonesians struck me as being large in number, Turks as well. (UP11HA01)

As well as being members of this group defined by religion, other identity markers are visible within the crowd at Hajj. These could be ethnic markers:

You just see the colour of their skin but you could tell from the languages they were speaking... which part of the world they were from. (UP11HA01)

Or cultural markers:

Some of them were wearing their nationality badge, the way their clothes looked, what languages they were speaking. (UP11HA05)

For some participants this diversity provided a happy opportunity to make contact with people from different cultures:

That was the beauty of being at Haram because you see the world in Haram. I could spot Chinese, Japanese, I could spot obviously different Africans, Turkish... (UP11HA02)

While for another, such differences are barely noticeable when engaging in the rites of the Hajj:

During Tawaf and Sa'i I think nobody cared who's next to you... because really when you're doing Tawaf you are concentrating on yourself, you are concentrating on what you are saying to Allah. (UP11HA03)

All five participants remarked on the diversity of the crowd, which appears to be a salient issue for people attending the Hajj.

4.3.4.2 Inconveniences

Some participants commented on the inconveniences associated with such a large crowd of people coming together. Transportation was a recurring theme:

The traffic and then the volume of people and the cars. (UP11HA01)

A female participant noted the inadequacy of the available toilets:

Bathrooms. I don't know about the men, but I know for the women it's terrible really. (UP11HA02)

4.3.4.3 Potential of danger

One participant commented on the potential danger with such a large crowd, especially in Jamarat, in the first few years before the development of new Jamarat facilities (see Chapter 2 for background):

It was scary moments as I remember, one moment with my wife and we thought we're going to die to be honest with you, but strangely enough, I was in the middle of the crowd and I thought, 'Even if I die, I'm dying in the best country in the world and I'll be sent to Heaven'. It was scary but comfortable. (UP11HA04)

Then we asked him to explain how it was scary but comfortable. He explained by referring to the fact that in this crowd, in contrast to other crowds where others' physical and sensuous presence is an intrusion, there was spirituality and this felt good:

It might not make sense. And the other thing is, being in a crowd here – for example going to a game of football – and you feel uncomfortable; someone might be smoking behind you, someone might smell, but being in the crowd with Muslims and they're all wearing the same thing – and they all smell nice, you don't mind being in that crowd even if you're going to get squashed because it's a good feeling; it's a spiritual crowd. So it doesn't matter how bad it is – which I won't say bad – it doesn't matter how crowded it is, it's got a good feeling to it. (UP11HA04)

4.3.4.4 Unity

Interviewees spoke of feeling connected with strangers in the crowd -- through shared group membership interpersonal friendships develop; because they were all pilgrims, people felt friendly and safe:

Relationship grows with them and that's one of the benefits of Hajj – one of the huge benefits of Hajj; it's the network... They are very friendly, very nice people. It doesn't matter what time you go, people talk to you. It doesn't matter who you sit next to, people reading the Qur'an, talking to each other and they ask where you're from, you tell them where you're from and same question, it's very friendly and very secure. (UP11HA04)

One participant spoke of the levelling effect of the Hajj:

Everyone has to do the same thing, however rich or poor you are. So really you're in it together, you're in the same boat. (UP11HA01)

There was some disagreement between participants as to whether the experience of performing the Hajj is the same for everyone. One argued that:

Wherever you look around you it's the same feeling it's the same experience. (UP11HA04)

Another had a slightly different take:

Similar experience because it's impossible to have the same experience. (UP11HA03)

Several participants acknowledged the diversity of the crowd and yet stressed that the overriding feature that brought them together – their religion – outweighed other considerations:

We're all different... but at the same time we had this common religion amongst us that brought us together all dressed in the same way... it made you feel there was something there between each one of us that we shared. (UP11HA01)

Another participant went further in assessing fundamental unity of the crowd:

People who've come from all over the world, they look different, they sometimes dress different, they might eat different food but they're all going to do the same thing... they'll be next to you in prayer. Yes there's a feeling of togetherness, there's a great feeling of harmony, there's a great feeling of oneness. (UP11HA03)

In such conditions, differences between individuals dissolve and there is a sense of union with the crowd. This feeling was echoed in the response of participant four:

I am part of the crowd. We are all part of it and it's no individual. (UP11HA04)

4.3.4.5 Crowd equality

The dissolution of cultural boundaries in favour of religious unity has already been discussed in the theme above ('Unity'). A contributory factor to this sense of equality is the uniformity of dress:

You cannot tell when the men are dressed in the two white cloths, you don't know, they could easily be from England... they could easily be from Jamaica. (UP11HA03)

A female Hajji described the sensation of gender and racial divisions disappearing within the Haram:

I enjoyed being able to pray in the open, even next to people I didn't know, sometimes even men would be next to me in the Kaaba. It was strange, it was beautiful, you feel like people are forgetting about – they're here for Allah, not focusing on the agenda, not focusing on the identity or different colours, it was beautiful. (UP11HA02)

Muslims show equality at the Hajj by wearing a white sheet⁷. This shows equality by showing that everyone is wearing the same thing. The Ihram is meant to show equality of all pilgrims, in front of God: there is no difference between a prince and a pauper. They have the same status as one another.

Beauty of Hajj, we're all different. But at the same time we had this common religion amongst us that brought us together All dressed in the same way It made you feel there was something there between each one of us that we shared. (UP11HA01)

4.3.5 Cluster Five: Relations among Hajjis

Cluster Five gathers the themes that applied to participants' perceptions of relations among Hajjis. This is a wide-ranging theme that includes observations about harmony, cooperation, and shared emotions, as well as reports of conflict and aggressive behaviour.

4.3.5.1 Friendly relations with others & social interaction

Participants described a friendly atmosphere during the Hajj:

[On] almost every occasion people were friendly with us. (UP11HA01)

⁷ Special clothing that is designed for the purpose of performing Umrah or Hajj.

This friendly manner can manifest in ways such as mutual assistance, and sharing. According to another participant, the Hajj also provides the context for the start of many friendships:

People who after going to Hajj have remained friends all their life – fifty, sixty years of friendship (UP11HA03)

4.3.5.2 Supporting needy strangers

Participants spoke of a great many acts of kindness and cooperation behaviour between strangers.

[If] someone wanted something, you give, or someone fell, you lift and help; you don't know that person and that's how it goes. (UP11HA04)

4.3.5.3 Cooperation

One participant gave an example of witnessing an accidental fire during the Hajj in 1997. This example shows how the selfless model adapts to become the cohesion and cooperation model during a mass emergency amongst crowds during the Hajj:

People came and said that these people have burnt they've lost their belongings clothes and so there was a collection made so our family I remember we gave money and we gave our clothes whatever you know clothes we had you know because we can buy more clothes but these people maybe they've lost money so a lot of people gave many of their clothes to help these people. (UP11HA03)

4.3.5.4 Joy of being part of the crowd

One participant described the experience of being in the Hajj crowd as distinct from the experience of being in any other crowd, stating that:

I always felt I wanted to escape from large crowds until I went to Hajj when one see crowd of millions I felt ease, calm I felt very relax and couldn't explain why but must be some things spiritual about hajj that you can't compare with crowds any elsewhere. (UP11HA01)

4.3.5.5 Shared emotion

In the responses of participants there was a sense of emotions residing not just in the individual, but in the crowd as a shared experience, enhancing one's own experience:

Already you're spiritually, emotionally very charged, plus you have people around you like that. So it increases that sense of worship and emotion. (UP11HA01)

So in this description one's own emotions feed off the emotions of others and, presumably, influence the emotions of yet others:

It's very emotional. You think of death, you think of your sin, you think of your family, you think of your loved ones who passed away, and then everybody is crying; it makes you very emotional. (UP11HA04)

In this way, other members of the crowd act as 'reference points' to guide emotional behaviour:

When you see these people you think, my God, you know they are opening their heart and we should also do this. When you see them you are affected by their emotion. (UP11HA03)

4.3.5.6 Group affiliation

In the responses of participants there was a sense of group affiliation and a sense of bonding, which has consequences for both feelings of safety and 'personal space':

I felt because we were there for the same purpose, the same reason, generally it was quite calm and I didn't feel intimidated or I didn't feel affected by them...I mean I must admit I think I felt secure, safe, comfortable, because of that, because we're united... never felt that other people got in your way inside Al Haram. (UP11HA01)

4.3.5.7 Communication in the crowd

During the Hajj, Muslims from all over the world come to Makkah. This can lead to communication issues because of the diversity of the languages spoken by the Hajjis.

Participants in the current study stressed the importance, therefore, of body language, and said that language differences were not a problem:

The body language, we can communicate, we just speak to each other with the body language, we'll do it and we get on and we could tell a lot of things (UP11HA04)

4.3.5.8 Individual conflict

One participant described a confrontation that occurred when he asked a fellow Hajji to pray in another location because he was blocking the way of others:

I saw someone praying between Muqaam Ibrahim... and the Kaaba door, and you know the Tawaf is very, very crowded and they are in the way, and I said to the guy... "Please can you not pray here; at least go back and pray!" And then he said to me, "I know better than you do." (UP11HA04)

4.3.5.9 Cultural difference & self-control

Though there is only a limited amount of aggressive behaviour, it does exist. One participant reported the following:

Somebody poked me in the back, and I tried not to turn because I hadn't done my Ikaama, but it kept becoming very, very painful so I turned around and I realised it was an older man from Afghanistan maybe or somewhere around there. I understood he meant you're a woman in front of me, get out. And of course I was trying to keep my nerve and I just carried on praying, I ignored it. (UP11HA02)

4.3.5.10 Conflict over the buses

Perhaps inevitably, considering the sheer numbers of people involved in the Hajj, participants' responses did not solely describe universal harmony and order. One participant described a scene in which large numbers of people were trying to board an insufficient number of buses all in one time:

People wanted to get on the buses and there were not enough buses to take everybody at one time, so there were violent scenes (UP11HA02)

4.3.6 Cluster Six: Experiences at the Haram

These themes refer specifically to participants' descriptions of their experiences at the Haram. These are considered particularly significant because of the importance of the Haram and because it is one of the most crowded areas during the Hajj (see Introduction and Chapter 2). Participants reported both feeling safe and sensing danger, and seeing cooperative behaviour as well as selfish behaviour among other crowd members. Other themes describe a sense of unity and shared emotion among Hajjis at the Haram.

4.3.6.1 Limited space

Lack of space inside the Haram is a problem faced by Hajjis:

We prayed either inside or if we were late sometimes then we prayed on the top floor. We were able to get to the top floor at least. (UP11HA03)

According to an experienced Hajji, this is an increasing problem:

The first few years it was accessible, the Haram, so I had to leave slightly early to get there on time. Unfortunately [in] the last few years [it has been] inaccessible. (UP11HA04)

4.3.6.2 Fair competition

With limited space available inside the Haram, there is competition for the most desirable places:

Obviously, one would try to arrive early and look for a space where you'd have maybe a nicer view or you could feel more at ease praying. (UP11HA01)

One participant spoke serenely and fatalistically about the disappointment of finding one's way blocked by others:

When it's full and you can't go through any more you feel sad that you can't go closer. You don't blame other people because they got there before you. (UP11HA03)

4.3.6.3 Feeling safe

Several participants reported feeling safe within the Haram. Even with the huge human density, as shown in figure 4.1. Participants were asked to review images taken from the pilgrimage and the participants were asked to give their impressions of them in relation to safety.

UP11HA01: To be honest with you when you're in the middle of the crowd you can't see it from above so you are not necessarily aware of being [in that critical density].

Int: But have you felt that you are in a very, very tight, controlled movement, very dense in some way?

UP11HA01: I'm sure I was in a dense crowd and like that, but I never felt claustrophobic or I needed to escape or anything like that.



Figure 4.1 High density of Hajj crowd (source: The author of this study 2010)

Another participant reported similar feelings of safety, but spoke also of ‘taking safety precautions’ hinting that safety might potentially be an issue:

*I did feel safe, yes. I didn't feel frightened at all... you take your precautions.
(UP11HA04)*

In contrast to the difficulties associated with *Tawaf*, participants described *Sa'i* as a comfortable experience:

In Sa'i, wherever you do Sa'i, it doesn't matter who's next to you, [with] everybody you feel comfortable. (UP11HA04)

There was one quotation where my question about safety alluded to security but the participant answered in terms of trusting strangers because they were all pilgrims. The question was: "Tell me what do you feel about the safety of performing the Hajj?"

I felt very safe; there wasn't an occasion when I felt unsafe. I think just because you're surrounded by so many people doing the same thing. You feel you could turn to anyone for help at any time. I've never felt unsafe at all. . (UP11HA01)

4.3.6.4 Feeling unity

The ritual of *Tawaf* represents the unity of believers in the worship of Allah, and participants on a personal level felt this unity:

There's a feeling of togetherness, there's a great feeling of harmony, there's a great feeling of oneness. (UP11HA03)

Because of the common bonds of religion that outweigh the differences between Hajjis there is a sense in some of the responses that during the Hajj 'strangers' do not exist in the traditional sense of the word:

I felt very much in unity with anybody outside my group. (UP11HA02)

Two participants described the feeling of unity in terms of family ties:

I remember going around... the Kaaba and seeing all the sisters sort of holding each other in a very sisterly way. I just joined them and they didn't tell me, "Go away". (UP11HA02)

As I said before there's camaraderie, there's a brotherhood there, and again I go back to this drink that I keep talking about. These people don't know who you are, never seen you before and at that moment after you drink the water they give you, you might never see them again, but that feeling is there. (UP11HA03)

As well as experiencing a feeling of unity with the crowd, participants also described witnessing harmony in the actions of the crowd. This can refer to harmony in movement:

You're just part of that crowd and you follow everyone and it's like there's a system there you follow, and it just matches. (UP11HA04)

The crowds... are going... around it in motion nicely without... fighting, it was beautiful. (UP11HA03)

4.3.6.5 Potential for danger

As previously stated being in a large crowd is potentially dangerous which was clear to the participants. Two described aggressive behaviour during *Tawaf*:

[During] Tawaf I must admit I felt some people were a little bit aggressive, you know, and wanted to rush it and would sometimes push you out of your way. (UP11HA01)

Even in the absence of aggressive behaviour, overcrowding is a problem:

Sometimes as you're going there on certain days for example there may be a big crowd and that can be worrying. (UP11HA03)

One participant suggested that the solution might be for management to set a limit on the number of people who can enter certain areas:

Once people realize that this they feel is about the maximum they should then close off and not allow any more people to go in which I think is happening now. (UP11HA03)

Given the sheer number of people present during the Hajj, and the history of previous accidents, there is a very real danger associated with the crowds:

The first few years, especially in Jamarat, in the crowd it was scary. (UP11HA04)

Several participants identified the *Tawaf*, in particular, as a potentially dangerous situation:

When you're doing Tawaf you are worried that if someone or you fall down it's a real problem, or [if] something happens to you, will someone get there? If I had my elderly father who's maybe eighty-five now, if he's with me I'll have a big problem. If

something happens to him, will the ambulance people get to him in time – that’s always a worry. (UP11HA03)

The last quotation notes the difficulties faced by older members of the crowd, a sentiment echoed by another participant:

I could see people who really felt they were in danger and I could feel for them because like I said they were either disabled or very old or very timid or very weak. (UP11HA02)

When confronted with such a large amount of people, the aforementioned unity of the crowd can dissolve in favour of smaller group affiliations:

Different groups trying to compete with each other for places (UP11HA01)

4.3.6.6 Selfish individuals

Some participants said that they had witnessed selfish behaviour in others at Tawaf, while others reported that they had not. One participant saw it as an unavoidable consequence of gathering together in large numbers:

Like in any crowd you’ll have some people would be selfish and would want to push others aside or take more space than maybe they needed to. (UP11HA01)

Another response suggested that selfish behaviour can stem from the existence of smaller groups within the crowd, with “*some groups wanting to keep spaces for their sisters.*” (UP11HA02)

One participant described a sense that a minority of Hajjis were not engaging in *Tawaf* in an appropriate manner:

They were in the minority and unfortunately they weren’t very relaxed in their approach to doing Hajj. They wanted to do things quickly. (UP11HA01)

4.3.6.7 Courtesy

Reports of selfish behaviour were outweighed by reports of cooperative behaviour. These included sharing:

If they're drinking something from one of those containers that has zamzam and if they see someone coming they'll give it to them. (UP11HA03)

... and considerations of etiquette and courtesy:

If they knocked you they apologized and I think the crowds just make you feel part of something special. (UP11HA01)

4.3.7 Cluster Seven: Perceptions of the Hajj Management

Participants were asked to describe their awareness of and experience with Hajj staff. Although there was limited interaction with local Saudis, participants talked about the difficulties of managing the crowds during Hajj, as well as positive experiences interacting with and observing staff members. Participants were eager to praise the management of the Hajj. Some acknowledged the scale of the task facing those responsible for crowd management:

I think the management and the logistics behind it; they must have worked very hard to make things that way. (UP11HA01)

Another, who had attended the Hajj on several occasions, remarked on the improvements that had been made to Jamarat where many of the crowd problems have occurred before:

I've been several times and I've seen the differences, they've done an extremely good job, especially in Jamarat... it was very well organized (UP11HA04)

4.3.7.1 Well-managed

Participants spoke of appropriate procedures, measures and of their experience that constant improvements were being made (evolution):

It was very well managed. When you comment about the staff you have to look at their bosses, their managers and I think that they put a very good programme in place. It must take a lot of time, a lot of training. I know from my own work and I think it was managed beautifully really, very impressed with that side of things. (UP11HA01)

4.3.7.2 Effective information and signage systems

Participants were generally positive about the available information and signage:

The signs were pretty explicit. (UP11HA02)

Although one participant noted that improvements could be made:

It's good but it's a way for improvement. It's always an improvement. Around the Haram, yes it's good, but slightly outside the Haram it could be more of signs to indicate directions and maybe public toilets or things like that. But it's good. (UP11HA03)

4.3.7.3 Adequate staff numbers

Most participants indicated that the number of staff was effective in providing the appropriate service in terms of the number and presence around the clock:

Haram staff, they're very professional. The reason I say very professional, when they have millions – millions come – and everyone begs you to, we are human beings at the end of the day, who will give up in the end, and they don't keep the order we won't have an ordered Haram. (UP11HA04)

Yes there were where ever you went from the airports, to the roads, to the Haram itself; there were plenty of staff, yes. (UP11HA01)

4.3.7.4 Faith in the ability of the emergency services

Of the emergency services, one participant remarked, “*I think they do a good job*” (UP11HA03) and another, who had personal experience of receiving assistance from emergency staff, echoed this:

I felt sick a couple of times and I was seen straight away and that was fine. (UP11HA01)

Though the emergency services do a good job, the main problem is the ability to gain access:

I think that is a quite a difficult problem for the authorities because if someone like say falls down and they get hurt for the ambulance crowd to for them to come in and look after this it can't be two minute job because it can be very difficult if someone is very close to the Kaaba for them to be called and then make their way in and pick up this person I think there will be a lot of people willing to help this person who gets injured but for the medical staff to get there it's not that easy simply because of how big the crowd is. (UP11HA03).

4.3.7.5 Relations with police

The role of police in maintaining order is crucial for managing such large numbers of people. The challenge faced by the police was described thus:

It's a great challenge really because although people might know where to go, still they've got to be marshalled, they've got to be routed and you can't just leave them. (UP11HA04)

Several of the participants praised the police for the many ways in which they carried out their task:

They are very professional. [They] keep the order and they're very patient. (UP11HA04)

One participant shared these sentiments, but expressed surprise to find this was the case:

I was very pleasantly surprised to see them [be] very helpful actually. (UP11HA02)

4.3.7.6 Hajjis and local Saudis

In an effort to distinguish the nature of the relationship between the pilgrims and the local Saudis, these commentaries represent the point of view and experience of participants:

On each and every occasion they were very kind to us they would make it as easy as possible for us to pass through the checks we needed to, which have to be done. And they were polite with us, despite the volumes of people I thought they would be very stressed but they were very relaxed. They gave us food and books and what more can you ask really? (UP11HA02)

Although one participant noted that:

I personally I think they do a good job under very difficult conditions because you've got millions of people coming at you all the time all the time all the time you've got to keep your eyes open you can't sit down and close your eyes you've got to be very alert as to what's going on and really it's very important that when they see a problem these people take a decision you might not like it but they've got to take a decision that is the best for everyone there. (UP11HA01).

4.3.7.7 Hajjis and Haram staff

From the participants' perspective, they think that the staff inside the Haram did a good job in the circumstances of a large-scale gathering.

They were doing a good job, I mean the Haram itself was beautifully kept and was clean. They spend billions on it, very impressed by the Haram itself. (UP11HA01)

4.3.8 Cluster Eight: Identity

During Hajj participants' identity as Muslim took prominence, and other aspects of self such as nationality were secondary, they said. A common theme in responses was that they felt unity with the crowd, and there was the sense of a shared experience among Hajjis.

4.3.8.1 Social identity

Identity describes an individual's sense of self, group affiliations, structural positions, and ascribed and achieved statuses. Therefore a Muslim's identity at the Hajj can be viewed as a social identity. When asked, 'How would you identify yourself?' one participant indicated that:

My nationality was second, my Islam was first, and nationality was second really. (UP11HA02)

This comment, echoed by other participants, expresses the idea that social identity comes from group membership, and that in the context of the Hajj one's identity as a Muslim is most important.

4.3.8.2 Shared identity

Given that, during Hajj the individual is surrounded by Muslims (both the pilgrims and the Hajj staff), this has a bearing on behaviour within the crowd. Although there are sub-groups within the Hajjis, there is also an overriding 'in-group' of fellow Muslims. Thus it is not just that 'I am a Muslim' it is also the fact that 'we are all Muslims – *everyone* here is a Muslim':

We are millions of Muslims together as one nation as one brotherhood sisterhood together doing the one same thing. (UP11HA03)

It makes me feel so proud to be a Muslim; that's what it makes me feel. Because you can't tell the difference between us. And not just that, safe; we are safe to come because we are all the same. We are all the same. (UP11HA04)

4.3.9 Participants' Responses to Pictures of Management/Functionaries

Following interviews participants were shown photographs of personnel at the Hajj, including army personnel, customs officials, members of the Red Crescent, emergency services, civil defence, and traffic police, as well as an image of a large crowd of Hajjis, as seen in figures 4.2, 4.3 and 4.4. Participants were asked to describe the function of each of these types, thoughts about them, and reflections on their experiences with these functionaries. Some examples:



Figure 4.2 Security forces at Haram plaza (source: The author of this study 2010)

Hmm, to me, coming from the West they look like soldiers in an army because they have a khaki uniform. But probably I guess they're not army officers so they're probably police officers. (UP11HA01)



Figure 4.3 Civil defence personnel at Haram plaza (source: The author, 2010)

UP11HA01: They're wearing hard hats; in England usually you just wear them on building sites. But I can see obviously they're looking after somebody who might have fallen ill.

Int: But from your experience when you saw them can you recognise from which sector of security services they are, emergency services?

UP11HA01: They look more like security to me than anything else. Because of their luminous tops and hard hats.

Int: Actually, they are civil defence.

UP11HA01: Civil defence, okay.



Figure 4.4 Red Crescent personnel at Haram plaza (source: The author of this study 2010)

UP11HA01: Yes, I can see obviously somebody has had an accident or maybe passed away and they're wearing some kind of uniform.

Int: Can you identify it?

UP11HA01: No, I can't.

Int: Have you had any experience with these people so far?

UP11HA01: Personally no, but I have witnessed them, that, myself.

It was found that all participants had difficulty identifying Hajj personnel providing services to them, suggesting that they didn't differentiate between the different functionaries and perhaps therefore that they had little direct experience of interacting with them.

4.4. Discussion

Among participants in this study, there was a lot of consistency in the responses, suggesting the shared quality of many aspects of the Hajj experience.

One such aspect was the experience of joy at being in the Hajj crowd. Participants reported friendly behaviour from others around them that in turn was reciprocated by participants themselves. Such was the feeling of communal joy that one participant who reported normally wanting to escape from large crowds found that this particular crowd engendered a sense of calm and relaxation.

Partly this joy may have come from engaging in a shared spiritual experience of the utmost religious significance for those participating. Among the associations described by participants was that the gathering reminded them of the prophecies of the Day of Judgment, when the righteous will congregate before entering *Jannah* (paradise). Crowd relations were described in terms of brotherhood or sisterhood, and several participants discussed the emotional qualities of the shared experience – seeing others happy made participants themselves feel happy, seeing others crying from heightened emotion brought participants to tears.

There were also reports, from all participants, of witnessing supportive behaviour in the Hajj crowd. This supportive behaviour ranged from simple gestures of what one participant termed 'kindness' – the sharing of food and water, making space for others so they are comfortable –

to helpful actions that are important for the maintenance of crowd safety, such as helping those who have fallen or who seem to be struggling in the crowd context.

Importantly, this supportive behaviour often took place between complete strangers, and sometimes without the necessity for verbal communication (it is worthwhile noting that Hajjis come from a wide range of cultural and linguistic backgrounds, and many cannot communicate with each other verbally). Key to understanding this seems to be that within the Hajj crowd, Hajjis are not seen as strangers. Instead, as previously mentioned, other pilgrims are seen as fellow Muslims, as family.

Closely related to the sense of joy at being with other Hajjis, and the prevailing atmosphere of support and cooperation, the theme of unity emerged as prominent among participants' responses. This sense of unity had several dimensions. On the spiritual level, participants described the connection they felt with others in the crowd as a result of everyone being there for the same purpose. 'Togetherness', 'unity', and 'harmony' were all used to describe this sense of shared purpose. In social identity terms, we might say that unity causes help. People help each other because they are the same people.

Also contributing to the unity of the crowd was the element of crowd members being dressed the same way. According to participants, this promoted unity in two ways: by dissolving cultural, national, and ethnic boundaries that would have been more salient had pilgrims been dressed in their regular clothes, and by reminding crowd members of their shared purpose for being there.

Although the management of the Hajj was praised, with one participant remarking on improvements that had been made and others expressing satisfaction with the provision of signage, there was a general sense that pilgrims did not have much contact with official staff. One said that they had only interacted with cleaners, while another reported no contact except with an Imam. Finally, there was an important distinction in the accounts between social identification and shared social identity (Neville & Reicher, 2011).

The findings presented here, of participants reporting joy at being in the crowd, contrast with early explanations of crowd psychology, discussed in the last chapter, which emphasize negativity and pathology. As we have seen, Le Bon (1895) described individuals in a crowd

as regressing to a 'less civilized' psychological state that can lead to greater selfishness, anti-social behaviour, and barbarity. More recently, Zimbardo (1970) described the phenomenon of 'de-individuation', by which crowd members feel less restrained in their behaviour due to their perception that their actions as an individual are 'lost' in the crowd, and that they are therefore less accountable, again leading to antisocial behaviour.

In this study, participants reported quite the opposite: they felt more accountable for their actions, and pro-social behaviour was modelled and spread amongst individuals in the crowd. Other crowd members were described as 'brothers' and 'sisters', and any instances of counter-normative behaviour were portrayed as rare and liable to invite disapproval from the majority of others within the crowd.

The discussion allowed me to reflect on my methodology and as a result, I amended the interview schedule in order to remove some non-crowd questions. The conclusions that I drew from this experience were that (a) people were comfortable talking in an authentic, unforced manner about their crowd experiences as a result of the framing of the interview questions; (b) I realised that the interview schedule was too long and was able to amend it; (c) I became aware that not all the material was relevant and this led to my editing the schedule for the following piece of work, the 2011 Hajj pilot.

The selection of participants in these research, interviews was done in coordination with the Preacher of the Medina Mosque in Brighton. The Preacher provided me with the names of people they approved to participate in my pilot study. There was a disproportionate ratio of 1 woman, to every 4 men. I noticed that it was difficult to recruit women participants in this pilot study because of culture, traditions, customs and the religious teachings of Islam. Women often don't want to discuss their experiences of the Hajj with a strange man in an interview. In many cases, women would recommend her husband or her brother or her father to conduct the interview. This issue requires some thinking about the mechanisms that might be used to increase this percentage in order to get a representative sample of the number of women coming for Hajj, which I sought to address in the main study of the thesis by using (male) research assistants' female partners or relatives (see Chapters 6 and 8).

While this pilot study was useful in terms of testing the interview schedule, in order to build on this data I needed to undertake a field pilot in preparation for the main study, to examine the practical aspects of carrying out the interviews as part of the Hajj.

Chapter 5: Field Pilot Study of Pilgrims and Management Experiences and Behaviour at the Hajj 2011

5.1 Introduction

In chapter 4 I began to explore the crowd phenomenology of the Hajj using IPA. This focused on the experiences and behaviours of UK pilgrims who had previously performed the Hajj. It further described the interview approach of this qualitative research, the data analysis, and the results.

Chapter 5 builds on chapter 4 in terms of being a pilot study in preparation for the major study of the Hajj 2012. This chapter aims to investigate the feasibility of the interviews with (a) pilgrims and (b) managers during the event in preparation for Hajj 2012 in terms of logistical considerations and other practical issues that might arise. In addition to the experiences of pilgrims within the Hajj crowd, there is the importance of the managers' perspective (cf. Stott & Reicher, 1998). As management have the power to shape the pilgrims' experience, their perception of the crowd of pilgrims is important. This is the first time that this research has been undertaken.

In each case, this study will be interested in points of agreement and disagreement between Hajjis' views and those of management, since these contrasts are suggested by recent research to determine how and why relations between crowds and managers may develop positively or negatively (Carter, Drury, Amlôt, Rubin, & Williams, 2014; Stott & Reicher, 1998). The researcher's role is to make sense of participants' accounts and, in particular, to test the manager's interview schedule, in preparation for the main study of the Hajj 2012 crowd. The study is qualitative and the approach adopted is again interpretative phenomenological analysis (IPA) (Smith, 2009). The methodology employed, semi-structured interviews, was first tested in the pilot study described in chapter 4.

This chapter is divided into two parts. In the first part I put forward an analysis of pilgrims' accounts, and a justification for the themes used to describe the results. I also put forward an explanation of my understanding of results compared with the results of chapter 4, and reflect how this will shape the main research project that will centre on the 2012 Hajj. In the second

section, I discuss the manager's interview schedule, the IPA themes identified, and lessons learned from the design and analysis for application during Hajj 2012.

The most important developments in my study can be perceived through my experience and reflections on these pilot studies – as Hajj comes once a year and lasts for only 5 days, as indicated in chapter 2, it is necessary to pilot and plan the main study as thoroughly as possible. I discuss the methodology used in this study. Furthermore, I reflect on the results and why I believe it is important for the next step in my research project.

5.2 Study 1 (Pilgrims)

5.2.1 Overview

This study replicates that described in chapter 4 (the crowd phenomenology of the Hajj: A UK pilot study) with an upgraded design carried out in the field. The primary motivation for conducting the study was to test the feasibility of the implementation of the study under the same conditions of the pilgrimage environment (time and place) as the main study (Hajj 2012) and to identify the logistical and administrative needs from the field realities for the Hajj for the upcoming major questionnaire survey and interview study. This second interview pilot study also helped me to develop the wording of the items in the questionnaire study for 2012. There were a number of minor changes made to the interview schedule used in the UK pilot and to shorten the interview time, notably omitting the final section, participants' responses to pictures of management/functionaries, as it was found (in chapter 4) that none of the participants differentiated between the different functionaries, which suggests that they had little direct experience of interacting with them. Furthermore, some items relating to housing and transportation were cut, as they did not serve the aim of the study because they were not about crowd experiences. With these changes, average interview time was cut from 45 minutes to 30 minutes.

Since I had already analysed interview material with former Hajjis (Chapter four), I could not avoid having some preconceptions about the issues that might be important when I came to analyse this new data-set. The aim of IPA is to empty the mind of preconceptions, but it is widely accepted that there is no theory-free perception. However, I did my best to approach

the data with an open mind in order to discover new themes and/or to look at new and existing themes differently.

5.2.2 Method

5.2.2.1 Design

I decided to sample the visiting pilgrims (participants) in four categories: (1) Interviews carried out before the day of Arafat⁸, with pilgrims who were performing Hajj for the first time in their lives, referred to in this study as ‘before-first’ pilgrims. (2) Interviews carried out before the day of Arafat, with pilgrims who had performed Hajj multiple times previously, referred to in this study as ‘before-multiple’. (3) Interviews carried out *after* the day of Arafat, with pilgrims who were performing Hajj for the first time, referred to in this study as ‘after-first’ pilgrims. (4) Interviews carried out after the day of Arafat, with pilgrims who had performed Hajj multiple times, referred to in this study as ‘after-multiple’.

Themes and questions from the schedule are presented below. Questions were arranged according to several themes: significance and experience of the Hajj (the importance of the Hajj for pilgrims, and their subjective experience of performing Hajj), identity (how Hajjis defined their identity, and what aspect of their identity – religious, national, cultural – was most important to them during the pilgrimage), relations with others (specifically with other pilgrims and management staff), behaviour (how the participants themselves behaved during Hajj, and what they noticed about the behaviour of others), and experiences on the way to and at the Haram.

⁸ The Day of Arafat falls on the 2nd day of pilgrimage rituals; the 9th day of Dhu al-Hijjah (the Month of Hajj) is called the Day of Arafat. While the Day of Arafat is always on the same day of the Islamic calendar, the date on the Gregorian calendar varies from year to year since the Islamic calendar is a lunar calendar and the Gregorian calendar is a solar calendar. This day is the culminating event of the annual Islamic pilgrimage to Makkah, Saudi Arabia. It is considered the most important day of Hajj, during which pilgrims gather on the desert plains of Arafat, near Makkah, to pray to their Lord.

I. Meaning of Hajj

- What are the channels of communication practiced by you to get different information about the Hajj?
- Has your expectation of Hajj been informed by the stories of your relatives who made obligatory Hajj, or by Islamic scholars, or by friends?

II. Experience of Hajj

- Can you describe your feelings at the moment when you saw in front of you for the first time the Holy Kaaba?
- Describe your feelings of being among the Hajj crowd.

III. Self & others

- How would you describe yourself in terms of relations with others?
- When you were with the crowds, did you feel that you were part of this crowd or did you feel that this crowd is, for instance, from Africa and you are from England?
- Would most other people at the Hajj describe themselves in the same way?
- Do you see yourself as similar or different to those who are performing Hajj?
- Can you describe your relationships with the Hajj crowds?
- Do you feel close to other pilgrims who were in the crowd?
- Do you feel any sort of bond with other pilgrims who were in the crowd?
- Did you feel that you and the other pilgrims were affected differently by being in the crowd or were you all having the same experience?
- Do you feel a sense of unity with other pilgrims who were in the crowd?

IV. Relations with others

- Did people talk to each other in the crowd? If so, describe.

- How did they communicate with others Hajjis who don't speak the same language?
- Do you find other people on the Hajj to be supportive?
- Do you enjoy their company?
- Have you felt at any time the need to focus attention on competing with other groups?
- Have you noticed any disruptive activities in groups (e.g. aggressiveness)?
- How did other Hajjis respond to this?
- Have you noticed anybody acting selfishly or in a bad/aggressive manner?
- From day one to the final day of Hajj did your feelings toward these people change?

V. On the way to Al-Haram, perceptions of other groups

- On your way to the Haram which groups were the most in number?
- Were they friendly with you?

VI. Experiences at the Haram – crowding

- How did you feel about the other people around you at the Haram?
- Did you feel united with other people inside the Haram?
- Did you feel that other people got in your way?
- Did you behave harmoniously with other people around you?
- Did you see anyone over-reacting as a result of excessive crowding in the Haram? If so, please describe what you saw.
- Did you see anyone behaving selfishly during the large gathering at the Haram? Can you give me an example of such an act?
- Did anyone show out-of-control behaviour? If so, in what circumstances? If so, please describe this behaviour.

- Did you see anyone in the crowd behave in such a selfish way that things got out of control?
- Did you see anyone becoming overly emotional during worship activities within al-Haram? If so please describe how this behaviour affected you as an individual and as a group at the Haram.
- Were there times when you felt that it was too crowded? Or were you comfortable with the level of crowding?

VII. Relationships between staff and the public

- How did you perceive your relationship with the Haram staff?
- Did you feel that the measures taken by staff in leading pilgrims out of the Haram were adequate?
- How did you feel about the quality or clarity of information that is broadcast or signs systems used?
- Did you have faith in the ability of emergency services to respond successfully to any incidents at the Haram?
- Do you feel that the number of staff was adequate to ensure effective crowd management?

5.2.2.2 Participants

The study sought to sample English-speaking Muslims from as many nationalities and regions as possible before and after the Hajj. Twenty-seven interviewees were recruited: 24 were male and 3 females. Ages ranged from 23 to 69, with a mean age of 43. Participants were from different specialities (research scientist, university professor, engineer, businessman, accountant, student, tour leader). Nineteen of the participants were performing Hajj for the first time while eight of the participants had been to the Hajj more than one time. One participant was from Ghana, three were Egyptians, seven were Americans, one was Syrian, two were Canadian, and twelve were British. See Table 5.1.

Table 5.1 Pilot of Hajj 2011 participants – pilgrims (demographic information)

Participant code	Nationality	Age	Sex	Occupation
HJP11U02	Egyptian	---	M	Assistant professor
HJP11U03	American	56	F	Real estate agent
HJP11U04	Egyptian	49	M	Businessman
HJP11U05	Egyptian	49	M	International corporation agent
HJP11S01	American	69	M	Retired
HJP11S04	Syrian	36	M	Engineer
HJP11B01	American	36	M	Accountant
HJP11B03	American	54	F	Women's health practitioner
HJP11B04	British	45	M	Student
HJP11U01	British	60	M	CEO of telecommunication Co.
HJP11B02	American	49	F	Tour leader
HJP11B05	British	35	M	University graduate student
HJP11S02	British	54	M	Businessman
HJP11U07	British	35	M	Engineer
HJP11U08	British	28	M	Engineer
HJP11U09	British	30	M	Engineer
HJP11U10	British	28	M	London Underground worker
HJP11B06	American	37	M	Teacher
HJP11B07	Ghanaian	58	M	Accountant
HJP11S07	Canadian	34	M	Businessman
HJP11S09	British	36	M	Businessman
HJP11S10	British	23	M	Student
HJP11S11	American	36	M	Computer consultant
HJP11U11	British	40	M	Travel agent
HJP11B08	British	36	M	Research scientist
HJP11S08	Canadian	44	M	Businessman
HJP11S12	-----	56	M	Businessman

5.2.2.3 Preparation and procedure

This section outlines some of the key considerations that emerged during various planning stages in the data collection process. Based on the 2011 UK pilot study, I was aware of several research difficulties. The main consideration was to make sure that any information collected should be done rapidly in the short time available for gathering data during Hajj, and include data for both pilgrims and Hajj management (see study 2, below). Financial limitations were another consideration. These issues were addressed and dealt with as appropriate as possible to achieve the objectives of the study.

I visited the head of the Centre of Research Excellence in Hajj and Umrah at Umm Al-Qura University in Makkah, and requested their support that was granted to me by the Dean. After several deliberations they were convinced that the research would build up our knowledge of the Hajj, and I was confirmed by three assistant researchers with previous experience in dealing with the participants and data collection in accordance with the moral, philosophical system of scientific research pilgrimage studies. They were influential in English (two British and one from Saudi Arabia, all were Ph.D. students in Islamic Studies from Umm Al-Qura University in Makkah). They delivered a major role in conduct the interviews during the 2011 Hajj for pilgrims.

After training in data collection for IPA for the assistants, we approached participants inside the Holy Grand Mosque and its courtyard plazas. We introduced the study to the participants and explained to them that they could refuse to answer any questions or stop the interview at any time they wished. All interviews were recorded using a digital recorder with the participant's consent. The interviews were conducted in English.

In order to explore relations between participants and Hajj staff the following steps were taken: after their interview each participant was presented with ten pictures of different personnel at the Hajj and asked to describe the function of each member of staff, and to reflect on their personal experiences with staff fulfilling these roles. Participants were asked to review images taken from the pilgrimage and the participants were asked to give their impressions of images in relation to Hajj.

5.2.2.4 Data analysis

Participant accounts of Hajj crowd experience and behaviour were analysed using interpretative phenomenological analysis (or IPA) (Smith, Flowers & Larkin, 2009) for the semi-structured interview themes (pilgrims). IPA was the chosen research method approach in this study because it offers the opportunity to engage with the insights and hear participants' accounts of their lived experience during the Hajj 2011. Analysing various accounts of this experience allowed for a deeper understanding of pilgrims' shared experience.

The analysis firstly involved coding by identifying key words that reflected issues that seemed important to interviewees. Next, I attempted to organize these key words into themes, where the key words seemed to belong together as they referred to similar issues. This was an iterative process. I went back and forth between the transcripts and the coding to check my analytic claims. Finally, I organized the themes into superordinate themes, or clusters, for ease of presentation. Finally, I ran a comparison between these results with outcome results of chapter 4.

5.2.3 Analysis

The analysis presents a summary of each theme as shown in the following table:

Table 5.2 Summary of all themes and clusters of Hajj 2011 Pilots (chapter 5) vs. UK pilot 2011 (chapter 4)

Chapter 4 clusters	Chapter 5 clusters
1. Meaning Of Hajj	1. Religious experience
2. Spirituality	2. Spirituality
3. Understandings before and after Hajj	3. Understandings before and after Hajj
4. Perceptions of the crowd: in general	4. Perceptions in and of the crowd: general
5. Relations among Hajjis	5. Behaviour to others in the crowd: general
6. Experiences at Haram	6. Experiences to and at Haram

7. Perceptions of Hajj management	7. Relations between Hajjis and others (non-pilgrims)
8. Identity Meaning Of Hajj 1. Opportunity For self-change 2. Submission 3. Self-control 4. Religious collective self-affirmation	8. Identity Religious experience 1. Mandatory for all Muslims 2. Opportunity for self-change. 3. Submission to Allah 4. Self-control 5. Religious collective self-affirmation
Spirituality 5. Collective social experiences 6. Spiritual qualities in interaction 7. Emotional significance of Kaaba 8. Spiritual (versus non-spiritual) aims Understandings before and after Hajj 9. Expectations Before Hajj 10. Expectations of danger 11. Change in expectations Perceptions of the crowd: in general 12. Distinctive cultural groups & diversity in the crowd 13. Inconveniences 14. Potential of danger 15. Unity 16. Crowd equality	Spirituality 6. Emotionality of seeing Kaaba 7. Collective spiritual experience 8. Spiritual (versus non-spiritual) aims Understandings before and after Hajj 9. Expectations before 10. Change in understanding 11. Expectations of danger Perceptions in and of the crowd: general 12. Crowd diversity 13. Joy from being part of the crowd 14. Crowd equality 15. Inconvenience 16. Different cultural groups in the crowd

<p>Relations among Hajjis</p> <p>Friendly relations with others & social interaction</p> <p>17. Supporting needy strangers</p> <p>18. Cooperation</p> <p>19. Joy from being part of the crowd</p> <p>20. Shared emotion</p> <p>21. Group affiliation</p> <p>22. Communication in the crowd</p> <p>23. Individual conflict</p> <p>24. Aggressive behaviour</p> <p>25. Collective conflict over the buses</p>	<p>Behaviour to others in the crowd: general</p> <p>17. Helping needy people</p> <p>18. Communication in the crowd</p> <p>19. Friendly relations</p> <p>20. Conflict and competition</p>
<p>Experiences at Haram</p> <p>26. Limited space</p> <p>27. Fair competition</p> <p>28. Feeling safe</p> <p>29. Feeling unity</p> <p>30. Potential of danger</p> <p>31. Selfish individuals</p> <p>32. Courtesy</p> <p>Perceptions of Hajj management</p> <p>33. Well managed</p> <p>34. Effective information and signage systems</p> <p>35. Adequate number of staff</p> <p>36. Faith in the ability of emergency services</p> <p>37. Relations with police</p> <p>38. Hajjis and local Saudis</p> <p>39. Hajjis and Haram staff</p>	<p>Experiences on the way to and at Haram</p> <p>21. Obstruction to attendance</p> <p>22. Joy from being part of the crowd</p> <p>23. Acting in unity</p> <p>24. Feeling safe</p> <p>25. Danger</p> <p>26. Selfish individuals in crowd</p> <p>27. Shared emotion</p> <p>28. Cooperation</p> <p>Relations between Hajjis and others (non-pilgrims)</p> <p>29. Relations between Hajjis and local Saudis (officials, workers)</p> <p>30. Expectations – relations with Haram staff</p> <p>31. Haram staff behaving helpfully</p> <p>32. Haram staff not behaving helpfully</p> <p>33. Communication from Hajj organizers</p> <p>34. Ability of emergency services</p> <p>35. Adequate number of staff</p>

Identity	Identity
40. Social identity	36. Social identity
41. Shared social identity	37. Shared social identity

5.2.4 Summary of results

It was clear that the findings were closely related to the responses described in chapter 4 (see Table 5.2). Therefore, to avoid redundancy, I will not present all the details here, because this analysis adds little to chapter 4. What is interesting is that even under the distinct conditions of the two studies – whereas the first study (chapter 4) was conducted under a closed roof away from the crowd, the second study (chapter 5) was conducted in the crowd – similar themes were identified (as shown in table 5.2).

For the sake of brevity and because of my interest in behaviour and experiences specifically in and around the Haram, I will present a detailed analysis from only one of the above clusters, *Experiences on the way to and at Haram*. This cluster has been chosen because the Haram is the focal location of our study.

5.2.4.1 Obstruction to attendance

Because of the large numbers of people involved, some participants reported difficulty in reaching their objectives while at the Haram.

I tried to pray 5 times but because of the crowd, sometimes I cannot reach the start, the prayer starts when we reach a point close. (HJP11S02)

5.2.4.2 Joy of being part of the crowd

Joy of being part of the crowd was a recurring theme within participants' responses. Rather than an aversive experience, being within a high-density crowd was experienced positively:

I've been to many stadiums like Wembley in the UK but the crowd [at Hajj is] 4 to 5 million people wearing the same uniform or same dress, is amazing and very beautiful, so it makes you feel proud of being Muslim. (HJP11S09)

5.2.4.3 Acting in unity

There was a sense among pilgrims that the members of the crowd were acting in unity. The following quote describes this feeling of unity, but also notes that there were exceptions:

There was a sense of unity but there was Satan who also influenced some people, but most of the time I would say 99% of the time there was a unity, people got along, they helped each other. (HJP11S09)

It is notable that, in this description of anti-social behaviour within a religious crowd, such behaviour was attributed to the influence of ‘Satan’ rather than to other pilgrims themselves.

5.2.4.4 Feeling safe

Hajjis reported feeling safe on the way to and at the Haram. This participant linked these feelings of safety to the presence of Haram staff and effective organisation of the event:

There is a lot of safety in the perform of the Hajj, there is good security there, everything is under control, everything is under control. There are TV cameras, there are staff working very well, it is clean and they look after the Haram, it's very nice, yes. (HJP11U04).

5.2.4.5 Danger

There were also reports of experiencing a feeling of danger at the Haram. One participant initially denied having felt in danger, before expanding on this and recalling an incident when he felt at risk:

Actually, no, there was not the feeling of danger. There was once, yes, actually, there was one time I felt danger while doing Tawaf, the crowd had gone really, the crowd was really swaying as one, from one side to the other in Haram while doing Tawaf, the crowd was really swaying and I was on the ground floor of course, so I was very close to the Kaaba and I felt that people may fall and that they will be stamping, people may not control themselves, somebody might get suffocated and I feared for the ones who were shorter in height. So that was the one time I didn't feel safe. (HJP11S11)

It is perhaps worthwhile to note that this experience was not prominent in the participant's memories of the Hajj, despite being potentially life threatening. It seems that positive recollections overshadowed the memory of being at risk.

5.2.4.6 Selfish individuals in the crowd

Theme 3 described unity in the crowd, and included a description of '99%' of crowd members acting in unity. One of the exceptions to this is described below:

Probably that man, I would say he was kind of behaving a little selfishly, you know, he could see that these was a large grouping he was trying to break apart their arms and get through but you know clearly he wasn't able to do so he just needed to calm down you know trying to get in back of them or in front of them or something. (HJP11B03)

5.2.4.7 Shared emotion

Pilgrims provided accounts of shared emotions within the Hajj crowd at the Haram. The *sora* are chapters of the Qur'an; the Sorat Al-Rahman is the 55th Sora of the Qur'an, and describes the blessings bestowed upon humans by Allah:

As an individual I was very moved that the Imam broke down, he was reciting the Sorat Al-Rahman and he broke down 3 or 4 times and everybody – I can only speak for myself – but everybody must have felt the same as I was feeling, there was a complete understanding of what the Imam was going through, he was obviously finding revelation in the Qur'an and at this particular time being Hajj... and obviously he, as I see it, loved this particular sora it is beautiful and I myself love this particular sora and I was also very moved that he was quoting from it. (HJP11S01)

5.2.4.8 Cooperation

Participants reported an atmosphere of mutual helpfulness and cooperation among pilgrims and staff.

There were a lot of people they support others, lot of people is helping if there is anything problem, there is the people serve you, the people is nice, people to help for everything, is nothing any problem with the perform of the hajj because the service is nice and the people is nice coming to there. (HJP11B05)

5.2.5 Conclusions

The UK pilot 2011, discussed in chapter 4, included the cluster ‘Experiences at Haram’. In the Hajj 2011 pilot, this is expanded to include experiences on the way to the Haram. There was significant common ground between the two studies. Both groups of participants discussed positive and negative experiences at the Haram, the results suggesting that, although being in a dense crowd can lead to feelings of danger, this is counterbalanced by the feelings of belonging and unity brought about by being part of a psychological crowd, which are linked to feelings of safety.

There are several differences in the two studies, including the fact that the UK pilot was conducted indoors, and the 2011 pilot was conducted outside at the Hajj. Furthermore, the UK pilot included speakers of several languages whereas the 2011 pilot focused on English speakers and took place in English, and the 2011 study cut down the interview questions and the study was more streamlined. In spite of these differences, parallels between the two pilot studies are apparent. These parallels include recurring themes such as collective spiritual experience, observing prosocial behaviour among other Hajjis, and shared social identity, as well as acknowledgement of conflict and competition within the crowd.

5.3 Study 2 (Management)

5.3.1 Overview

Prior to this study, no attempts have been made to assess crowd management at the Hajj from a psychological perspective. The primary objective of this study is to plan for the 2012 study of those who manage the planning of the Hajj, including both management staff and academics. Planning for the study of the perspectives of these staff during the Hajj was undertaken by investigating the feasibility of the methodological approach. This part of the study detailed the key findings of the nine semi-structured interviews conducted with experts (both managers and academics connected with the Hajj), specifically in relation to crowds,

their behaviour, relations and the most appropriate ways of preparing for, and managing, safe crowd events at the Hajj.

5.3.2 Method

5.3.2.1 Design

The study sought to sample selective representatives from different types of management from the Hajj event in 2011, favouring the speaking of English where possible. Nine interviewees were recruited.

5.3.2.2 Participants

Study 1 and study 2 were both carried out with the cooperation of the Custodian of the Two Holy Mosques Institute for Hajj Research at the University of Umm Al-Qura. I was supported by three experienced assistant researchers fluent in English (two British and one a Saudi Student of Islamic Studies from Umm Al-Qura University in Makkah) to help me conduct the interviews during the 2011 Hajj. I trained the assistants by briefing them on the aims of the project and the ethics and philosophy of my research. I gave them information on how to carry out the interview (e.g., how to introduce the interview, how to follow up questions and prompts). However, it was very difficult for my research assistants to carry out any of the interviews, as it was difficult for them to access the top generals for the interviews, as the assistants were not senior enough. In contrast, I had previously worked with most of these participants in the management of the pilgrimage for more than 20 years, and so I was able to employ my relationships with the management in conducting the interviews. Therefore the assistants did not carry out the interviews with management; I did that myself.

I approached participants inside the headquarters of their offices of Hajj operations. At the beginning of the interview I introduced myself by saying that I was a PhD student in social psychology at the University of Sussex, UK, and that as part of this degree, I was undertaking a research project that examined the crowd experience and crowd behaviour and its management during the Hajj.

Three participants were from the top management (decision makers), all holding general's rank, three were middle management (planning and operation), all holding general's rank as

well, and three were civilian experts and consultants to the management. Ages ranged from 41 to 61, with a mean age of 54. Participants were from different specialties. All participants were male. The names of the participants have been disguised to protect their identities, but with their agreement I have kept their job titles in order to provide context for their responses⁹. In this context, the information provided does not show their identity. Informed consent was obtained from all participants for all studies. Length of experience working in the management of the pilgrimage ranged from 12 to 35 years.

Table 5.3 Pilot of Hajj 2011 participants – management (demographic information)

Nationality	Age	Occupation
Group 1: Top management (decision makers) – All are generals – All Muslims – All male		
Saudi	57	Director of Civil Defence, Makkah region
Saudi	61	General Director of Civil Defence
Saudi	58	Spokesperson of the Ministry of the Interior
Group 2: Middle management – All are generals – All Muslims – All male		
Saudi	54	Assistant Director of the Makkah Region for Operations
Saudi	61	Civil Defence Manager in Makkah district
Saudi	54	Director of planning – The Directorate of Civil Defence in Makkah
Group 3: Experts consultants (academics) – All hold doctorates – All Muslims – All male		
Saudi	51	University academic staff member – Vice Dean for Development at the Hajj Research Institute
Saudi	41	Consultant of transportation Projects and Haram Expansion Project, Ministry of Higher Education
German	53	Crowd expert

⁹ Interviewees stated that they did not mind being recognised in the Method section, hence I have used full job titles here. In the Results section, a coding system masks their identities.

5.3.2.3 Procedure

Each participant was interviewed during a visit to their workplace, for instance the command and control centre. Visits were planned in advance and some of these visits were re-scheduled more than once due to the preoccupation of some of the participants in their responsibility in managing the Hajj 2011 event. The data in this study is derived from three types of Hajj management as indicated in the 'Participants' section. Interviews lasted around 60 minutes each. Participants were asked to describe Hajj events and talk about their own and others' feelings, behaviours and relationships between pilgrims in the crowd and with non-pilgrims. I introduced the study to participants and explained to them that they could refuse to answer any questions or stop the interview at any time they wished. All interviews were recorded using a digital recorder with the participant's consent. Some interviews were interrupted more than once and by more than one participant to respond to an important telephone call or to respond to an existing state of emergency. In certain of these cases, the interview schedule was given to the participant, who then completed the remaining questions in writing.

5.3.2.3.1 Semi-structured interview schedule

Questions for the interview were chosen in order to focus on the perspective of management staff on processes occurring during Hajj. It was considered important to obtain opinions about the meaning of the Hajj, and their expectations of how the event would proceed, in order to approach from a management perspective these topics that had been covered during interviews with Hajjis. As well as questions about the pilgrims and about the staff's own experiences of the Hajj, participants were asked about contact and communication with pilgrims, as this is vital to the Hajj progressing safely and is a potential area of vulnerability in the organizational structure of the Hajj. I was also interested in any specific perceptions management staff had of the Hajj crowd as a crowd. The interview was structured as follows:

I. Demographic Information

- What is/was your role in the Hajj management?
- Have you performed the Hajj before as a Hajji?

II. Meaning of the Hajj

- What does the Hajj mean to you as a person in charge of managing this event?

- Can you describe for me the different feeling (if there is any) when you perform Hajj as a pilgrim and as a person performing management services?

III. Expectations of the Hajj

- What were your expectations of the behaviour of other Hajjis?
- What were your main concerns about their behaviour?
- What are the main problems you face in your job?
 - o In terms of safety?
 - o In terms of disorder?

IV. Communication

- What are the channels of communication practiced by the management of the Hajj to deliver different information about the Hajj for people attending?
- How do you communicate with pilgrims from different nationalities with different language than yours?
- Do you feel that pilgrims are cooperative in responding to instructions from management? If not, why not, from your experiences?
- Have you spoken to pilgrims in person?

V. Experience of the Hajj

- Can you describe your feelings being in the position of serving the Hajj crowds?
- Tell me if your feelings or perceptions towards other people around you changed over the course of the Hajj. If so, in what way?
- Have you noticed any disruptive activities in groups (e.g. extreme behaviour, aggression)?

VI. Behaviour of Hajjis

- How would you describe the Hajjis? (What words would you use?)
- How do Hajjis behave?
- Do they all behave in the same way?
- What are the differences among Hajjis?
- What needs do they have on the pilgrimage?

VII. Experiences of Responding to Accidents at the Hajj

- From your previous experiences of responding to accidents at the Hajj can you describe the pilgrims' characteristic behaviour in extreme situations (i.e. in cases where pilgrims are likely to recognize the threats to themselves)?
- Have you ever witnessed cooperative behaviour among pilgrims in extreme situations?

VIII. Your Responses

- How do you respond when there is an emergency in the crowd (such as a crush)?
- What is the best response?
- How should they be treated when there is an emergency?
- What are their needs in such a situation?
- What are the needs of your organization?

5.3.3 Data Analysis and Results

Participant accounts of their experience and their perception of the crowd of pilgrims were analysed using IPA for the semi-structured interview themes.

The themes of the analysis are presented below:

Table 5.4 Analysis of Pilot of Hajj 2011 participants – management

Part 2: Management			
	Group 1: Top management (Decision makers)	Group 2: Middle management (planning and operation)	Group 3: Expert consultants (academics)
CLUSTER 1: Relationship of manager to Hajjis			
Themes	Interviewee 1, Interviewee 7, Interviewee 9	Interviewee 2, Interviewee 8, Interviewee 6	Interviewee 3, Interviewee 4, Interviewee 5
1) Relationship of service to Hajjis	1, 7, 9	2, 8, 6	3, 4, 5
2) Enjoying being in the crowd	1, 7, 9	2, 8, 6	3, 4, 5

3) Professional participation (testing) in Hajj			3, 4, 5
4) Difficult to measure anxiety in the crowd			3
5) Effective communication with the crowd	1, 7, 9	2, 8, 6	3, 4, 5
6) Personal communication with Hajjis	1, 7, 9	2, 8, 6	3, 4, 5
7) Shared goals	1, 7, 9	2, 8, 6	3, 4, 5
8) Shared identity with the crowd	1, 7, 9	2, 8, 6	3, 5
9) Communication through Hajj representatives	1, 7, 9	2, 8, 6	3, 4
10) Cooperative in responding to management	1, 7, 9	2, 8, 6	3
11) Inability to help			3
12) Research needed on Hajjis' needs	1, 7, 9	2, 8, 6	3, 5
13) Crowd control and management	1, 7, 9	2, 8, 6	5
14) Effective response when there is an emergency	1, 7, 9	2, 8, 6	3, 4
15) Challenges facing Hajj crowd management	1, 7, 9	2, 8, 6	3, 4, 5
CLUSTER 2: Perceptions of Hajjis' relations and behaviour with others			
16) Inappropriate behaviour is linked to not achieving their goals and needs	1, 9	2	4, 5
17) Expectation of self-regulation of the crowd	1, 7, 9	2, 6	
18) Willingness to help	1, 7, 9	2, 8, 6	5
19) Hajjis are polite and peaceful	1, 7, 9	2	3, 4
20) Perception of unity and equality within the Hajj crowd	1	2, 6	
21) Males defending females	7	8, 6	3
22) Erroneous beliefs and practices and misconduct	1, 9	2, 8	3, 4
23) Relations between Hajjis and their organizers	7	6	3, 4
24) Disruptive activities in groups	1, 7, 9	8, 6	3, 4, 5
25) Hajjis stay in their groups	1, 7, 9	2, 8, 6	3, 5
26) Cultural differences among Hajjis	1, 7, 9	2, 8, 6	3, 4, 5

27) Cooperation (helping) in the crowd	1, 7	2, 6	4, 5
CLUSTER 3: Perceptions of physical aspects of the crowd			
28) Crowd density	7	2	3
29) Crowd wave motion	1		3
CLUSTER 4: Perceptions of danger/problems in the crowd			
30) Pressure in crowd causes waves, leading to accidents			3
31) Spread of anxiety in crowd			3
32) Panic spreads through crowd	1, 7	2, 8	3
33) Disorder hinders the crowd			3
34) Disorder causes anxiety in pilgrims			3, 5
35) Panic causes extreme and selfish behaviour	1, 7, 9	8, 6	3, 4
7. Cooperation and helping vs. selfishness in extreme conditions in the crowd	7, 9	8, 6	

5.3.3.1 Cluster One: Relationship of Managers to Hajjis

This cluster contains themes on the subject of the relationship between Hajjis and Hajj management. It encompasses how management staff feel when they are in the crowd, how communication between pilgrims and staff is achieved, and challenges faced by staff in managing the crowd and responding to emergency situations.

5.3.3.1.1 Relationship of service to Hajjis

Hajj management staff who were interviewed saw their duty as providing the optimum conditions for pilgrims to carry out Hajj rituals in a safe and pleasant environment. One described his role as:

Providing the required services and facilities to assist pilgrims performing their Hajj rituals in a peaceful, spiritual, and healthy environment (9 - Top management)¹⁰

5.3.3.1.2 Enjoying being in the crowd

As with pilgrims who took part in the study, the Hajj management spoke of their positive feelings of being part of the crowd. For at least one interviewee, personal identity was less salient than their identity as a member of the group:

I merged with the crowd, where I lost my personality, my legal personality; I mean the administrative, to a large degree and felt that I belong to this crowd (5- Expert consultants)

5.3.3.1.3 Professional participation (testing) during Hajj

In contrast to the comment above, a member of the Hajj research institute said that he avoided mixing his professional role with performing Hajj as a pilgrim:

Generally, I prefer not to mix performing Hajj and conducting research activities, and encourage my colleagues not to do so. (3- Expert consultants)

5.3.3.1.4 Difficult to measure anxiety in the crowd

One participant described the difficulties of establishing the level of anxiety within the crowd, before this anxiety is expressed through hostile actions:

As a researcher, it is quite difficult to predict, measure, and quantify such anxiety before it appears as unfriendly actions. (4- Expert consultants)

5.3.3.1.5 Effective communication with the crowd

Effective communication between Hajj management and pilgrims is essential for providing safety for such a large crowd. One issue faced by Hajj management is that some in attendance cannot read, and so information must be conveyed by means other than words:

¹⁰ Participants' coding number

By different means and media, keeping in mind the need to simplify the information and instructions, knowing that there is a presence of a large group of pilgrims who are illiterate (7- Top management)

Because of the obstacles posed by some members of the crowd being illiterate, and the presence of people who speak different languages, a preferred method of communication is through pictorial representations and symbols:

Diagrams, symbols, and illustrated photographs are the best communication to Hajjis of mixed cultures and languages (6- Middle management)

5.3.3.1.6 Personal communication with Hajjis

Interviewees were asked whether they had had individual contact with members of the crowd. Some said that such contact was limited due to language barriers, while others affirmed that they had:

I have spoken to pilgrims in person, I feel greatly comfortable when speaking to the pilgrims, where I answer a lot of their inquiries and take their suggestions for service development pilgrimage from their point of view (2- Middle management)

5.3.3.1.7 Shared goals

The sense of a shared purpose, also discussed by the Hajjis, was felt by Hajj management and aided in feelings of identification with the crowd:

I feel that we (the Hajj management) and pilgrims are all gathered for the same goal. (3- Expert consultants)

5.3.3.1.8 Shared identity with the crowd

Shared goals contribute to a feeling of equality and unity with the crowd, as reported by management staff:

I felt that I was united with my brother pilgrims as I was part of them (pilgrims) sharing same goals and activities, and Hajj journeys was one of kind different than all other journeys I took before in my life time. (6- Middle management)

5.3.3.1.9 Communication through Hajj representatives

Communication between Hajj staff and pilgrims was mainly carried out via representatives of different national groups within the crowd. According to this interviewee, contact was:

Mainly indirectly through Hajj mission representatives, the mutawaf [national representatives] (9- Top management)

5.3.3.1.10 Cooperative in responding to management

On the whole it was felt that crowd members were responsive to crowd control instructions given by management:

Most of the pilgrims are cooperative in responding to the management's instructions. (7- Top management)

5.3.3.1.11 Inability to help

However, it is not always possible to provide such assistance. The same interviewee described witnessing emergency incidents, but not being in a position to help. Instead, he observed the incidents in the hope that the information he gained might be useful in preventing or responding to future emergencies:

It happened that I saw two emergency incidents at the Jamarat but was not able to help, so I observed the behaviour of people as a researcher. (3- Expert consultants)

5.3.3.1.12 Research needed on Hajjis' needs

One response given was that further study is necessary to establish in what ways the experience of Hajjis can be improved:

We believe that we need more crowd psychology study to increase our understanding of their behaviour. (1- Top management)

5.3.3.1.13 Crowd control and management

With increasing numbers visiting Makkah for Hajj, issues relating to crowd management will remain important. For some this can be conceptualized as an issue of 'crowd control':

These days we depend a lot in managing the crowd and control will be part of the management. (1- Top management)

5.3.3.1.14 Effective response when there is an emergency

It was pointed out by a member of the Hajj management that the most effective response to emergency situations is pre-emptive action:

The effective response is the response prior to the event to prevent it or minimize its effects. (8- Middle management)

5.3.3.1.15 Challenges facing Hajj crowd management

The most important challenge facing the Hajj management is to ensure the safety of the crowd:

Ensuring their safety first and ensuring that they can continue to perform their Hajj. (7- Top management)

5.3.3.2 Cluster Two: Perceptions of Hajjis' Relations and Behaviour with Others

This cluster comprises themes that relate to how Hajj management staff perceives the behaviour of Hajjis, including relationships between individuals and groups within the crowd. It includes their thoughts on prosocial and antisocial behaviour, similarities and differences within the crowd, and suggestions for why conflict and danger can occur during Hajj rituals.

5.3.3.2.1 Inappropriate behaviour is linked to not achieving goals and needs

Basic goals and needs vary for pilgrims on the Hajj. As an example, Iranian Hajjis require open-top buses to transport them during the pilgrimage as they feel that this brings them closer to God, therefore such buses are provided. It was pointed out that behaviour that is detrimental to crowd safety and enjoyment often comes about from crowd members not having their basic needs met:

We must meet the basic needs of the pilgrim to avoid the consequences for inappropriate behaviour as the problems within the crowd grow significantly. (2- Middle management)

These ‘basic needs’ are defined by a board member of the Establishment of the Mutawaf of Turkish, American and European pilgrims, and Head of the Department of Quality Assurance as:

Different kinds of food, adequate accommodation, accuracy in time planning, transportation, services in the streets, way finding points, lost and found centres, and mostly to be treated as human because they feel upset when they are treated in an aggressive way. Failure to provide such services might lead to aggression and competition between crowd members as they strive to achieve their goals. (7- Top management)

5.3.3.2.2 Willingness to help

The role of the Hajj management is to assist pilgrims in performing their rituals during Hajj therefore it is unsurprising that those interviewed expressed their desire to provide help:

Yes, in all previous [crowd accidents], some pilgrims act to pick people up from the fallen on the ground or the protection of children up to carry the elderly and vulnerable people. (6- Middle management)

5.3.3.2.3 Expectation of self-regulation of the crowd

As a religious crowd, it is expected that religious and spiritual beliefs would have some influence on the behaviour of members of the crowd:

According to Islamic teaching, I expected the behaviour to be self-regulated at all times and in all conditions. (9- Top management)

5.3.3.2.4 Hajjis are polite and peaceful

Several participants praised the behaviour of the crowd, and one response was effusive in its praise, reporting that Hajjis were:

Peaceful, religious, sensitive, polite, cooperative, friendly, and curious. (3- Expert consultants)

5.3.3.2.5 Perception of unity and equality within the Hajj crowd

We saw in Chapter 4 and earlier in this chapter that Hajjis reported feeling a sense of unity and equality with other members of the crowd. This was echoed by Hajj management staff,

who noted that these feelings are engendered by Hajjis wearing the same attire (*Ihram* robes – See chapter 2) performing the same rituals:

They wore the same clothes for the simple expression that there is no difference between rich and poor, they perform the same ritual in the same place and time and pray for the unity. (1- Top management)

5.3.3.2.6 Males defending females

There were reports from participants that they witnessed men defending women at times of danger or hostility. An interviewee gave an example of this:

In high-density areas and harsh environments, [there can be] some unfriendly actions [and I saw] men defending their females in their group. (3- Expert consultants)

Perhaps notably, this behaviour was observed within pre-existing groups within the crowd.

5.3.3.2.7 Erroneous beliefs and practices and misconduct

As we saw in Chapter 2, the ‘stoning of the devil’ ritual at Al-Jamarat Bridge has been the setting of several major incidents and disasters, before the redesign of the bridge in 2006. Several members of Hajj management reported that one possible cause of problems within the crowd are fervent, mistaken beliefs about the significance of the ritual:

Some people die because of misconceptions, they think that the devil is there, they fight you to go there even if they know that they will have problems, maybe they will be injured because they think that if they throw these stones, the devil will die. (7- Top management)

5.3.3.2.8 Disruptive activities in groups

An added danger is that some crowd members believe that if they die during Hajj, they go straight to paradise, which may lead to recklessness among crowd members, or, according to one member of management, a wish to die:

This makes the Hajj very difficult because of their wish – yes, that’s right, they wish to die in Makkah – so that’s why they don’t mind to fight sometimes when they go to throw the stone or in circling during Tawaf or entering a dense crowd. (7- Top management)

5.3.3.2.9 Relations between Hajjis and their organizers

Hajjis were viewed by management as generally cooperative with organizers:

Pilgrims are cooperative with their Hajj organizers. (9- Top management)

5.3.3.2.10 Hajjis stay in their groups

There was a sense among interviewees that, during Hajj, pilgrims tend to remain within their previously existing groups, with one member of staff stating simply that:

They stick to their group. (3- Expert consultants)

5.3.3.2.11 Cultural differences among Hajjis

Despite feelings of unity and equality among crowd members, there also remain some differences between the various cultures represented within the crowd:

Some cultures are used to being very polite. In other cultures, rough talk and behaviour are not uncommon. (1- Top management)

Because the participants were in many cases civil servants (i.e. they held positions in the Saudi Arabian government), they were reluctant to criticize specific nationalities or groups. They were however, keen to name certain countries in a positive light, as when a participant stated:

Some governments cooperate in a positive way, such as Malaysia, Indonesia and others. They underwent a pilgrimage intended to prepare their representatives for the Hajj, with spatial training through simulation of sacred sites, learning about best practices and what they should avoid for their own safety and the safety of other pilgrims. (7- Top management)

5.3.3.2.12 Cooperating (helping) in the crowd

Interviewees reported that they had observed helping behaviour within the crowd:

[I saw] cooperation and people helping each other. (5- Expert consultants)

5.3.3.3: Cluster Three: Perceptions of Physical Aspects of the Crowd

This cluster describes the way in which the Hajj management perceived the crowd as a physical entity, and includes descriptions of high density within the crowd and phenomena caused by high density that relates to the way in which the crowd moves.

5.3.3.3.1 Crowd density

The management staff that were interviewed described seeing:

Incidents of high density of people in crowded areas. (3- Expert consultants)

5.3.3.3.2 Crowd wave motion

One effect of high density, coupled with efforts by individuals or groups to reach their goal, is of the ‘human wave’ phenomenon. An interviewee described witnessing such an event as follows:

In one incident, I managed to stand behind a column until the human wave had passed, then I moved to see the source of the incident. (3- Expert consultants)

This statement implies that, when certain incidents occur, it might be impossible for Hajj management to act until the risk to their own safety has passed. This could affect their ability to do their job effectively.

5.3.3.4 Cluster Four: Perceptions of Danger/Problems in the Crowd

This cluster describes situations of danger during Hajj, and possible reasons for these situations arising. Hajj management reports both cooperative and selfish behaviour in response to danger.

5.3.3.4.1 Pressure in crowd causes waves, leading to accidents

The human wave effect, described above, can lead to injury or death. The motion of the crowd:

Creates pressure waves, causing accidents. (3- Expert consultants)

5.3.3.4.2 Spread of anxiety in the crowd

Just as physical actions can spread among crowd members, such as with the crowd wave motion, Hajj management reported observing a similar effect with emotions:

Negative feelings... may spread to others, causing anxiety to the crowd. (3- Expert consultants)

5.3.3.4.3 Panic spreads through the crowd

Potentially the most dangerous emotion that can spread through the crowd is ‘panic’, which, according to one response can easily pass among crowd members:

Panic can easily spread through an excited crowd. (3- Expert consultants)

5.3.3.4.4 Disorder hinders the crowd

When disruptions occur in a certain section of the Hajj crowd, this negatively impacts the smooth movement of the pilgrims:

Disorder creates difficulties to the flow. (3- Expert consultants)

5.3.3.4.5 Disorder causes anxiety in pilgrims

Such disorder can also influence the emotions felt within the crowd. One member of staff noted that lack of personal physical space can lead to feelings of anxiety among Hajjis.

[Disorder] causes some anxiety to pilgrims due to very close contact. It can be accepted to some extent as long as the density is not reaching dangerous levels. (5-Expert consultants)

This response also suggests that such anxiety can be tolerated as long as crowd members feel safe.

5.3.3.4.6 Panic causes extreme and selfish behaviour

It was stated that, in situations of ‘panic’, prosocial behaviour can be sacrificed in favour of an outlook that prioritizes the safety of the individual.

As a human, in very extreme conditions, unexpected behaviours appear due to panic, such as stepping over others, or walking over the heads of others in the crowd.
(4- Expert consultants)

It should be noted, however, that this response used the phrase ‘very extreme conditions’, suggesting that they do not expect such behaviour in the regular course of events.

5.3.3.4.7 Cooperation and helping vs. selfishness in extreme conditions in the crowd

Hajj management reported pro-social and selfish behaviour. One member of Hajj management described witnessing some pilgrims endangering other members of the crowd, and others putting themselves at risk in order to help those in need:

From our experience in dealing with emergencies and previous accidents in the past, there have been cases of horror and panic in escaping and actions of selfishness such as the desire to escape from the situation selfishly or even walking on top of the bodies of others in the crowd. On the other hand, we have seen positive behaviour as well the actions of some helping others to the extent where they expose themselves to dangerous situations. (7- Top management)

Key to the understanding of the Hajj crowd, and the improvement of the safety and comfort of pilgrims, is to establish what lead crowd members in some situations to exhibit helping behaviour, and in others to behave selfishly.

5.3.5 Summary of Study Two

The focus of the current study achieved its objective by exploring the hidden side of the relationship of those in leadership and management roles with pilgrims, managers’ perceptions of pilgrims’ relations and behaviour with others, perceptions of physical aspects of Hajj crowd, and perceptions of danger and problems in the crowd. In this chapter, I attempted to advance the field by being more specific about intergroup relations; I looked at the intergroup aspects of crowd experience and behaviour to develop our understanding.

In terms of viewing the Hajj crowd as a psychological crowd, management staff echoed pilgrims’ accounts of being in Makkah for a shared purpose, which was commented on by all

participants. It was notable that interviewees spoke of a common goal that was shared not just by Hajjis but by the management as well. Reasons for this unity were forwarded by participants, who described the Hajj as an act of collective worship leading to feelings of equality. Furthermore, the *Ihram* robes were mentioned (see 5.3.3.2.4), as they were by Hajjis, as a factor in encouraging crowd members to assume a common identity with the crowd.

Responses from management staff are particularly useful in terms of the different perspective they offer on how dangerous situations arise within the crowd. Their observations can be divided into two categories, corresponding to psychological and physical risk factors.

With regard to the former, various factors were cited, including personal beliefs that encourage certain individuals to act with extreme fervour or disregard for their own safety, such as the notion that those who die during Hajj will directly enter heaven. Other potential causes of conflict or danger were suggested, notably cultural differences between different groups of pilgrims, for example different standards of etiquette held by culturally diverse groups. For example, that which is considered to be normal behaviour in one culture might be thought aggressive by another culture. Nevertheless, participants also commented on helping behaviour among Hajjis, and positive relations between pilgrims and management staff.

Physical aspects of the crowd that can lead to potentially dangerous situations included high crowd density in certain areas. As a result of this density, movement within the crowd can be slow and act as a barrier to those who are trying to move forward. In such situations, management staff reported witnessing ‘human wave’ motions in the crowd, and potential danger to Hajjis. According to interviewees, these physical phenomena can feed back into the psychological state of crowd members, causing ‘panic’ and disorder, which in turn affect the physical situation within the crowd. Consequences of danger reported by participants included both cooperative and selfish behaviour.

5.3.6 General Discussion

This chapter has presented two studies of Hajj 2011, focused on the experiences of pilgrims and management respectively. Hajj 2011 was one of the safest of recent years, in which millions of Hajjis converged on Makkah without major incident. The smooth running of the Hajj helped to provide the right climate to conduct research interviews with crowd members and management staff. Among the findings in both the pilgrim and management pilots was that perceived crowd safety was not simply a matter of intergroup relations between the pilgrims and management, but also of intragroup relations, i.e. group processes within the crowd. Expectations of support were a significant factor in how crowd members experienced high density situations, as demonstrated by responses in the cluster 'Experiences on the way to and at Haram' (e.g. in section 5.2.4.8).

There were many commonalities in the findings of the two studies, particularly in how participants viewed Hajj as a collective experience in which Hajjis view themselves as part of a unified group. Both groups also, nevertheless, reported some incidents of conflict between individuals and groups in the crowd. A common theme was that when there is overcrowding, pilgrims are frustrated in trying to achieve their goals, which can lead to disagreements, aggressive or hostile acts, or dangerous incidents.

As mentioned in the previous section, management staff remarked on the single-minded focus of Hajjis on performing their rituals. There is a widely held belief that to die during the Hajj guarantees immediate passage to heaven, which might lead pilgrims to take risks that they would not otherwise. This was borne out by one Hajji, who, when faced with a dangerous situation in the crowd, thought, 'Even if I die, I'm dying in the best country in the world and I'll be sent to heaven.' In this context, it was pointed out by a member of Hajj management that:

Some of them exposed himself or herself to various risks, which we warned them about by different means and some behave in a dangerous way because they believe that if they die during Hajj, then they will enter paradise so this makes the Hajj very difficult because of their wish – yes that's right, they wish to die in Makkah so that's why they don't mind to fight sometimes when they go to throw the stones or in circling during Tawaf or entering a dense crowd. (6 - Middle management)

One potentially crucial difference between the two groups of participants is that management staff has a privileged view of events occurring within the crowd, in that their focus is on the crowd itself, rather than on completing Hajj rituals. As one pilgrim noted, ‘when you’re in the middle of the crowd you can’t see it from above so you are not necessarily aware [of its density]’.

Another difference, relating to how the two groups engaged with the interview process, is that, while the pilgrims were keen to share their personal observations of participating in the Hajj, the high-level management staff who took part were less keen to respond on a personal level. It is particularly important to find out the views of field management, because they have direct contact with pilgrims and their experiences are different from those of senior management – I would like to explore these differences. One important consideration when interpreting the results of this research is that there is no direct dialogue between pilgrims and those responsible for the administration of the Hajj. Instead, communication occurs through official representatives of various groups within the crowd. Instructions and regulations are relayed to crowd members through these channels; therefore it is important that the forthcoming research, during the 2012 Hajj, includes data from various levels of the Hajj administration, ranging from the upper management to the soldiers involved in fieldwork, who have direct contact with the pilgrims.

This was a pilot field study of pilgrims and management. I took samples across English-speaking Muslims from as many nationalities and regions as possible. I was supported by three experienced assistant researchers who were fluent in English (two British and one a Saudi Student of Islamic Studies from Umm Al-Qura University in Makkah) during the first study. We conducted the interviews during the 2011 Hajj. Twenty-seven interviewees were recruited: 24 were male and 3 were female. Again, there was a lower proportion of female participants due to the pilgrims’ social and cultural restrictions. In the main study I will try to include female research assistants to interview women in order to raise the proportion of female participants.

In terms of social status, the majority of the participants were educated people and those with a good standard of living; this may have some correlation with the fact that we targeted speakers of English. For the purpose of including all social levels we should include all of the

major languages used in the pilgrimage. In study 2, I sampled across the English-speaking management and participants were all from different senior management roles. All were male because there are no women working in the Hajj senior management. In the main research I will include junior management as well as field management who are involved with pilgrims face-to-face.

The first study (pilgrims) was conducted in English and was carried out by three research assistants, two British and one Saudi in order to avoid bias towards my role as a senior manager. As a result of this pilot study, for the next main study I decided to employ research assistants in data collection who were foreigners and from the same country as the pilgrims, to underscore the sincerity of expression and information collections. For the second study (of Hajj management) I relied on the fact that I was well known to the Hajj administration and their trust in me that I will not use their data for purposes other than research purposes. As this segment of the participants was a higher rank than me, there was limited possibility for an excess of deference in answering my queries.

5.3.6.1 Reflections on method

On reflection, there were a relatively large number of closed questions in the interview schedules for both pilgrims and managers. Ideally, for an IPA study there should be more open-ended questions in order to allow the interviewees to raise issues rather than the interviewer control them. However, there was still at least one open-ended question for most of the themes addressed.

The overall sample size was large (27) for an IPA study and my concern with describing the breadth of experiences meant there was no in depth analysis (see 3.8 Methodological issues in the study of the crowd). In this pilot study I was less concerned with whether or not the sample matched the profile of the Hajj population, and it is clear that some national and language groups are over-represented in the sample because of the ease of recruiting them. During the data-gathering process, it was apparent that pilgrims were often eager to take part in the interviews, more so if they were approached in their native language, and particularly if the interviewer was of the same nationality. For this reason, 45% of respondents among pilgrims were British, as two of three research assistants on this pilot were from the United Kingdom. In next year's study (Chapters 6-8), research assistants of various nationalities will

be used to collect data, in order to secure participants from a range of national and cultural backgrounds, representative of the heterogeneous Hajj crowd. The interview questions will be in the mother tongue of the participant, which will require multiple interview schedules in different languages, and the presence of translators for the major languages spoken by Hajjis. This way I will ensure a more representative sample.

It was apparent to me on listening to the recordings of the interviews that the assistants employed in this study did not possess the skills to carry out interviews to the necessary standard. For example, when interviewees gave very brief answers, the interviewers did not exhibit the curiosity or skill to follow these up. They did not get the interviewees to elaborate and so therefore some of the richness that would be hoped for in an IPA interview study is missing. This is a lesson for the main study. For that, I will include some training time for all interviewees bring them up to the required level for the task.

Furthermore, the research assistants in the pilot study of Hajj management faced difficulties in securing interviews with management staff. This was because during the Hajj these people are preoccupied with doing their job, and could not commit entirely to the interviews with very junior people approaching them unsolicited. I had to conduct these interviews personally, as I had the advantage of knowing many of the participants already, and communication with them was easier for me, having spent 20 years working and communicating with these managers. Therefore in the 2012 study, I will have to carry out the interviews with senior managers myself; my prior experience of working with these people will aid me in this.

As mentioned, an additional factor that might affect the nature of interviews with pilgrims is whether I am wearing my army uniform. I wasn't wearing my army uniform in this study and will ensure that during the 2012 study I will not wear uniform when interviewing participants.

Because of their time constraints, some of the managers completed the interviews in written form. The obvious disadvantage of this was that I was unable to interact with follow up questions or to clarify answers. These answers were also briefer than those produced in a live interview. My reasoning in allowing this to go ahead was that the alternative was no, or incomplete, data from these participants. Some data was better than none. I will be putting

measures in place in the main study – such as arranging meetings at a time when interviewees really are available to talk – to prevent this from happening.

It should be added that it was not only the managers who were under time constraints. Pilgrims, too, were eager to carry on their Hajj duties, and did not want to spend too much time being interviewed. It was clear that an interview during the 2011 study was re-designed for optimal use of the time available. Some parts of the semi-structured interview schedule of 2011 UK pilot were deleted, such as items related to pilgrims' accommodation and transportation and the possibility of identifying service providers through their uniform. These changes reduced the duration of interviews from 45 minutes to 30 minutes in 2011 study. It is clear that interviews during the 2012 study will need to be designed for more optimal use of the time available.

There were other logistical considerations raised by these pilot studies that will again be pertinent during the full study. After obtaining ethical approval from Sussex University, it was necessary also to seek ethical approval from Umm Al-Qura University in Makkah. Permission was also sought from security agencies to conduct interviews within the Masjid al-Haram, and travel permits were secured from these organizations. Because of limited time available for carrying out research during Hajj, all permits and passes will need to be arranged before the main study during next year's pilgrimage.

The full study will be particularly interested in points of convergence and divergence between responses by the two groups under consideration: Hajj management and pilgrims. Recent years have seen major organizational changes in the administration of the Hajj, notably the redesign of the Jamarat Bridge. By combining an understanding of the dynamics and psychology of the Hajj crowd with the deployment of Saudi security forces across a broad spectrum of responsibilities, it will be possible to maximize the chances of future Hajj events to be successful. The next three chapters will be concerned with the main study undertaken for this PhD.

Chapter 6: Experiences of the Crowd and Crowd Safety at the Hajj 2012

6.1 Introduction

In previous chapters I described pilot studies necessary to plan for the main research addressing the aims of the thesis: (1) to document and understand the perspective of pilgrims from a psychological point of view, since there is almost no psychological research on the Hajj, and the few studies that do exist focus on negative aspects and problems of the crowd such as stampedes, overcrowding and large-scale accidents; (2) specifically to examine pilgrims' experiences of the crowd (density, joy), any concerns around safety or feelings of safety and the reasons for these feelings, and their perceptions of other groups and subgroups in the crowd, including their relations with management; (3) to determine the relationship between these experiences and pilgrims' shared identity with the crowd; (4) to address the *intergroup* aspects of crowd experience and behaviour, and how Hajjis perceive managers and vice versa, since social identity is a function of intergroup relations.

The present chapter presents data gathered during Hajj 2012, and expands on the findings of the previous two chapters of this thesis. In chapter 4, I described the pilot study carried out in the UK in October 2011, the interview approach of this qualitative research and the data analysis process, which used interpretative phenomenological analysis (IPA) (Smith, 2009). In chapter 5 I described the methodology and design of a field pilot study of the accounts of both pilgrims and managers, carried out in Makkah during Hajj 2011. This IPA study further outlined the interview approach, data analysis, and results of the crowd experience and crowd behaviour of participants at the Hajj in order to establish the methodology and design of the IPA study for Hajj 2012 at Makkah, Saudi Arabia (pilgrims' accounts). Based on the 2011 Makkah pilot studies, I was aware of several research difficulties and issues, which were discussed in chapter 5, alongside the strategies I developed for overcoming them, which are described in this chapter.

In addition, chapter 6 builds on chapter 5 in terms of being the final outcome of the preparations and strategies mentioned in previous chapters in conducting this study. The study sought to sample, as far as possible, the various Muslim peoples by their language,

specifically the Arabic, Indonesian, Persian, Urdu, English, French and Turkish languages, and thereby get a representative sample. For this reason, the interviews were conducted in these languages.

The present study is an open-ended study of Hajjis' experiences at the key location of the Hajj, and during an important ritual. Semi-structured interviews were conducted with people who were in the Grand Mosque crowd, to allow participants to express in their own terms their perceptions of crowd experiences and crowd behaviour at Hajj 2012. Specifically, I wanted to examine their experiences of the crowd (including density and safety), any concerns around safety or feelings of safety and the reasons for these feelings, and their perceptions of other groups and subgroups in the crowd, including their relations with management. In addition to that, I wanted to determine the relationship between these experiences and their sense of unity or shared identity with the crowd.

Hajj takes place during a particular five-day period each year, and involves performing rituals at specified spiritual locations. Because of the large number of people attending Hajj, and performing these rituals in the same location, at the same time, density levels in the crowd have become a threat to the safety of those in attendance. Previous studies have examined the link between crowd density and risk. For example, John Fruin indicated that extreme crowding results in individual loss of control, and both psychological and physiological problems result in injuries and fatalities (Fruin, 2002). In another example, Moussaïd, Helbing, and Theraulaz (2011) reported that extreme density can result in 'crowd turbulence', a phenomenon that has been observed during recent crowd disasters, which occurs when crowd members are subject to two opposing forces: when pressure is applied to a crowd of people from one direction, personal space is limited to the extent that forces can be transmitted directly between bodies; this in turn leads to crowd members pushing against the original force, leading in some cases to injury and death. Besides this, committees formed to investigate crushing incidents during the Hajj have indicated that 'high-density flows' are a proximal cause of such accidents (see table 1). The 2006 accident, in which 346 pilgrims died at Jamarat during the 'stoning of the devil', has been attributed to high density flows (Helbing, Johansson, & Al-Abideen, 2007).

The study described in this chapter focuses on pilgrims' experiences on the way to the Masjid al-Haram and during Tawaf. The Haram is the location, and Tawaf the ritual, that are the focus of the research overall. Reasons for this include their centrality to the experience of Hajj, and the fact that being in the Haram and performing Tawaf almost inevitably lead to experiences of high crowd density. These activities may be less objectively safe and comfortable than others associated with the Hajj, and so offer a good opportunity to explore Hajjis' emotions, relations with and perceptions of others, feelings of safety or danger, and attributions for these feelings of safety or danger.

Because of the large amount of data gathered, we decided to report the results of only two groups: English speakers and Urdu speakers.

Based on the 2011 Makkah pilot study, I was aware of several research difficulties, which I will now discuss alongside the strategies I developed for overcoming them. Notably, there was the limitation of the research study time specified, which was due to the limit on the days of Hajj. The pilgrimage occurs from the 8th to the 12th day of Dhu al-Hijjah, the twelfth and last month of the Islamic calendar. Thus the window for data collection was extremely small, considering the large number of pilgrims I planned to sample. Another difficulty encountered in the 2011 pilot was that many pilgrims were unwilling to participate in the research due to their preoccupation with worship and prayer. They did not want anything standing in the way of achieving this. In addition to this, many pilgrims were rushing to perform rituals in just five days. In order to address these difficulties, the 2012 research team focused on field presence, intensifying their effort and work in the short time available to conduct interviews with pilgrims by increasing the number of assistants available to obtain the largest number of respondents possible. As for encouraging the pilgrims to participate, assistants were recruited from different nationalities in order to encourage pilgrims to communicate with them and participate. In addition, the assistants' social skills were extremely important. They had to show patience and courtesy, and were helpful in answering many of the pilgrims' questions and inquiries about Hajj in the same cultural context and language.

With regard to the psychological and physical health of the pilgrims, it was clear from the 2011 pilot that the Hajj was stressful to many of them. They feel tired due to the constant travelling during Hajj, such as changing accommodation and performing rituals. Many of

them are exposed to a variety of health problems, in particular colds, flu and other infectious diseases (Memish, Stephens, Steffen, & Ahmed, 2012). This was likely to be a further factor affecting their willingness to participate in the research. This study was keen to intensify the efforts of researchers in order to exploit the time available to interview respondents and explain the research and its objectives so they understood its importance. We told them that the research would serve the purpose of providing new information about the crowd psychology of performing the rites of Hajj, and was therefore of scientific and practical value to pilgrims.

6.2 Method

6.2.1 Overview

The study was conducted by sampling pilgrims visiting the Haram from the 1st to the 14th day of the Hajj month of the Islamic year 1433 (October 2012¹¹). It was necessary to apply the research procedures used, interviews, research, during a specific time period representing the pre-Hajj period (from the 1st up to the 8th of Dhu al-Hijjah), during the pilgrimage (from the 9th up to the 12th of Dhu al-Hijjah) and immediately after completion of the Hajj rituals (after the 13th of Dhu al-Hijjah), in order to capture the pilgrims' perceptions and impressions and any significant changes in their behaviour or how they felt during the course of Hajj, in their own words. The Ethical Committee, Custodian of the Two Holy Mosques Institute of Hajj Research, Umm Al-Qura University; the management of the affairs of the Grand Mosque security, Makkah, Saudi Arabia; the University of Sussex, Brighton, UK approved this study protocol.

6.2.2 Preparation of and management of the research

It was important to keep in mind that there were a number of challenges facing the study (including the short time available for gathering data, financial limitations and regulatory

¹¹ Because the Islamic calendar is a lunar calendar, and is eleven days shorter than the Gregorian calendar used in the Western world, the Gregorian date of the Hajj changes from year to year.

requirements). These challenges were addressed and dealt with as appropriately as possible to achieve the objectives of the study.

A considerable number of meetings and arrangements prior to the pilgrimage in the 2012 season were coordinated with the Institute of the Custodian of the Two Holy Mosques, Umm al-Qura University, Makkah, where the Assistant Dean for scientific research confirmed the institute's logistic and financial support for this study. Accordingly, I worked prior to the pilgrimage season in ways that will now be discussed.

For the purpose of exploring the crowd experiences and behaviours of the main language groups of pilgrims at Hajj 2012, the interview schedule had to be translated into Arabic, French, Urdu, Persian, Turkish and Malay. As a first step, I translated the English language schedule into Arabic. Next, this Arabic language document was given to the translation department at Umm al-Qura University to translate it into other languages, namely French, Persian, Turkish, Malay and Urdu. These were then given to a different translation department based at the Institute of the Custodian of the Two Holy Mosques to re-translate all forms mentioned above into the Arabic language to make it easier for me to review all questionnaire surveys and to ensure compatibility with the translation of the Arab version that I carried out myself.

An announcement was made at Umm al-Qura University to request research assistants who spoke these languages so that we could include almost all categories of pilgrims who attended Hajj 2012. I then interviewed and selected my research assistants (21 students were used for this particular study, three assistants of each of the following languages: Arabic, Malay, Persian, Urdu, English, French and Turkish) in accordance with the required specifications for the study and the necessary languages. Allowances were paid to research assistants by Umm al-Qura University.

Theoretical training was implemented for two consecutive days at Umm al-Qura University before the start of the pilgrimage. This training explained the objectives and methodological requirements of the study. It outlined the theoretical dimensions of the research and stated what procedures must be adhered to, as well as what should be avoided, such as losing control of the interview, which can occur when respondents stray to another theme, take so

long to answer a question that interviews overrun,¹² or even begin asking the interviewer questions. The purpose of this training was to allow assistants to establish the right kind of interaction with participants when conducting interviews.

Practical training was implemented between assistants so that each student could practice the interview with someone from the assistant's group. This was to ensure adequate practice of the interview, and well as to provide guidance on best practice when delivering the interview. Specifically, the assistants were guided in how to follow up questions and ask for clarifications in order to get people to disclose their feelings and elaborate on their answers.

This would ensure standardization of procedure across the interviews. Furthermore, three factors were considered as important in order to carry out this study. Those factors were time, money and staff. To overcome this, coordination with Umm al-Qura University was developed. This produced financial and logistical support and knowledge of the nature and environment of pilgrimage.

6.2.3 Procedure

In deciding on the sample size of this study (70 participants), it was important to establish the right number of participants. If it were too low, it would carry the risk of inadequate information. Too high, and it might be impossible to carry out the interviews within the allotted time period.

There are a multitude of languages spoken by pilgrims from Islamic countries, where language diversity is common. The sample of pilgrims included most Islamic nationalities, comprising seven different languages (see below). The researcher received help from graduate students in the postgraduate stage of their Master's and PhD studies at Umm al-Qura University, and who had previous experience of fieldwork, particularly in the area of working with pilgrims. Where possible, the nationalities of the research field team members were the same as the sample pilgrims in the data collection.

¹² While IPA interviews should be as long as necessary to ensure that all relevant experiences can be reported, in practical terms this had to be adapted to a situation where busy pilgrims wanted to carry on with their religious devotions and where, at the outset of the interview, a set time had been specified to them.

Based on the pilot work and the needs of the study, we approached pilgrims in the crowd close to and inside the Grand Mosque.

6.2.4 Participants

It was important to represent the various Muslim people by their language, especially the Arabic, Persian, Urdu, English, French, Turkish and Malay languages. These seven languages are used by the Saudi Arabian authorities to communicate with pilgrims, and together, they cover nearly every country that is represented at the Hajj – for example, many Muslims travel to Makkah from Francophone countries in Africa.

Table 6.1 List of Hajj 2012 Participants – Pilgrims (demographic information)

Gender	Number Of Hajj Performed	Job	Ages	Country of origin	Language	Code
M	1	Public servant	48	American	English	P12HA-01
F	2	Student	31	Pakistani	English	P12HA-02
M	2	Self-employed	39	American	English	P12HA-03
M	3	Sound Engineer	29	American	English	P12HA-04
M	2	Translator	29	American	English	P12HA-05
F	1	Housewife	29	American	English	P12HA-06
M	2	Cook	46	American	English	P12HA-07
M	11	Consultant	53	American	English	P12HA-08
M	2	Self-employed	39	American	English	P12HA-09
M	1	Financial Analyst	30	American	English	P12HA-10
M	1	Business	43	Niger	French	P12HA-11

F	1	Student	29	Togo	French	P12HA-12
M	1	Student	32	Togo	French	P12HA-13
M	1	Farmer	62	Burkina Faso	French	P12HA-14
M	1	Business	56	Cameroon	French	P12HA-15
M	1	Business	46	Cameroon	French	P12HA-16
M	1	Business	57	Senegal	French	P12HA-17
M	4	Government Employee	43	Ivory Coast	French	P12HA-18
F	1	Student	32	Mali	French	P12HA-19
F	4	Government Employee	40	Ivory Coast	French	P12HA-20
M	1	Business	47	Indonesia	Malay	P12HA-21
M	2	Business	39	Indonesia	Malay	P12HA-22
M	1	Business	52	Indonesia	Malay	P12HA-23
M	2	Professor	44	Indonesia	Malay	P12HA-24
F	1	Government Employee	49	Indonesia	Malay	P12HA-25
F	1	Government Employee	57	Indonesia	Malay	P12HA-26
M	1	Business	46	Indonesia	Malay	P12HA-27
M	10	Driver	39	Indonesia	Malay	P12HA-28
M	1	Business	39	Indonesia	Malay	P12HA-29
M	4	A religious teacher	44	Indonesia	Malay	P12HA-30
M	1	Student	24	Pakistani	Urdu	P12HA-31
F	1	Student	26	Pakistani	Urdu	P12HA-32
M	5	Driver	37	Pakistani	Urdu	P12HA-33
F	1	Housewife	49	Pakistani	Urdu	P12HA-34
M	1	Architect	23	Pakistani	Urdu	P12HA-35
F	1	Housewife	26	Pakistani	Urdu	P12HA-36

M	1	Salesman	60	Indian	Urdu	P12HA-37
F	1	Housewife	55	Indian	Urdu	P12HA-38
M	2	Employee	30	Pakistani	Urdu	P12HA-39
M	2	Salesman	31	Pakistani	Urdu	P12HA-40
M	3	Professor	38	Afghan	Persian	P12HA-41
M	1	Currency Trader	47	Afghan	Persian	P12HA-42
M	2	School Teacher	34	Afghan	Persian	P12HA-43
M	1	School Teacher	32	Afghan	Persian	P12HA-44
M	1	Shop Owner	49	Afghan	Persian	P12HA-45
M	3	Professor	39	Afghan	Persian	P12HA-46
M	1	Business	32	Iranian	Persian	P12HA-47
M	2	School Teacher	37	Afghan	Persian	P12HA-48
M	2	Business	42	Afghan	Persian	P12HA-49
M	1	Farmer	34	Iranian	Persian	P12HA-50
M	3	Imam	63	Turkish	Turkish	P12HA-51
M	1	Unemployed	38	Turkish	Turkish	P12HA-52
M	1	Labourer	70	Turkish	Turkish	P12HA-53
F	1	Housewife	56	Turkish	Turkish	P12HA-54
F	1	Housewife	49	Turkish	Turkish	P12HA-55
M	1	Farmer	61	Turkish	Turkish	P12HA-56
M	1	Labourer	30	Turkish	Turkish	P12HA-57
M	2	Engineer	39	Turkish	Turkish	P12HA-58
M	1	Government Employee	45	Turkish	Turkish	P12HA-59

M	1	Business	56	Turkish	Turkish	P12HA-60
M	1	Business	40	Egyptian	Arabic	P12HA-61
M	5	Professor	42	Egyptian	Arabic	P12HA-62
M	1	Retired	70	Egyptian	Arabic	P12HA-63
F	1	Company owner	40	Egyptian	Arabic	P12HA-64
F	1	Researcher and Writer	27	Egyptian	Arabic	P12HA-65
M	1	Fishmonger	57	Tunisian	Arabic	P12HA-66
M	3	Accountant	42	Iraqi	Arabic	P12HA-67
F	1	School Teacher	64	Tunisian	Arabic	P12HA-68
M	1	Agronomist	56	Egyptian	Arabic	P12HA-69
F	1	Doctor	54	Egyptian	Arabic	P12HA-70

For the sample, we selected 10 speakers of English, 10 French, 10 Persian, 10 Turkish, 10 Malay, 10 Urdu and 10 Arabic.¹³ This resulted in a total sample of 70 participants for this study: 53 of the participants were male (75.7%) and 17 were female (24.3%). All participants were adults; the average age was 43. Seventy was considered to be a substantial number, but still viable.

The distribution of the sample across the period of the Hajj was as follows: the greatest number of participants, 36 (51.4%), were sampled in the 9 days before Hajj, 24 (34.3%) were sampled during the 3 days of Hajj, and 10 (14.3%) were sampled in the 6 days after the Hajj rituals.

We approached participants inside the Holy Grand Mosque and its courtyard plazas. All interviews were recorded using a digital recorder with the participant's consent. The interviews were conducted in English, French, Persian, Turkish, Malay, Urdu and Arabic. At the beginning of the interview we introduced ourselves by saying that we were conducting a

¹³ The research assistants were instructed to select people speaking these languages.

study in social psychology at the University of Sussex, UK. As part of this degree, we were undertaking a research project that examined the crowd experience and crowd behaviour and its management during the Hajj. We explained to them that they could refuse to answer any questions or stop the interview at any time they wished.

6.2.4.2 Interview schedule

Themes and questions about the schedule are presented below. Questions were arranged according to several themes: significance and experience of Hajj (the importance of Hajj for pilgrims, and their subjective experience of performing Hajj), identity (how Hajjis defined their identity, and what aspects of their identity – religious, national, cultural – were most important to them during the pilgrimage), relations with others (specifically with other pilgrims and management staff), behaviour (how the participants themselves behaved during Hajj, and what they noticed about the behaviour of others), and experiences on the way to and at the Haram.

I. Meaning of Hajj

- What does the Hajj mean to you?

II. Expectations

- What are you expecting at the Hajj?
- How will other Hajjis behave?
- How will you be treated by the staff?

III. Experience of crowds (spatiality)

- Describe your feelings as you are about to be or are among Hajj crowds. Is it a pleasant thought or an unpleasant thought?

IV. Self & relationships

- How do you see yourself? What word would you use? (E.g. Muslim, British)
- Would you describe most other people at the Hajj in the same way?

- Do you see yourself as similar or different to others who are about to perform Hajj?
- Can you describe your relationships with the Hajj crowd?
- Do you feel close to other pilgrims who are in the crowd?
- Do you feel any bond with other pilgrims who are in the crowd?
- Do you feel that you and the other pilgrims in the crowd are all having the same experience?
- Do you feel a sense of unity with other pilgrims who are in the crowd?

V. Behaviour with others

- Do people talk to each other in the crowd? If so, please describe. How do they communicate with other Hajjis if they don't speak the same language?
- Do you find other people on the Hajj to be supportive?
- Do you enjoy their company?
- Do you believe that people of different religions can live in unity (harmony) in a given society?

VI. Experiences on the way to Haram

- How do you feel about the other people around you on the way to Haram?
- Do you feel that other people are getting in your way on the way to Haram?

VII. Safety at Haram

- Tell me what do you feel about the safety of performing Hajj?
- Do you feel safe at al-Haram?
- Was there any time you felt in danger? Can you say why?

VIII. Tawaf

- Do you feel you are behaving harmoniously with other people around you? (Can you give me an example of Harmonious behaviour?)
- How are other pilgrims behaving during Tawaf and Al Sa'i?
- How did you find the experience of Tawaf?
- Does it feel good?
- Do you feel in harmony with others as you perform it?
- Is it too crowded at Tawaf?
- Or is it comfortable?
- Does it feel safe? Why?
- Do you see anyone over-reacting as a result of crowding in the Haram? If so, please describe what you have seen?
- Do you see anyone behaving selfishly during Tawaf? Can you give me an example of such act?
- Is anyone's behaviour out of control? If so, in what circumstances? If so, please describe this behaviour?
- Do you see anyone becoming emotional during Tawaf?
- Do you feel you are behaving harmoniously with other people around you? /
- (Can you give me an example of Harmonious behaviour?)

IX. At Haram – Perceptions of other groups

- Can you identify other groups (nationalities) at Haram?
- Are they friendly with you?

X. Relationships between staff and the public

- What do you feel about the way that you have been treated by local Saudis (officials, workers)?
- Please describe how you feel about your relationship with Haram staff?
- How do you feel about the attitude of the Haram staff towards pilgrims?
- How do you feel about the clarity of public information?
- Do you have confidence in the ability of the emergency services? If not, why?
- Do you feel that the numbers of staff at Haram are adequate to ensure effective crowd management?

6.2.3 Data Analysis

Since we are interested in relations between Hajjis and others, we will focus in the results section on Hajjis' experiences on the way to and at the Haram, and safety at the Haram and performing Tawaf.

Participant accounts of Hajj crowd experience and behaviour were analysed using interpretative phenomenological analysis (IPA) (Smith, Flowers, & Larkin, 2009) for the semi-structured interview themes (pilgrims). IPA was the chosen research method in this study because it offers the opportunity to explore participants' accounts of their lived experience during Hajj 2012. Analysing various accounts of this experience allowed for a deeper understanding of pilgrims' shared experience. IPA, which is concerned with individual accounts of subjective experience, gave participants a voice. We ran an IPA analysis on participants in all seven language groups, but decided to report results from only two groups: English speakers and Urdu speakers. The reason that we are interested particularly in English and Urdu speakers is that, according to the members of management interviewed in the pilot study in chapter five, English speakers are more oriented to safety than are Urdu speakers (Al Sharif, 2004).

I coded the material by identifying key words, focusing on what seemed to be experientially important to the participant. I then organized these key words into themes where the key words seemed to belong together in meaningful patterns based on my interpretations of the interviewee's concerns. Again, this was an iterative process as I went back and forth between the transcript and coding in order to maintain my analytic claims. Finally, I organized the themes into subordinate themes, or clusters, for simplicity of presentation.

Table 6.2 Summary of all themes and clusters of Hajj 2012

IPA analysis Hajj 2012	English 1-10										Urdu 31-40									
	1	2	3	4	5	6	7	8	9	10	31	32	33	34	35	36	37	38	39	40
Cluster 1. Experiences on the way to Haram, Themes																				
Collective spiritual experience	*	*	*	*	*			*		*	*	*	*	*	*	*	*	*	*	*
Unity of direction and purpose	*								*	*		*		*	*		*			*
Obstacles to the movement to Haram by squatters		*	*	*	*	*	*	*	*	*	*		*			*		*	*	
Shared identity						*	*													
Cluster 2. Safety at the Grand Mosque (Haram), Themes																				
Feeling fully safe at the Hajj (in general)	*	*	*	*	*	*	*	*	*	*	*	*		*	*		*			*
Feeling fully safe at the Haram	*					*				*	*	*	*	*	*	*	*	*	*	*
Feeling safe due to shared identity			*				*													
Feeling safe due to competent management														*						*
Feeling safe due to God's protection									*				*			*	*	*		*
Feeling safe, but with caution		*	*	*	*															

Potential of danger	*				*			*												
Not feeling in danger		*		*		*	*		*	*			*	*	*	*	*	*	*	*
Cluster 3. Experiences of Tawaf, Themes																				
Feeling in harmony and cooperative behaviour	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Appropriate and civilized behaviour in performing Tawaf	*		*	*	*	*	*			*	*	*	*				*			*
Appropriate vs. inappropriate behaviour by individuals	*				*								*							
Overcrowding	*	*											*	*	*	*	*	*		*
Crowded but comfortable experience in performing Tawaf			*						*	*	*									
Uncomfortable crowding in performing Tawaf				*	*	*											*	*	*	
Uplifting and positive experience in performing Tawaf	*		*	*	*	*	*		*	*	*	*	*	*	*	*	*	*	*	*
Feeling safe in performing Tawaf	*		*	*	*	*	*		*	*	*	*	*	*	*	*	*	*	*	*
Misconduct around the black stone	*	*	*										*						*	
Shared emotion during Tawaf	*	*	*	*	*		*		*	*			*	*	*	*	*	*	*	
Helping behaviour	*				*															*
Hostile individuals in the crowd		*	*		*				*						*					

No selfish behaviour in the Tawaf												*	*		*	*	*	*	*	*
No out of control behaviour	*		*		*		*			*		*	*	*	*		*	*	*	*
No overreaction because of overcrowding													*	*	*			*	*	
Feeling safe in the house of God												*	*	*						*

6.4 Results

6.4.1 Cluster 1. Experiences on the way to Haram

This first cluster relates to the experiences of the Hajjis on their way to the Haram. It encompasses spiritual feelings, identity, and the practicalities of getting to the Haram.

6.4.1.1 Collective spiritual experience

Through Hajj, pilgrims show their commitment to God, by undertaking a journey that may be long, difficult, and expensive. Hajjis share in this journey, the last leg of which is the route to the Haram. Participants reported that collective spiritual feelings were engendered by sharing this experience:

I feel joy and spirituality with the ones heading to the Haram. (P12HA-31)

6.4.1.2 Unity of direction and purpose

Hajj also represents the unity of the human race, and that despite diversity in race, colour, and creed; all peoples were originally as one. Hajjis said that they were aware of being gathered in the same place for a common aim:

I feel we are all the same with the same purpose. (P12HA-09)

6.4.1.3 Obstacles to the movement to Haram

Despite this shared sense of purpose, there were also reports of some pilgrims acting as obstacles preventing others from achieving their aims. These may include pilgrims who did not register their place of residence, those who prefer to stay as long as possible in the Grand Mosque, or people who gather for prayer and obstruct others who are trying to reach the Haram.

Some pilgrims sit on the roads early during the prayer time and are an obstacle to the movement and they don't cooperate with the organizers of the Haram; they only care about taking a place. (P12HA-31)

6.4.1.4 Shared identity

The majority of pilgrims are in Makkah to perform the Hajj for the first time in their lives. When they enter the Grand Mosque and are confronted with the sound of others like themselves at prayer, their identity as Muslims is at the forefront of their minds. This sense of shared identity was reported by two participants, and expressed in terms such as brotherly identification:

[The people around me] are my brothers (P12HA-07)

6.4.2 Cluster 2. Safety at the Grand Mosque (Haram)

This cluster collects themes that describe the experiences of Hajjis at the Haram relating to their safety. The pilgrimage was once an extremely hazardous undertaking, and Hajjis would assign a relative or trusted member of the community as the executor of their wills in case they did not return. Conditions on the journey have improved, but numbers taking part have also increased significantly, such that high density has become the major threat to the safety of those in attendance.

6.4.2.1 Feeling fully safe at Hajj (in general)

This first theme within the cluster describes the general safety that pilgrims felt during the Hajj:

The Hajj was pretty safe thanks to God; I didn't feel threatened at any point. (P12HA-09)

6.4.2.2 Feeling fully safe at Haram

This sense of safety was also felt at the Haram itself:

I feel very safe at the Haram from all harm and harassment. (P12-HA-04)

6.4.2.3 Feeling safe due to shared identity

Two pilgrims said that their shared identity gave them a sense of safety and solidarity. This shared identity also helps Hajjis to coordinate their actions to reduce friction and encourage cooperation. The result is a psychological space where the individual feels secure, without fear or threat:

Yes, safe in all regards, you're here with the Muslims and gather at one time with almost no problems. (P12HA-07)

6.4.2.4 Feeling safe due to competent management

Another reason that Hajjis felt safe was their sense that the Hajj was being organized well:

I found safety because the government is strong and every employee works well. (P12HA-31)

6.4.2.5 Feeling safe due to God's protection

Various participants also reported feeling reassured by their belief that God would protect them while they were at the Haram, the most holy site of Islam:

I feel safe and secure; there is no fear for me, especially at the house of God and in general in Saudi Arabia. (P12HA-33)

6.4.2.6 Feeling safe, but with caution

Despite feelings of safety, some participants reported taking precautions such as minimizing the amount of money they carry. In this there is an implicit acknowledgement that some might be taking advantage of the crowd, setting for the purpose of theft.

I feel safe in the Haram; I don't travel with a lot of money, so even pickpockets aren't an issue. (P12HA-03)

6.4.2.7 Not feeling in danger

The majority of Hajjis said that they did not feel in danger, and that they were not worried about their safety because of the belief that to die during the Hajj guarantees safe passage to heaven:

I didn't feel [in danger] at all. Even if something happened to me while I'm on the way to Allah I will go to heaven. (P12HA-31)

This belief was also stated by a Hajji in the pilot study described in chapter 4, and was discussed by a member of management staff in the pilot study (management) in chapter 5, as a potential risk factor in the crowd.

6.4.3 Cluster 3. Experiences of Tawaf

This cluster contains themes that describe the experiences of pilgrims while performing Tawaf, the circumambulation of the Kaaba.

6.4.3.1 Feeling in harmony and cooperative behaviour

Participants reported that some degree of cooperation between Hajjis is necessary for Tawaf to be a pleasant experience:

I behave harmoniously with the people around me and I feel that if everyone moved at the same pace, it would make it a more enjoyable Tawaf. (P12HA-04)

6.4.3.2 Appropriate and civilized behaviour in performing Tawaf

Some participants said that the other pilgrims they witnessed during Tawaf were patient and cooperative, helping others who need it:

People are patient in the Tawaf and Al Sa'i and they cooperate and sprinkle water when it is hot. (P12HA-40)

6.4.3.3 Appropriate vs. inappropriate behaviour by individuals

Among the responses were acknowledgements that Hajjis could be both prosocial and antisocial in their behaviour during Tawaf:

Most people are calm, nice and helpful, but there are some others – limited in number – who get frustrated and display unpleasant attitudes. (P12HA-01)

This participant said that people displaying negative attitudes are a minority, and distinguishes them from the majority of pilgrims. Moreover, he sought to explain their behaviour in terms of frustration.

6.4.3.4 Overcrowding

Participants reported the situation during Tawaf as being excessively crowded. During Umrah (the minor pilgrimage), crowd numbers do not reach the same level as during Hajj.

For Umrah it isn't as bad as it looks right now – it's extremely crowded. (P12HA-01)

6.4.3.5 Crowded but comfortable experience in performing Tawaf

Despite such high numbers of pilgrims within the crowd, such crowding does not necessarily entail an unpleasant experience. This participant said that the overcrowding did not disrupt the Tawaf:

There is overcrowding in the Tawaf but it does not cause disruption. (P12HA-31)

Another participant reported feeling comfortable within the crowd:

Always crowded and its outer appearance suggests difficulties, but when you enter inside the crowd you are not worried anymore as if the angels are performing Tawaf with us and around us. (P12HA-21)

6.4.3.6 Uncomfortable crowding in performing Tawaf

In contrast, others described crowding during Tawaf as a negative experience that provoked limited hostile reactions among crowd members:

Yes crowding during Tawaf was a negative experience. Sometimes people with their mothers and wives felt as if they had a right to push people out of the way or expected people to make way for them. (P12HA-05)

Another participant reported that:

Few people get angry when touched by another man performing the Tawaf due to overcrowding, but if this happened unintentionally they exchange apologies and so on. Yes, it is very crowded and was not comfortable but you feel you are enjoying this hustling crowd. (P12HA-23)

Another participant reported negative behaviour during Tawaf due to excitement:

In my opinion, there are people who are enthusiastic to worship, even under intense heat, while there is a group of people who are only interested in kissing the black stone so they randomly cut off the path of those who were performing Tawaf. I don't have a problem with the blocking [of the Tawaf movement] but there must be some politeness and kindness to others, especially the vulnerable pilgrims. (P12HA-24)

6.4.3.7 Uplifting and positive experience in performing Tawaf

The experience of performing Tawaf itself was described as 'uplifting', suggesting that this ritual can impact positively on the mood of pilgrims:

[Performing Tawaf] felt very good and uplifting. (P12HA-09)

6.4.3.8 Feeling safe in performing Tawaf

Participants reported feelings of safety during Tawaf. Again, there was the sense that God would protect them during this religious ritual:

It was very safe; I felt Allah was here to protect all of us. (P12HA-10)

6.4.3.9 Misconduct around the black stone

There were reports of aggressive behaviour as people tried to get close to the black stone:

People are fighting while kissing the stone. (P12HA-32)

I feel a little threatened by people at the black stone because some get rough. (P12HA-01)

6.4.3.10 Misconduct in general

According to participants, aggressive and competitive behaviour was also witnessed in other places during Tawaf.

Some people started yelling and pushing because of the rush. (P12HA-04)

6.4.3.11 Shared emotion during Tawaf

As was the case with the pilot studies described in chapters 4 and 5, participants described shared emotion among the crowd:

I saw people crying from the fear of God and I cried too. (P12HA-38)

Another participant reported that:

Yes, I have seen a lot of pilgrims of different nationalities becoming emotional during Tawaf, crying from just seeing the Kaaba for the first time in their life, and this behaviour has affected me and those around me also; we were collectively crying from the intensity of the spiritual feeling of being in this position. (P12HA-11)

6.4.3.12 helping behaviour

There were descriptions of helping behaviour during Tawaf, for instance providing assistance for vulnerable members of the crowd:

My grandmother fell in Tawaf and some sprinkled water and also some others supplied air with a hand fan. (P12HA-40)

6.4.3.13 Hostile individuals in the crowd

There were also reports of hostile actions among crowd members:

Yes, there are people who push others during the Tawaf. (P12HA-03)

6.4.3.14 No selfish behaviour in the Tawaf

Others, meanwhile, said that they had not witnessed any selfish behaviour. This participant ascribed this to the disapproval from God that would follow if such behaviour occurred.

I didn't see that because God does not like selfishness. (P12HA-39)

6.4.3.15 No out of control behaviour

The same participant claimed that there is 'no anger' during Tawaf, and so people remain under control:

I did not find that because there is no anger in Tawaf. (P12HA-39)

6.4.3.16 Feeling safe in the house of God

As stated before, the religious nature of the Tawaf ritual led to feelings of safety, because of the belief that God would provide protection:

Yes, because we are in the house of God, and there is no fear in the night and day.
(PI2HA-32)

6.5 Discussion

6.5.1 Experiences on the way to the Grand Mosque (Haram)

Participants' responses suggest that Hajjis are a psychological crowd even before the start of rituals such as Tawaf. Interviewees described collective feelings of spirituality and joy from being part of a group heading towards the Haram. Fellow pilgrims were perceived by English and Urdu speakers as having the same purpose, and were described as 'brothers'.

One negative experience that was reported was the presence of 'squatters' obstructing progress to the Haram. This group comprises those who are reluctant to leave the vicinity of the Grand Mosque after performing their Hajj rituals, and others who are gathering for prayer and blocking the routes to the Haram. According to Dr Amin Pattani, Director General of the Ministry of Hajj, this is a phenomenon that will not easily be solved, but he suggests some ways of alleviating the problem of obstruction: 'To minimize this phenomenon we need to educate pilgrims, and show those [squatters] that they are a major cause of disruption, and make clear that there are fines and other penalties associated with this behaviour.' (Pattani, 2004, p. 7)

6.5.2 Safety at the Grand Mosque (Haram)

Despite some participants describing feeling in danger at the Haram, most talked about feelings of safety. This sense of safety came from three sources: Hajjis feeling that competent management was in place, their relationship with others in the crowd, and their belief that God would protect them during Hajj. The results suggest that safety is not always explicit but is sometimes implicit, in that each of these factors that create a sense of safety is related to the

participants' identities as Muslims. The first two factors are concerned with Hajjis' relationships with management and with other pilgrims. The constituent members of both groups are other Muslims, and it is possible that in this context (a Muslim event) they will be seen as fellow in-group members. An alternative explanation is that the identity of management as Saudi Arabians or as management was salient, but that this out-group was seen in this context as supportive of the in-group of pilgrims. As for the third, Hajjis felt protected by God, and even if death were to occur during Hajj, this would bring them into the paradise of God.

Participants spoke of feeling unity with others present during Hajj, and described cooperative behaviour among the crowd. It seems that even so-called 'critical' levels of density do not contribute to discomfort or feelings of danger when there is a psychological bond between crowd members. This has an explanation in Drury's (2012) social identity model of collective resilience and Neville and Reicher's (2011) study of crowd experiences at a music event. The idea is that in a potentially dangerous crowd (e.g. a situation of high density), shared social identity can make us feel secure because it increases expectations that others (with whom we share a social identity) will be supportive. This hypothesis, among other factors, will be tested in a quantitative study, discussed in chapter 8 of this thesis.

There were some differences in the way the crowd at the Haram was experienced by English and Urdu speakers. The former were more likely to say that they felt safe due to shared identity and helping behaviour among crowd members, while the latter more commonly reported feeling safe due to being present in God's house. Both groups reported feeling unity of direction and purpose, feeling that they were involved in a collective spiritual experience, feeling safe at the Haram in general, feeling in harmony with others, experiencing cooperative behaviour, and observing appropriate and civilized behaviour among pilgrims who were performing Tawaf.

For some, feelings of safety were promoted by the fact that they identified with others in the crowd, who formed an in-group of people of the same religion, performing the same religious ritual. This is consistent with earlier studies using self-categorization theory (SCT), for example Drury, Cocking and Reicher's (2009a) study of mass emergency behaviour, in which those categorized as identifying strongly with the crowd were more likely to report prosocial behaviour among other crowd members than were those who identified less strongly.

6.5.3 Experiences at Tawaf

Tawaf is of particular interest to this research, as it is one of the key rituals of the Hajj, and is likely to involve dense crowds. Again, the majority of interviewees described feeling safe, and there were reports from both the Urdu and English speakers of Hajjis cooperating and helping others – for example, sprinkling water to relieve the discomfort of high temperatures.

Notably, when describing unhelpful or unpleasant behaviour that they had witnessed during Tawaf, participants within both groups qualified their criticism with acknowledgements of the pressures that had led others to behave in this way. It was also noted that such behaviour is the exception, rather than the norm. During this ritual, which involves walking in the same direction around the Kaaba, shared emotion occurred, with reports of people within the crowd crying because of the presence of God.

Interviewees from both the English and Urdu-speaking groups described the crowded situation during Tawaf, but also said that they were comfortable being in this high-density situation. Perhaps contributing to feelings of safety and comfort was the joy engendered by performing this important religious ritual with other members of an in-group – the experience of Tawaf was described as ‘uplifting’.

Reports of shared emotions within the crowd echo findings in previous papers on crowd psychology. Neville and Reicher (2011) interviewed members of two types of crowd (football supporters and student demonstrators), and carried out a questionnaire study of a third (attendees at a music festival), finding that shared identity can promote positive emotions such as a feeling of connectedness with others in the crowd, and the perception that fellow crowd members value one’s presence. Furthermore, the idea that shared identity can influence the experience of a crowd event, to the extent that potentially unpleasant sensations can be experienced positively, is shown by work by Pandey, Stevenson, Shankar, Hopkins and Reicher (2013) on experiences of cold at the Hindu Mela pilgrimage, and by Shankar et al. (2013) relating to how loud noise is experienced. The present analysis finds similar reports of positive emotional experience in a dense crowd. While interviewees do not refer explicitly to

identity, they do refer to the experience as shared (e.g. 6.4.3.11) and therefore this is perhaps a function of their shared identity.

6.5.4 Methodological reflection

In this study I recruited research assistants to collect data from the same language groups and therefore often the same nationalities as the pilgrims in order to cut down the potential for compliments to me or to any assistants from Saudi Arabia as hosts. This allowed an emphasis on the sincerity and accuracy of their answers. This does not deny, of course, that there were social desirability factors at work – indeed one could imagine that if respondent and researcher were from the same group, this would increase the likelihood of the respondent trying to be ‘indeed o.

The sample was broadly representative of the demographic profile of the Hajj population in terms of nationalities and language groups, though clearly the focus on just English and Pakistanis was not.

Fifty-three of the participants were male (75.7%) and 17 were female (24.3%). It is a great achievement that we were able to increase the percentage of women’s participation to (24.3%) compared to the study in the previous chapter. We achieved that through the employment of three wives of my research assistants in the collection of the data. They had a positive role to access the female pilgrims, and thus women’s participation rate rose.

While the assistants were trained and were more skilled and motivated than those in the pilot work in getting respondents to elaborate on their experiences, they nevertheless did not use prompts and follow up questions as much as I would have wanted. With a large group, it was hard to get consistency. Nevertheless, these are data that still tell us a lot about participantshifeelings during the Hajj and some of the reasons for those feelings.

6.6 Conclusions

This study provides a unique contribution to the understanding of a major religious event, in that it is the first study that involves interviewing pilgrims, during the Hajj itself, about their experiences and perceptions, using a psychological framework.

The findings of this study lend support to work previously carried out on crowd events, and the hypothesis that people feel safer within the Hajj crowd than they might do otherwise, because of their relationship with others and specifically a shared (Muslim) identity with fellow crowd members. Moreover, while not every participant gave every type of response, Table 6.4 shows how widespread each response was.

However, while I sampled across language groups to try to reflect in this study profile of the Hajj crowd population, it remains to be seen how far these findings, from two language groups only, can be generalized to a wider group of pilgrims. Although this study gave these pilgrims a voice and allowed them to describe their experiences in their own words, its applicability to a wider population remains limited, as it was a qualitative study with a limited number of participants. The next stage is to use these findings as the basis of a quantitative study, which will assess on a wider scale the factors that influence the relationship between crowd density and safety (Chapter eight). This comprehensive study of pilgrims will be complemented in the next chapter by the main interview study with managers.

Chapter 7:

Perceptions and practices of 2012 Hajj management regarding crowd phenomena

7.1 Introduction

In October 2012, over three million pilgrims from all corners of the world flocked to Makkah, Saudi Arabia, to participate in one of Islam's five pillars of faith known as Hajj. Hajj is a unique "mega-gathering" because of the sheer number of visitors in a confined space at a specific time, and that poses a challenge for Hajj authorities in managing such a large, multilingual, multicultural crowd. Planning, preparation, communications and logistical support operating and monitoring are the foundations of its success. Management of the annual pilgrimage is a very complex task, as the movement of three million people from one location to another requires major logistical planning during the five full days of continuous movement before the completion of the final phase of the Hajj journey, and this is especially true when an emergency occurs. The scale of the task is underlined by the fact that 15,000 personnel are required to ensure the safety of the crowd during the Hajj.

In recent years, there has been increasing interest in the crowd, with scientific research in engineering, environmental factors, and development of Hajj infrastructure, and the implementation of findings to ease a pilgrim's journey. However, far too little attention has been paid to Hajj crowd psychology. Therefore, the current study aims at addressing the gap in the Hajj research in terms of assessing crowd management perceptions during Hajj and especially in case of emergencies. No one has carried out this kind of study before, and this study is the first to consider the perceptions of those involved in Hajj organization, safety, security and emergency response. The Government of Saudi Arabia has developed a multiple hierarchical administrative system to provide pilgrims with best services, conditions and wellbeing. The system comprises different administrative levels starting from the Council of Ministers to the Makkah Regional Planning and Development Office. Each level is considered in this study.

Chapter 4 presented the findings of a UK pilot study of previous attendees at Hajj, and used interpretative phenomenological analysis or IPA (Smith, Flowers, & Larkin, 2009) to analyse participants' experiences and observations at the Masjid al-Haram (Grand Mosque) during

Hajj. Among the findings was that interviewees had great difficulty identifying different types of Hajj management, when presented with photographs.

In Chapter 5, I described the results of a field pilot study carried out at Hajj 2011. This IPA study presented the accounts of both pilgrims and management staff of crowd experience and crowd behaviour at the Hajj. I found that there were difficulties in persuading higher-ranking members of management to participate in interviews with my assistants. I realised that I had to carry out all interviews with high-ranking management staff myself, and to use my existing contacts to gain access to participants. It was also noted that these high-ranking interviewees acted like politicians in that they were guarded and cautious in their responses. It was decided that I needed to include junior management staff in the full study, and also to speak to those who had face-to-face contact with the pilgrims.

The current chapter focuses on the perspectives of Hajj management staff, presenting findings from in-depth semi-structured interviews with participants who are heavily involved with a Hajj event organization, deliveries, planning, coordination and different security and safety tasks.

The current study contributes in important ways to the psychology of intergroup perceptions and is based on the social identity approach (Tajfel & Turner, 1979; Turner, Hogg, Oakes, Reicher, & Wetherell, 1987). It focuses on particular interrelated issues such as management's perceptions of the relationships between Hajjis and management staff, and management's perceptions of relations between and behaviour of the various social groups that constitute the Hajj crowd. Furthermore, this study explores the perceptions of risk and problems and difficulties in the process of managing pilgrims performing Hajj.

The psychology of intergroup perception in the management of crowds and mass emergencies is a relatively new scientific research area. Hoggett and Stott (2010) point out that 'classical' theories of crowd behaviour (e.g., Le Bon, 1908; Allport, 1924) ignores the reality that crowd incidents are representative of intergroup experiences and distract attention from the role of groups such as the police. Yet studies have shown that classical theory has in the past guided police procedure via assumptions that inadvertently develop public disorder. In this context, it has also been indicated that traditional crowd theory isolates crowd incidents from their context and describes behaviour entirely in terms of processes internal to the crowd itself,

which ignores the fact that such incidents are characteristically intergroup encounters (Stott & Reicher, 1998, p. 509), as discussed in Chapter 3.

This study will focus on the authorities (those involved in Hajj planning, safety and emergency response). There are several reasons for doing so. The first is that crowd events are intergroup encounters, as mentioned. In the past, theories of crowd behaviour ignored this, and therefore produced a distorted analysis of crowd behaviour (Stott & Reicher, 1998). The second is that social identity is a function of intergroup relations. A person's sense of belonging to a group depends in part on whether that person is supported by others, both from within and outside of the group (Turner et al., 1987). The third follows on from these two points, and is that the views of management staff are important as they have the power to shape the intergroup context within which people define themselves and experience the crowd event. This is demonstrated by the findings of Drury and Reicher (1999), who found that, during a demonstration, police and council action aimed against the crowd as a whole increased the likelihood that protesters considered themselves as part of an in-group. In turn, this increased expectations of support from others within the crowd. In a different domain of crowd behaviour, Drury, Novelli, and Stott (2013) stated that emergency arrangements and preparations generally include expectations about crowd behaviour. These expectations matter, as they can operate as rationales for emergency management practices; if management thinks the crowd is irrational and destructive it is problematic, because they have the ability to turn those perceptions into practice. For example, if the managers think that crowd members are stupid, they will withhold information. If they believe the crowd to be aggressive, managers will use coercion.

These ideas have been explored in previous studies of crowds, but not with those involved in the management in the harsh conditions of Hajj (e.g. sweltering heat, dehydration, heat stroke) and tiring physical work involved in the pilgrimage, and large outstanding and overwhelming crowds during Hajj, or in such a multinational, multicultural, multilinguistic setting. Previous research that has looked at the police in Britain (Stott & Reicher, 1998) or emergency services, crowd safety professionals and stewards in Europe (Drury et al., 2013), have shown that sometimes these crowd management professionals pathologise the crowd by viewing it as naturally liable to panic and disorder, and sometimes don't see their own role in the reduction of crowd anxiety or crowd disorder.

These considerations do not apply only to policing of emergency situations. In relation to spectator crowds, Berlonghi (1995) argues that problems can arise if the relevant authorities of those involved in crowd management and crowd control do not understand crowd behaviour and prepare for a variety of circumstances that may occur. Nevertheless, despite the increasing number of pilgrims performing the Hajj every year for the last 1432 years, the various psychosocial factors of Hajj crowds are not well understood and still represent a challenging question for further investigation. Therefore, capturing the underlying social, psychological factors affecting the Hajj crowd could yield efficient safety management practices and prevent injury and death, as well as being theoretically important and novel.

The central concern of the in-depth interviews, carried out during Hajj 2012, was to achieve a holistic understanding of the interviewees' perceptions of the crowd, and to explore interesting areas for further investigation on issues such as management perceptions of the relationships between Hajjis and management, and management perceptions of pilgrims' relations and behaviour with other groups performing Hajj. Furthermore, the study aimed to explore the perceptions of risk, problems, and difficulties in the process of managing pilgrims performing Hajj by identifying the root of the issues related to management ideas and recommendations for a safer crowd event.

The following research questions are proposed:

- How do managers, planners, and staff view Hajjis? How do they perceive issues of density and the needs of Hajjis (religious, spiritual, physical, social)?
- Where do managers see points of danger and how do they explain danger and accidents on the Hajj? Through reference to (valid or invalid) crowd psychology? How do they perceive the purpose and effectiveness of their communications? Do they perceive sources of resilience within the crowd itself – or the opposite?
- How do managers see issues of legitimacy? At which points do they perceive they need to exercise control?

7.2 Method

7.2.1 Participants

Participants comprised 30 management staff, with ten from each of three groups. I decided to use just 18 out of 30 in the sample in the analysis, at the rate of the first six for each of the three groups of management in order to deepen the analysis, especially since this is one of the major studies and the first survey carried out whilst the crowd administration is in action.

The names of the participants have been disguised to protect their identities, but with their agreement I have kept their job titles in order to provide context for their responses¹⁴. In this context, the information provided does not show their identity. Informed consent was obtained from all participants.

The first group consisted of academics, i.e. professional consultants from the authority for the High Committee of Hajj, and other authorities working in Hajj affairs. All participants were male, five from Saudi Arabia and one from the UK. Ages ranged from 34 to 60, with a mean age of 50. For this sub-sample I sought very senior academics with a role in advising on planning – people with influence, seniority and experience of the Hajj:

1. Director of Research and Studies at the Institute of the Custodian of the Two Holy Mosques for Hajj Research.
2. Professor at King Abdul-Aziz University and director of several studies of movement of the crowds and public transport in Makkah and the holy sites within the custodian of the Two Holy Mosques projects for the expansion of the Grand Mosque.
3. Director of HajjCoRE (Center of Research Excellence in Hajj & Umrah) Umm Al-Qura University, Makkah, Saudi Arabia.

¹⁴ Interviewees stated that they did not mind being recognised in the Method section, hence I have used full job titles here. In the Results section, a coding system masks their identities.

4. Vice Dean of the Custodian of the Two Holy Mosques Hajj Research Institute for Academic Affairs.
5. Scientist, Physics. In collaboration with the Institute of the Custodian of the Two Holy Mosques for Hajj Research in studying Holy Mosques crowds.
6. Professor of Transportation & Traffic Engineering & Project Manager for public transport in Makkah for trains and buses CEO trains Mecca.

The second group comprised management staff involved in planning the Hajj, and consisted of six senior managers related to the Central Hajj Committee. This committee occupies the next level of Hajj administrative authority and is presided over by the governor of Makkah. In this study, I aimed at sampling managers involved in examining and approving the Hajj plans brought forward by individual governmental agencies and non-governmental bodies for a complete and overall Hajj plan, to get to know their thoughts and impressions of the pilgrimage program in terms of planning, monitoring, and relations between the parties involved in Hajj. All participants were male, and all were Saudi Arabian. Ages ranged from 45 to 69, with a mean age of 53:

1. Commander of forces at the Jamarat.
2. Deputy commander of the Hajj Forces for Operations.
3. Assistant of the Security Administration department for Hajj and Umrah and Captain of the prevention and control points in Al Mashaer.
4. Undersecretary of the Ministry of Municipal and Rural Affairs and Head of Central Department for development projects.
5. Director of the Civil Protection Department.
6. Disaster Medicine specialist and medical crisis management.

The third type of management targeted in this study was the field management, whose role is implementing the integration of the functions of the Hajj, such as controlling the number of pilgrims, scheduling, channelling flow, managing crowd density in potential risk areas, controlling crowd transitions between events, enforcing pedestrian traffic regulations, and controlling individual and group behaviour on the ground. I aimed to sample management

staff who were much more junior than participants in the other two samples, and who had direct contact with Hajjis as part of their routine work commitments. All participants were male, and all were Saudi Arabian. Ages ranged from 45 to 69, with a mean age of 53:

1. Deputy Chief Staff Operations for the Organization and the Management of Pedestrians Unit.
2. Risk Analysis Division. (junior management)
3. Applying the instructions to organize the crowd in the courtyard of the Al Haram Al Makki Al-Sharif. (Junior soldier)
4. Work within Al Haram Force (domination and crowd control in Al Haram). (Junior soldier)
5. Chief of the Civil Defence at Arafat Area.
6. Organizing the passage of pilgrims in the Haram eastern arena (area). (Junior soldier)

7.2.2 Design

It was decided to use in-depth interviewing to collect data for the current study because it provides a very flexible technique for research (Drever, 1995). Interviews would allow us to elicit managers' views on the role of organisation of crowd events, including: processes and approaches used in the planning for crowd situations; attitudes and beliefs regarding crowd satisfaction, comfort, safety, relations and performance; and commitment to each (Robson, 1993). Interviewees were drawn from relevant management groups to achieve a structured convenience sample (Bryman, 2004).

The in-depth interview schedule was based on our experiences and the results of semi-structured interviews for the 2011 UK pilot study¹⁵. We realized that prepared questions should be broad. The schedule was translated from the English original into Arabic as

¹⁵ Interviews were carried out face to face, but some supplementary written material was subsequently provided by interviewees.

interviews were carried out in Arabic, then the transcripts were translated from Arabic to English by me and by other people. The quality of translation was checked by myself from digital recording and translation transcripts to assure its quality.

7.2.3 Procedure

I approached participants inside the headquarters of their offices of Hajj operations and in the field. At the beginning of the interview I introduced myself by saying that I was a PhD student in social psychology at the University of Sussex, UK. As part of this degree, I was undertaking a research project that examined the crowd experience and crowd behaviour and its management during the Hajj.

Each participant was interviewed during a visit to their workplace, under the same conditions and the daily pressures of work in which they practice following the movement of the pilgrims and their behaviour in the performance of the ritual of Hajj. Visits were planned in advance due to the preoccupations of the participants with their responsibilities during Hajj 2012. My friendly relationships with the participants, in knowing them well for more than 20 years working in the administration of the Hajj, facilitated my access to them in their workplaces and persuaded them to devote part of their valuable time to conduct a recorded interview during the performance of their duties. Interviews lasted around 50 minutes each. All interviews were recorded using a digital recorder with the participant's consent. The interview schedule is presented in table 7.1.

Table 7.1 Semi-structured interview schedule

CATEGORY	QUESTIONS
I. Current research interests	<ul style="list-style-type: none"> • Can you tell me about your research in the field of Hajj crowd behaviours/dynamics/management? • Can you give me some specific examples of research you have done concerning Hajj events, crowd behaviour? • Are you aware of any psychological studies related to Hajj events? If yes, can you name them? • What do you think are the key issues involved in Hajj crowd events from your experience/research?

	<ul style="list-style-type: none"> • What do you think are the key signs of potential problems at of Hajj crowd events? • Why did you decide to go into this particular area? • What would you say are the key lessons to be identified about Hajj crowd behaviour from your research/experience?
II. Experience of Hajj crowd events	<ul style="list-style-type: none"> • How would you describe the pilgrims from your experience of dealing with them? (What kind of people?) • Is the Hajj crowd different from those at other crowd events? • Can you explain why crowd management is vital in event security?
III. Planning for a Hajj crowd event	<ul style="list-style-type: none"> • How do you monitor Hajj crowds? What techniques or tools do you use? • Can you state the main problems that arose at the previous Hajj? • How do you typically prepare for a Hajj event?
IV. Hajjis' expectations	<ul style="list-style-type: none"> • Do Hajjis feel safe on the Hajj? • What expectations of danger do they bring to the event? • Which sources do they trust in relation to the source of danger? • Which sources do they trust in response to danger?
V. Collective relations	<ul style="list-style-type: none"> • What is the Hajjis' relationship with authorities, management and staff? • Do the Hajjis differentiate between all the different categories of staff on the Hajj, or treat them all as one? • Do you think Hajjis perceive staff as fair and legitimate in relation to their needs?

VI. Crowd behaviours

- What are the different types of crowd behaviours at the Hajj?
- What do pilgrims hope to achieve at Hajj?
- Do you follow any rules about underlying crowd behaviours?
- Do Hajjis' expect others to help them?
- Have you witnessed any undesirable behaviour of certain groups in the Hajj crowd?
- Have you ever seen aggressive behaviour in the Hajj crowd?
- Have you seen any non-compliant behaviour of certain groups in the Hajj crowd?
- How do Hajjis behave when faced with danger?
- Does "mass panic" occur? If so, how? What are the causes?
- In emergencies do Hajjis help others in need?
- What is the rationale underpinning your assumptions and rules of crowd behaviour?

VII. Venue suitability

- What are the trouble spots in Hajj? And what are the precautions you taking in order to deal with these trouble spots?

**VIII. Recommendations
for event planners**

- What are the key factors involved in Hajj crowd events?
 - What are the key lessons involved with successfully planning and managing crowd events?
-

7.2.4 Analytic approach

An interpretative phenomenological approach (IPA) (Smith, Flowers, & Larkin, 2009) was adopted to explore the views of Hajj authorities and administrative participants, and others associated with Hajj management and to provide context and offer a complete picture of their experiences and expectations related to the management. Specifically, the aim was to elicit their perceptions of safety surrounding the Hajj event, the thoughts they have concerning Hajj programme operations, processes, outcomes, their perceptions of their relationships with pilgrims, and their perceptions of Hajjis' relations and behaviour with others as a result of their involvement in the Hajj management.

The analysis involved first coding by identifying key words, then reflecting issues that seemed important to interviewees. Next, I attempted to organize these key words into themes, where the key words seemed to be belonging together as they referred to similar issues. This was an iterative process. I went back and forth between transcripts and coding to check my analytic claims. Finally, I organized the themes into superordinate themes, or clusters, for ease of presentation. Finally, I ran a comparison between these results with outcome results of chapter 5.

7.2 Results

In order to address findings concerning intergroup processes and Hajj crowd behaviours from the perception of the event management, transcripts were coded for themes, which were then grouped together in three subordinate clusters: The first deals with the relationship of managers to pilgrims. The second addresses participant perceptions of pilgrims' relations and behaviour with other pilgrims performing Hajj. The third concerns respondents' perceptions of danger, problems and risks of the event from their experience in dealing with the pilgrims. Table 7.2 presents the results of the study of the three groups of management interviewed:

Table 7.2 Summary of all themes and clusters of Hajj 2012 IPA.

CLUSTER 1: Relationship of managers to pilgrims																			
#	Theme	Academics						Planning						Field					
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	Service	*	*				*	*	*		*	*	*	*	*	*	*	*	*
2	Cooperation	*	*	*	*	*	*	*	*		*			*		*	*		*
3	Legitimacy	*	*	*		*	*	*	*	*	*	*	*	*	*	*	*	*	*
4	Communication	*	*	*			*				*	*	*	*	*	*	*	*	*
5	Feeling safe	*	*		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
6	Pilgrims see us as homogeneous	*	*	*	*	*		*	*	*	*	*	*	*	*	*	*	*	*
7	Shared goals and values		*		*		*	*	*		*			*		*	*	*	*
8	Time/planning	*		*			*	*	*		*					*	*		*
CLUSTER 2: Perceptions of Hajjis’ relations and behaviour with others (Hajjis)																			
9	Equality		*	*	*		*	*	*	*		*	*	*		*		*	*
10	Unity	*	*	*			*	*	*			*	*		*	*	*	*	
11	Togetherness													*	*		*		
12	Variety	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*		*	*
13	Spirituality	*		*	*		*	*	*	*	*	*	*	*	*	*	*	*	*
14	Hajj crowd is self-organising	*	*	*	*		*							*		*			*
15	Helping		*		*	*	*							*	*	*	*	*	*
16	Shared emotions in crowd	*		*		*	*							*	*	*		*	
17	Undesirable behaviour	*	*	*		*	*	*	*		*	*	*	*	*	*	*	*	*

CLUSTER 3: Perceptions of danger/problems (dangers and risks)																		
18	Aggression	*					*	*	*		*	*	*	*		*		*
19	Panic	*	*		*	*	*	*		*	*	*	*	*	*	*	*	*
20	Overcrowding	*				*	*	*	*			*	*		*		*	*
21	Precautionary measures	*	*	*	*	*	*		*	*	*		*		*		*	*
22	Mismanagement					*			*	*		*		*				*
23	Crowds are depicted as an irrational entity									*	*	*	*					*
24	Unruly pilgrims							*	*		*	*			*			*
25	Cultural issues	*	*	*	*	*	*		*		*	*		*		*		*
26	Tiredness							*	*		*	*	*	*				
27	Environmental concerns													*		*		*
28	Rumours													*			*	*

7.5.1 Cluster 1: Relationship of Managers to Pilgrims

This cluster contains themes that address the relationship between Hajjis and management staff. It is important to gain an understanding of how staff view this relationship, which is crucial to the safe and smooth running of the Hajj.

7.5.1.1 Service

Academics involved in Hajj management outlined the difficulties of ensuring safety at an event in which the number of attendees is constantly increasing, but the dimensions of the area and time remain fixed:

Management is making every effort possible to... achieve a safe Hajj, but with the number of pilgrims on the increase – and we can't change the time of the pilgrimage and the land used is fixed – this is a difficult equation. (1- Academics)¹⁶

¹⁶ Participants' coding number

It is difficult, therefore, to provide service that is compatible with the expectations of pilgrims.

Planning staff reported that, in their perception, Hajjis were generally satisfied with the service provided by Hajj management:

They show their appreciation to us and to our government of Saudi Arabia with prayers of appreciation for the various services. (7- Planning)

Some of them said the services were above their expectations and some are unhappy, but generally they are satisfied with what has been offered to them. (11- Planning)

It was also reported that the standard of service had risen in recent years with the development of Hajj infrastructure:

the services provided to pilgrims are impressive compared to previous years, and the reputation of Hajj management is positive and... gives confidence for the pilgrim in the administration [so that they] follow instructions. (12- Planning)

Field management staff described the majority of pilgrims being satisfied with the service that they had received. According to these participants, Hajjis made spontaneous displays of gratitude. For instance, several reported that members of the crowd had approached them to shake their hand and pray for them:

they shake hands with us and expressed their satisfaction with our services to them through their words and their prayer (14- Field)

Such shows of appreciation can lead to mutual feelings of warmth among pilgrims and management:

I swear to God that you see some of them are crying, the tears are coming out of his eye, and he is shaking my hand sincerely, we respond to them likewise and with the same enthusiasm and passion (15- Field)

It was also acknowledged that a portion of Hajjis were not satisfied with the service provided:

there is a very small percentage that expresses dissatisfaction with some services or delay. Particularly those accustomed to a high standard of living, who find it inconvenient waiting for a long time or using public toilets; they find it in general difficult to endure the difficult conditions of Hajj. (14- Field)

7.5.1.2 Cooperation

Among planning staff, ‘cooperation’ was a word that frequently recurred during interviews. This was ascribed, variously, to ‘trust’:

Good cooperative relationship and earn trust with distinctive services provided for visitors and achieve their needs greatly helped to bring out the positive behaviour of the pilgrims and this behaviour vary among pilgrims in time. (7- Planning)

...and ‘moral norms’ that impact on pilgrims’ cooperation with the management:

The moral norms impact their behaviour of cooperation in maintaining order as individuals and in groups. (10- Planning)

‘Trust’ was also mentioned by field management as being linked to cooperative behaviour with the management, as was ‘respect’:

The relationship in a general form is excellent because we are sharing a lot of positive points such as mutual respect, trust and cooperation. (18- Field)

7.5.1.3 Legitimacy

This theme relates to the extent to which Hajjis perceive management staff as behaving in a legitimate manner and treating pilgrims fairly. Academic staff referred to research findings (Abdulrahman, 2011) that indicate that pilgrims, mostly perceive staff as adhering to these standards:

According to a large-scale survey study (done by the Hajj Research institute), 81% of the total respondents (2250) indicated a positive result of perceiving staff as trust and fair and legitimate in relation to their needs. (2- Academics)

Here, it must be noted that this is not a statement about the interviewee’s own experience, but is a reference to a study.

Several members of planning management referred to the role of the Saudi Arabian government in ensuring that staff are seen as legitimate:

During our entire service there was no evidence that the pilgrims questioned the integrity of the staff. On the contrary – the government of Saudi Arabia... annually hosts thousands of pilgrims from poor countries and monitors the prices of food,

housing, opens free hospitals for treatment and provides free medicine for pilgrims, and of course pilgrims note that. (8- Planning)

the goodwill of the government of Saudi Arabia in facilitating the pilgrimage, and the giant achievements and continuous improvements provided by the management are something tangible on the ground, and success in the annual administration has earned us confidence in regulatory procedures and safety. (10- Planning)

Field management concurred with the view that staff are seen as legitimate:

Hajjis perceive staff as fair and legitimate in relation to their needs. (14- Field)

7.5.1.4 Communication

Communication is obviously of paramount importance for the successful organisation of the Hajj. Academic staff noted that there is no direct contact between pilgrims and organisational staff:

Pilgrims have no direct relations with authorities. Pilgrims have direct relations with their Mutawafs, who are responsible for providing them accommodation, catering, and transportation during their stay in Saudi Arabia. In turn, the Mutawafs receive their licenses and instructions from public authorities (Ministry of Hajj). (6- Academics)

The same interviewee also noted that the diversity of the Hajj crowd can make communication difficult:

Pilgrims come from different nationalities, languages, cultures and behavioural backgrounds. This makes it extremely difficult to manage communication with and direct. (6- Academics)

Planning staff also discussed the indirect route of communication between Hajj organisation and pilgrims:

They don't have a direct relationship, the communication are passed through different channels until it reaches them. (11- Planning)

This is in contrast with the relationship between Hajjis and field management staff, with whom they are able to communicate directly. According to responses, Hajjis are compliant with the instructions given to them by field staff:

In the field management it is through direct relationship, especially at the Haram, we build a direct relationship of friendship and cooperation, and they are committed to what they are asked to do by us often. (15- Field)

There is a direct contact and face-to-face communication, [and although] there exist language barriers, in general the relationship is based on mutual respect and appreciation. (18- Field)

Face-to-face contact, according to these participants from field management, can improve the relationship between staff and pilgrims, and increase cooperation.

7.5.1.5 Feeling safe because of management

Academic staff described pilgrims as feeling safe during the Hajj, which was linked conceptually to the status of the Hajj as a spiritual event:

Definitely the answer is yes [Hajjis feel safe on the Hajj], since they perceive the Hajj as a very pleasant and peaceful spiritual experience. (6- Academics)

Organisational staff echoed this claim, and ascribed feelings of safety to the lack of major incidents since 2006:

Pilgrims feel of complete safety and security in the Hajj thanks to God as since 2006 no accidents. (12- Planning)

Field management, who praised the recent projects aimed at increasing safety at the Hajj, shared a similar sentiment:

What helps [are] the mega projects and organizations based on the best global expertise [that have] maintained the safety record free of accidents for the last 6-7 years. (15- Field)

This feeling of safety apparently improves interactions between staff and Hajjis:

Yes, and this helps us and eases things up for us in dealing with them. (16- Field)

7.5.1.6 Pilgrims see us as homogeneous

Interviewees from all three groups said that Hajjis regarded management staff as a homogeneous entity and do not differentiate between different types of management. According to academic staff, this is due to lack of contact between pilgrims and management:

It is the case because there is no direct relationship with the management.
(2- Academics)

Planning staff shared similar views:

It seems to be that there is no distinction between the pilgrims and all the different categories of staff.... There is no need for pilgrims to deal with the organizers, they will arrive and everything taken care of them and their representative makes all arrangements needed by the management. (8- Planning)

Field management staff, who do have contact with Hajjis, nevertheless also said that pilgrims do not distinguish between Hajj management staff of different types:

They are dealing with us as a single body. They ask us things that are not in our competence to not differentiate between service providers. (15- Field)

Such confusion about the roles of staff can lead to disillusionment with Hajj management:

this leaves an impact on the workers; you may find a pilgrim requesting guidance information of a fireman, which of course is not of his original tasks, who in turn seeks to find the answer for the pilgrim that may not be available with him and if he tells him that he does not know you will see that it leave a negative impact upon the pilgrim. (16- Field)

Among the interviewees there was one exception, who stated that Hajjis were able to distinguish between different groups of management:

Participant: The distinction is easy through the uniforms for each authority, but you can pose this question onto the pilgrims themselves.

Interviewer: Ok, I did ask the pilgrims and they say they cannot distinguish between all the different categories of personnel working in the services of the Hajj as they are so many with different uniforms. What is your comment on that?

Participant: I'm surprised they say they can't differentiate between us. Probably because we are in the medical services it is easily to distinguish us [by seeing our] ambulances and medical equipment. (12- Planning)

It should be noted that this participant works within the medical services, who as stated might be more identifiable than other staff. The interviewee seems to have assumed that this applies to all staff groups.

7.5.1.7 Shared goals and values between management and pilgrims

Shared values described by academic staff included safety and spiritual values:

Safety is the requirement to be achieved as the objective of everyone. (2- Academics)

Shared religious values with everyone in Hajj, including personnel. (6- Academics)

Planning staff also described a shared spiritual goal:

acceptance of the management by pilgrims also because the goals are common terms that everyone is looking for the satisfaction of God. (10- Planning)

...but stressed the difficulties of ensuring everyone reaches their goals:

You're talking about 3-4 million, they want to achieve the same goal but in different ways. In order to achieve this we are working in their wish for us in their management plans and programmes, and this difference is our management approach to their safety in achieving their goals and our goals as directing pilgrims. (7- Planning)

Field management staff, whose experiences are closest to those of the pilgrims (in that they interact with Hajjis on site), also described shared goals and values:

I enjoy being in their services and been in contact with them and with their spirituality and faith feelings as I share the same values and I learned from them some phrases in different languages. (18- Field)

Trusting others' judgement, solidarity and bonds of understanding, love, mutual respect, great cooperation sharing the same goals. (13- Field)

It is interesting to note that this participant repeated the description of participant 07 (from Hajj planning), of Hajj attendees aiming to reach the same goals, but via different methods, which can perhaps pose difficulties for the management. As it may be difficult to predict such inconsistent behaviours.

7.5.1.8 Time/planning

As mentioned in theme 1 ('Service'), the limited time period in which Hajj takes place makes it very difficult to organise. Academic staff stressed that the conditions under which Hajj takes place are subject to a range of variables, which can give rise to further challenges:

The circumstances are not something static, but are in constant motion and the weaknesses are always variable and change from time to time depending on the spatial, temporal, environmental, social, economic and political circumstances. (1- Academics)

Planning staff pointed to the logistical difficulties created by the short time period of Hajj, and the limited space available:

Hajj has specific activities which are bound by time limitations, it is not permitted to delay the performance of Hajj activities to some other time, and the pilgrims are increasing, still remains the place limitation... which we consider to be the biggest challenge of... the management of large crowds. (7- Planning)

One way of easing these conditions is through prior contact with Hajj attendees, and encouraging them to prepare themselves for the pilgrimage:

Because of the short time of the Hajj... before the Hajj season starts we plan according to lessons learned and new developments in coordination with representatives of the campaigns of pilgrims and make them understand implementation plans, they in turn understand the requirement from their Countries before arriving in Makkah. (16- Field)

7.5.2 Cluster 2: Perceptions of Hajjis' relations and behaviour with others

The themes in this cluster are concerned with how management staff view the relationships among Hajjis, and their behaviour during the pilgrimage. Such considerations can increase understanding of helping behaviour within the crowd, as well as incidents that can lead to increased danger to crowd members.

7.5.2.1 Equality

Academic staff who were interviewed described the Hajj crowd as unique in its sense of equality between individual members of the group. Spiritual concerns are foremost, and markers of difference such as ethnicity or socioeconomic status are dissolved. The *ihram* robes that all Hajjis must wear contribute to this feeling of equality:

The Hajj crowd is distinguished from others in their feeling of equality and unity of direction and Hajj activities. With the simple white dress that all wear that expresses the purity, equality and the absence of social stratification... you see them in the activity of the pilgrimage with no discrimination between poor or rich. This is the only place in the world to my knowledge that a large gathering of the crowd feels fully equal even with the kings and leaders of states in the same place doing the same activities equally. (6- Academics)

This idea of the Hajj being unique in its feeling of equality was mirrored in the responses of planning staff:

in Makkah all people are equal they move according to a programme that identifies the role of each and every one of them (12- Planning)

there is no difference between rich and poor, or Arabic or non-Arabic among them. No differences in race, colour, and language everyone is equal before God... The white garments are symbolic of human equality and unity before God, since all the pilgrims are dressed similarly. Money and status no longer are a factor for the pilgrims – the equality of each person in the eyes of God becomes paramount. (12- Planning)

Again, the uniformity of dress is signalled as a contributory factor in the equality of crowd members, which again was described by field management:

wearing ihram leads to their sense of equality. (17- Field)

7.5.2.2 Unity

‘Unity’ was another theme that emerged during interviews with Hajj management. Academic staff pointed to the rituals that are performed by everyone as leading to unity:

They come from different cultures and different religious beliefs, but they are all united in the performance of the rituals. (1- Academics)

Participating in the same rituals leads to a shared sense of purpose, as described by those responsible for planning Hajj:

They are strongly united, so you see more discipline in one direction and the intent and provisions governing the pilgrimage. The Hajj crowd is more coherent and united to face the challenges of physical, psychological and patience and endure hardship and climatic conditions and spatial difficulties of Hajj trip. (12- Planning)

This unity, then, is necessary to combat the difficulties imposed by the physical and psychological hardships endured by Hajjis. The most unifying element of the Hajj crowd is its spiritual element, according to field management:

Pilgrims gather primarily to express their unity and love of one God. (15- Field)

Whatever factors may divide them outside of the context of the Hajj; members of the crowd are united in the overriding fact of their shared religion and goal of worshipping God.

7.5.2.3 Identification with the crowd associated with ‘unity’

Interviewees spoke of identification with the crowd associated with ‘unity’ as a function of shared identity and sense of solidarity as they gather for one purpose. Field management staff who have direct contact with Hajjis, said that:

We have witnessed from pilgrims repeatedly over the previous years of the Hajj that pilgrims felt the responsibility for others who are sharing the same experience. [They feel] solidarity and unity and help others they don't know in overcoming problems. (13- Field)

Yet, another participant described the crew as ‘self-organising’ because of a common Islamic identity and unity:

Shared Islamic identity and morals as neither the differences in nationalities, nor the differences in colours, race and languages can detach them... what make them distinguished from other crowds that the Hajj united them and they are self-organising. (8- Planning)

Another member of field management said:

Because they're gathered on a large scale for the same thing at the same place and at the same time together in unity you will not succeed in their control if you don't cope with their wishes [needs]. (14- Field)

Effective management of the crowd, then, requires that management staff are attentive to their needs, particularly as Hajjis are gathered for a common purpose.

7.5.2.4 Variety

Interviewees spoke of the diversity of the Hajj crowd. This member of academic staff emphasised the primacy of an Islamic identity, in a crowd consisting of people from vastly different backgrounds:

In Hajj you are talking about people here from every corner of the world, of different Islamic doctrines, colours, languages, customs, traditions, and levels of social and intellectual and ideological. Despite all these contradictions in one place, and on the same occasion, [there is] only one identity, that is an Islamic identity. (1- Academics)

Members of the planning staff also described religious identity as overcoming differences within the crowd. The variety of cultures represented at the Hajj leads to differences in behaviour, with potentially negative consequences:

Pilgrims come from 159 countries, so certainly there will be different behaviours... the negative influence varies according to the beliefs, circumstances and surroundings that the people live in. (8- Planning)

Field management staff also described the variety found within the crowd. Here, the unifying element is the shared experience of coming to Makkah to perform Hajj for the first time:

They are a different people, differences in colour, race, language, customs, traditions and doctrines and in the shapes, sizes, orientations and behaviour come to the location they dreamed of for a long time, for the first time in their lives. (15- Field)

7.5.2.5 Spirituality and shared emotions in the crowd

Participants described the heightened emotions that result from performing the Hajj in a large group. Academics referred to the ‘excitement’ found within the crowd:

It can be described as an emotional, spiritual excitement (1- Academics)

Hajj crowds are sometimes spiritually excited to achieve their goals leading to some pushing and squeezing others. (6- Academics)

Conversely, others, such as this member of the planning staff, viewed spirituality as a calming influence:

Spirituality plays a key role in guiding behaviour. In the Haram in Makkah and in Al Madinah the pilgrims are more calm and tranquil and forgiving, therefore, incidents do not occur despite the pressures and massive crowds in the Tawaf for example. (10- Planning)

Field management staff also noted this apparent contradiction, and despite comparing religious crowds favourably to other types of crowd (e.g. a crowd at a shopping mall), remarked that the singular aim of the religious crowd can make it more difficult to manage:

Religious crowd is distinguished in being more spiritual and polite and emotional, but more difficulties in managing them, because they have the same target and they will not accept anything stand in the face of achieving that. (14- Field)

Others within this group, who have the closest contact with Hajjis, described the intense emotions that arise during the performance of Hajj rituals:

Hajj is a spiritual and very personal experience, [they are] excited that they are achieving their lifetime dream in performing Hajj. (14- Field)

7.5.2.6 Hajj crowd is self-organising

A member of academic staff said that the naturally self-organized was surprising to him:

What surprises me most about the Hajj crowd is that they are naturally self-organized, knowing that they are not self-organized in naturally in their countries. (1- Academics)

Such self-organising behaviour is observed, for example, at the Zamzam, a holy well located within the Al Haram mosque:

[They] organize themselves through the queues at regular lines of Zamzam water and help each other in organizing themselves. (15- Field)

7.5.2.7 Helping

Helping behaviour was reported by field staff as being common at the Hajj, notably during emergency situations. This was characterised as ‘expected’ behaviour, characteristic of pilgrims of all ethnic backgrounds:

Pilgrims often extend a helping hand to their brothers in need of help in case of an emergency and this is very much expected among the pilgrims. This is what we have witnessed from them repeatedly over the previous years of the Hajj and from all races and ethnicities, a character prevailing among pilgrims. (13- Field)

Helping behaviour can even stretch to putting oneself at risk to help others:

We have seen... cases of self-sacrifice in order to help others strangers in the crowd. Two years ago our mission was to assist in evacuating a building on fire in Makkah. We saw scenes of honourable guests help the vulnerable ones in the evacuation... many persons exposed themselves to the risk of self-sacrifice in order to help other strangers in the crowded high-rise building. (15- Field)

7.5.2.8 Undesirable behaviour

As well as cooperative, selfless behaviour, there were reports of undesirable behaviour occurring within the Hajj crowd. These descriptions are from academic staff:

I think that when crowds of people rush to when free things e.g. water, food etc. are being given out, this is undesirable. Also, when certain groups of pilgrims push excessively this is also very undesirable. However, I do not blame the pilgrims in these things, as this is subjective, and also related to culture. (5- Academics)

I have [seen] a group of strong and physically fit males from a certain nationality moving together and pushing their way through the crowd and not caring about others in front of them, especially elderly, women and children. (6- Academics)

Both of these interviewees linked undesirable behaviour to cultural or national background, as did members of the planning staff:

Some nationalities tend to have violent behaviour while performing the rituals, especially in the Jamarat facility, and the attempt of noncompliance with the organisational plans. (8- Planning)

This can lead to certain groups taking protective measures to shield the more vulnerable members of a particular group, or to achieve the goals of a group:

To move like herds for some groups behind one leader and especially the Indonesians were they work on establishing human chain formation within the groups consisting of 55 people marching together in a long ring-shaped formation which influences the others in the crowd. (11- Planning)

Field management also reported aggressive behaviour from groups:

small groups and members of the African missions who were forming joint forces moving forward by pushing the people who got in their way to make place for them, of course, we try to calm them and use awareness with them that this is religiously unacceptable because it may have some results contrary to the conditions of Hajj and in order for God to accept they must refrain (stay away) from this behaviour. (16- Field)

The same participant was also eager to praise certain national groups:

But also on the other hand, let me tell you that there are groups of pilgrims that are... well organized and follow the instructions and discipline; they are the pilgrims from east Asia, and pilgrims from Malaysia, Singapore, Thailand and well as the pilgrims from Turkey, Europe, America and Australia. (16- Field)

Most of the field management's descriptions of undesirable behaviour, however, concerned individuals and small groups:

I have seen undesirable behaviours of certain categories of Hajj crowd. But they are individually and cannot be generalized to a specific category. (13- Field)

in some cases, [some try to] escape in a selfish manner, causing panic to others. (14- Field)

Some behaviour may issue (arise) from some pilgrims that might be incompatible as you called it, but it is limited from some of the individuals and it's not worth mentioning because it does not represent anything important. (15- Field)
some people came not for the purpose of Hajj, but to exploit this crowd. Yes, some people have other agendas such as pickpocketing or for political purposes or business. (18- Field)

Participants from all three groups were keen to stress that undesirable behaviour is the exception, rather than the rule, among the Hajj crowd.

7.5.3 Cluster 3: Perceptions of Danger/Problems

This cluster gathers themes that describe the risks and problems that the managers say occur within the crowd during Hajj.

7.5.3.1 Aggression

Different levels of emotional response were categorised by academic staff:

Crowd behaviours can be categorized based on aggressiveness/excitement (calm, normal, aggressive). The first is very obedient, cares for other fellow pilgrims, avoids pushing and body contact, and follows the rules and authorities instructions. The other extreme (i.e. the aggressive) represent the selfish behaviour, where under excitement they usually move in groups and push their way through the crowd, sometimes affecting other fellow Hajjis. (6- Academics)

Factors that can lead to aggressive behaviour among pilgrims include lack of space or information. In response to the question 'What are the causes of aggression?' this participant responded:

Lack of space allocated for each pilgrim and the narrowness of space and lack of information. (1- Academics)

Another factor contributing to aggression is high levels of negative emotion among the crowd which occur at times of perceived danger:

Anxiety and desperation are the key factors that lead to crowd aggression. (6- Academics)

With surprise and sometimes shock e.g. in situations where trampling can occur and individuals in the crowds are being pushed and moved in all directions without their control. (5- Academics)

The conviction that aggression arises from Hajjis sensing danger was also held by planning staff:

When things are running smoothly, there will be spiritual, emotional excitement, but otherwise there may be hysteria and aggression. (8- Planning)

Significantly, aggressive behaviour was reported as having occurred at the Jamarat Bridge, site of many of the fatal accidents that have occurred during the Hajj:

In the old Jamarat Bridge; at the time of the stoning of the devil and the unexpected pressures where everyone seeks to escape by himself and might even forget the people closest to him and this often occurs in small groups or some individuals. (10- Planning)

[aggressive behaviour in Hajj crowds] In small groups and in many years, including the incident in 2006 on the old Jamarat bridge, which has killed a group of them. (11- Planning)

Self-organising behaviour, or collective self-regulation, was also reported as a response to aggression within the crowd:

Aggression is very limited by some people and often does not require the intervention of security, but is dealt with by the pilgrims themselves by a religious advice and guidance. (12- Planning)

7.5.3.2 Panic

The word ‘panic’ was used to describe the behaviour of some pilgrims when faced with danger. Academics described how panic can occur and spread within the crowd, sometimes explicitly using a discourse of disease:

Panic extended to a larger group of people like a mass infection. (2- Academics)

Mass panic did occur. For example, in the Holy Mosque (Haram) they distribute the holy Zamzam water in plastic containers across different parts for people to drink from. In a certain public place inside the Haram empty plastic containers were temporally piled on top of each other. When by accident the pile collapsed and empty containers hitting the marble-tiled floor emitted a loud sound like an explosion. People heard the ‘explosion’ without knowing its source and with lack of information

they panicked and tried to push their way through the already crowded exits of Haram. (6- Academics)

However, not all reported that they had witnessed such behaviour, and this participant disagreed with the previous participant's description of 'mass panic' is not a crowd phenomenon:

I have never experienced this to occur, but I believe that it can. However, I do not think that it is 'mass' panic – it is more local panic. But generally, I have not seen this to occur, even in quite extreme scenarios. (5- Academics)

When requested, planning staff offered definitions of the phenomenon of panic:

panic is a state when the man cannot contain himself and when he does not know how to act; the reasons are previously mentioned (stated). The most important of which is the enormous pressure in the crowds. (10- Planning)

They behave differently and often spontaneously without thinking and unstudied reactions (panic) which may cause the death of one of them. (11- Planning)

It was also suggested that inexperienced or ineffective management can lead to panic within the crowd:

When there is a weakness in the management and lack of expertise in dealing with the crowd that will cause the panic in the crowd. (12- Planning)

Members of field management also described panic as causing a breakdown in mental functioning:

Panic causes anxiety and fear and chaos. (16- Field)

The case of a sudden impact on that affect the awareness of the person and his thinking in his reaction to the danger. (18- Field)

The recent redevelopment of Al Jamarat Bridge and other development projects have, it was said, reduced the incidence of panic in the Hajj crowd:

We already witnessed some cases of mass panic in the previous Hajj seasons before expanding Al Jamarat and the modern development projects. But during these recent years the cases of mass panic have faded (13- Field)

7.5.3.3 Overcrowding

High density within the crowd was discussed as a threat to the safety of pilgrims. Among the locations mentioned as being at risk of overcrowding was the Mataf (the circumambulation area around the Kaaba), which is currently being expanded:

High densities that may cause increased probability of crowd instabilities and trampling; stationary spots which occur before prayer times in the Mataf region which cause the effective Mataf area to dramatically reduce causing severe bottlenecks. The other most urgent key issue is the appropriate management and effective scheduling of crowds such that high densities are not reached.

(5- Academics)

At the Mataf, density exceeds 6 persons per square meters (p/m²) and might reach 8 p/m². (6- Academics)

Areas of high density can be identified and provisions made for overcrowding scenarios. This participant discussed safety measures from a technical, engineering perspective, rather than social psychological considerations such as communication with the crowd:

If the density increased to reach critical density limits then it becomes dangerous and difficult to deal with, so we try to identify the density permanently using flow measurement to prevent or minimize the danger from happening as much as possible and often this can be achieved through engineering solutions and good management of the crowd. (4- Academics)

Prior vigilance towards potential overcrowding is essential because, as members of planning and field management staff pointed out, regular crowd control measures such as barricades can fail in the face of high density:

If the overcrowded reach the risk density control measures will fail. (11- Planning)

large crowds generate overwhelming force if it is not properly dealt with the handling and management of it in proper way it will constitute a danger to the people and to the systems of management and control. (18- Field)

7.5.3.4 Precautionary measures

Academic staff who were interviewed stressed the importance of pro-active planning, rather than reactive crowd control:

Leaving crowds without proper management will cause overcrowding, pushing and stampedes. Once crowd density exceeds a critical threshold tragic incidents can occur and have occurred in the past. The famous 'FIST' (Force, Information, Space and Time) model (by Fruin) explains that, without proper crowd management and

Information sharing with the crowd, who happen to exist in a constrained Space in a certain Time, over-density will cause crowd forces generation within the crowd.
(6- Academics)

The following quote refers to the importance of positive social relations in the crowd, not just technical solutions, for improving the safety of the Hajj:

Controlling cannot solve the problem, especially that we should help increase the number of pilgrims we are serving; so if proper management is planned and people are geared (psychologically) to be helpful, more safety and security are achieved.
(3- Academics)

Field staff, meanwhile, said that flexible plans (that can deal with any unexpected developments) are necessary to respond to incidents as they arise:

Flexible recoverable plans [are necessary] to deal with the developments that may appear for the first time during Hajj. (14- Field)

7.5.3.5 Mismanagement

Some participants had witnessed incidents of mismanagement during Hajj. Inadequate provisions for high density can exacerbate already difficult situations:

One of the most dangerous things I experienced was on the journey from Arafat to Muzdalifa and from Muzdalifa to Jamarat. There was severe overcrowding and near-occurrences of trampling. There was almost no crowd management here – just penned-in confinement of already frustrated pilgrims. (5- Academics)

Among planning staff, the 2006 accident at Al Jamarat was attributed to both inadequate management and Hajjis straying from their pre-ordained schedule:

the accident [in] 2006 was an example of loss of control. When the density was very high (7 people per square metre) and we were relying on crowd control more than relying on crowd management and pilgrims did not follow their programme schedule defined for them, this resulted in a situation of horror and chaos when the incident took place. (8- Planning)

However, field staff did not describe mismanagement as having occurred:

I have trust in my superior's management because they are using science and technology as tools of management. (18- Field)

7.5.3.6 The crowd as an irrational entity

Some interviewees reported that, at times, they had viewed the crowd as a homogeneous entity, as described by this academic:

I think that many crowd behaviours are different depending upon different cultures, e.g. group movements in Tawaf. However, when the densities become quite large, much of the individual cultural behaviour becomes lost and the crowd begins to behave similarly. (5- Academics)

Continuing the metaphor of a ‘herd’, members of the crowd are also very susceptible to being influenced by others’ imitations:

We observed one of the pilgrims acting in imitation of others which illustrated the herd theory of the crowd. For example, if someone did something like climbing the barrier in violation of the system there were found to be dozens of imitations that could be described metaphorically as an infection of the crowd (12- Planning).

Field management, meanwhile, spoke of the pressures on crowd members leading to irrational behaviour:

Some members of the crew lost their senses due to physical forces implemented by some member of the crowd – this could generate violent behaviour as a result. (14- Field)

7.5.3.7 Unruly pilgrims

Certain behaviours by Hajjis are considered by management staff as detrimental to the safety of others. Planning staff gave an idea of the kind of behaviour in question:

We try to control the behaviour in case there is a potential negative impact on others; an example of such is carrying their luggage to Al Jamarat Bridge or sleeping on the roads leading to the holy sites. (8- Planning)

Members of field management, meanwhile, described the problems posed by ‘irregular’ pilgrims, i.e. those without permits:

The irregular (illegal) pilgrims are a large category and they negatively affect the plans and services laid down to manage the crowds. (15- Field)

We have seen the undesirable behaviour by some of the irregular pilgrims; these behaviours have impacted on the organization and [they] sleep on the roads because they did not enter properly. (16- Field)

7.5.3.8 Cultural issues

The cultural diversity of Hajjis can lead to different behaviours within the crowd, some of which are potentially dangerous. Academic staff described some of the different groups within the crowd, and associated behaviours:

I have seen problems when African people complete Tawaf and want to exit the Tawaf area – they walk as if they are in a battlefield in conflict direction that may cause trouble for many other people. (3- Academics)

Shi'a pilgrims have a desire to perform rituals with their feet on the floor (i.e. The ground floor of the Haram as well as in the case of stoning). Also Southeast Asia pilgrims have a desire for certain cuisine, we strive to secure for them. The Africans come in a large group and they tend to push people, also in the area of Tawaf some of the Iranians in the Tawaf bother the others by praying loudly, causing panic and inconvenience to other pilgrims and some Arab countries place their women inside a circle surrounded by men to protect the women and the elderly during Tawaf. (1- Academics)

African Hajjis were also portrayed as a powerful physical presence by planning staff:

the non-Arab Africans use their bodies as powerful blocks. (11- Planning)

7.5.3.9 Tiredness

Fatigue was named as a factor in affecting the wellbeing and emotional state of Hajjis.

Academic staff noted that lack of education about the rituals can contribute to physical tiredness:

It appears that the majority of pilgrims are moderately educated about the Hajj rituals and [the associated] suffering; so during the Hajj journey the fatigue signs will be clearly shown on the Hajjis and their unfamiliarity of the nature of space, thus increasing the probabilities of their intolerance and becoming unable to understand the matters pertaining to their personal safety and protection as well as to the safety and protection of others. (8- Planning)

High temperatures were also named as a risk factor:

It was noted that most medical conditions are [related to] physical tiredness and thermal stress (12- Planning)

Field management also named tiredness and lack of information as adding to the stresses of performing Hajj:

The biggest challenge facing the pilgrims: fatigue, health conditions and lack of familiarity with some instructions, reading and writing, making his task difficult, lack of training and education for many pilgrims. (13- Field)

7.5.3.10 Environmental concerns

Members of field staff expressed concerns about environmental factors that can increase risk to the safe running of the Hajj. These can be in the form of extreme weather conditions or infectious disease:

Climate change and rain and floods and extreme heat in a dry environment of tough natural challenges are taken into account. In addition to that, [we must] provide public health and safety to diverse crowd types and [overcome] inherent problems, which need to be managed according to their level of complexity and potential of fatal outcomes, such as the spread of contagious diseases and epidemics. (13- Field)

Despite the dry climate of Makkah, the area around the Masjid Al Haram is susceptible to flash flooding because of its low elevation. Rainfall can therefore pose a problem:

if it rains during part of the performance of the pilgrimage that things would be the hardest and require further measures which are regular cases unnecessary. (18- Field)

7.5.3.11 Rumours

A further risk factor is the spread of misinformation, which was a concern raised by members of field management. This participant used the psychological concept of ‘hysteria’:

Rumours that lead to aggression in escaping from alleged danger in a hysterical way that may lead to the risk of fatality. (17- Field)

To counter this, it was said, it is necessary for organisational staff to provide good communication and accurate information:

If communication is not appropriate in quantity and quality at the right time and place to dispel doubts in the crowd this will generate a suitable situation to spread the rumours which is a source of risk to pilgrims. (13- Field)

The importance of information to be given to crowd from source to prevent the spread of rumours as a source of danger to the crowd, especially in locations of long wait and in emergency situations. (18- Field)

7.6 Discussion

Thirty semi-structured interviews were conducted with Hajj management, including ten event (Hajj) academic consultants, ten event planners and ten field management, in order to examine their perceptions of the crowd; in particular their understanding of crowd behaviour, crowd psychology and its relation to safety, danger and their own role. For the purposes of analysis, numbers were cut to 18 (six from each group), in order to make the amount of data manageable. As expected, as well as commonalities across interviewees, different experiences were reported from each category of manager, since some have more face-to-face contact with the crowd than others. The following 29 common themes emerged from the data:

- Quality of service
- Cooperation
- Legitimacy
- Communication
- Feeling safe
- Pilgrims see us as homogeneous
- Shared goals and values
- Time/planning
- Equality
- Unity
- Togetherness
- Variety
- Spirituality
- Hajj crowd is self-organising
- Helping
- Shared emotions in crowd
- Undesirable behaviour
- Aggression
- Panic
- Overcrowding
- Precautionary measures
- Mismanagement
- Crowds are depicted as an irrational entity
- Unruly pilgrims
- Cultural Issues
- Tiredness
- Environmental concerns
- Rumours

The findings will now be considered in relation to the field pilot study of management staff in chapter 5, and the qualitative field study of Hajjis in Chapter 6. Such observations are

necessarily tentative, given the small sample size – those interviewed might not be representative of the groups from which they are taken.

Largely, the results of this chapter were in line with the results of Chapter 5, although the field pilot study presented in that chapter did not include junior management staff on the ground. Themes that arose in both the pilot study, and the final version of the study presented in this chapter, include those relating to the relationship between Hajjis and management staff, such as a positive overall relationship between pilgrims and management, cooperative behaviour, shared values and goals, and difficulties in communication due to language barriers. In the current study, this last problem was described by field staff as being overcome via face-to-face contact and mutual respect.

It was important to represent all levels of management of the pilgrimage from senior management to the soldiers who work in the field face-to-face with pilgrims. I conducted interviews in Arabic to ensure that I included all educational levels of personnel from the highest to the lowest military rank in relation to my position in order to avoid certain hierarchical issues in their responses to my interview questions. While all levels of management were covered, they were not represented in proportion to their representation in Hajj management (where, obviously, there are many more junior soldiers than generals).

As suggested in chapter 5, I relied on my being well known to the Hajj administration and their trust in me that I would not utilize their data for purposes other than research purposes and that it would be used for the development of the pilgrimage. This segment of the participants were of a higher rank than me and therefore it was less likely that they would show deference or other forms of social desirability in answering my queries. Equally for the other types of management that I included in this study (the field management) who were lower than my rank I was mindful of the fact that this might have affected their answers. I tried to counter this by assuring them that the material was in the strictest of confidence to encourage them to be free from pressure and to answer honestly for the sake of the Hajj. Nevertheless it is still possible that some answers were attempts to flatter me or be diplomatic.

Themes that relate to management staff's perceptions of the relationship among Hajjis also repeated and expanded on those found in the pilot study, such as unity and equality being encouraged through a shared sense of purpose and the spiritual nature of the crowd.

Participants in both studies also describe the diversity of the Hajj crowd, but said that these were outweighed by the common bond of religion. Self-organised behaviour among the crowd was named by respondents in both studies, as was mutual cooperation and helping.

While on one level these managers stressed the unity of the Hajj crowd, some of them did differentiate sub-groups within the crowd when discussing problems in the crowd. In this context, they singled out particular ethnic or national groups (e.g. Africans) they claimed were responsible for problems such as aggression. Therefore, this needs to be balanced against the statements by the same interviewees on harmony in the Hajj crowd.

In terms of danger and risk management, some participants in the pilot study mentioned 'panic' within the crowd and how certain physical conditions (such as 'wave motion') might cause this. In the current study, management staff went into more detail about the dangers that occur during Hajj. Participants described witnessing aggression and also 'panic' among pilgrims. However, they were also keen to stress that such behaviour is an exception that occurs in response to danger caused by overcrowding, misinformation, heat, physical fatigue or other adverse conditions such as storms. There was disagreement among participants as to whether 'mass panic', meaning panic that spreads across the crowd, occurs at the Hajj.

There were also significant overlaps with the responses of Hajjis described in the field study in Chapter 6. Again, descriptions of shared identity, unity, and equality were given by participants in both studies. Hajjis mostly reported feeling safe, often due to the spiritual element of the gathering and to the belief that management staff would protect them, which was echoed by staff in the current study. Pilgrims also reported helping behaviour, but there were additional reports of aggression and discomfort in areas of high density such as the Haram during Tawaf.

A further key finding was that all but one of the management staff interviewed in this study reported that Hajjis see organisational staff at Hajj as homogeneous. Their responses began to shed some light on the difficulties encountered by participants in the UK pilot study (chapter 4) in identifying different types of Hajj management. One idea was that pilgrims do not usually experience a need to distinguish between management staff, as all communication is via representatives of the various groups at Hajj. Even the field staff reported that Hajjis were

unable to identify different management staff, and that this can sometimes cause dissatisfaction among pilgrims.

We can also draw some comparisons and contrasts between the different groups interviewed in this chapter: academic staff, planning staff, and field management. Again, a caveat must be added that sample size is small and not necessarily representative. An area of divergence is the theme of communication. Academic and planning staff noted that most communication between Hajjis and management staff occurs indirectly, through the Mutawafs (group representatives). However, field management reported that they did in fact have direct contact with pilgrims, and added that this face-to-face contact engendered mutual cooperation. There was agreement among the three groups that Hajjis tend to view management as a homogeneous entity, although an exception to this was a member of the medical staff, who believed that he and his colleagues were easily identifiable.

Some members of academic and planning staff described instances of mismanagement that they had witnessed during the Hajj. Responsibility for this was not ascribed to any particular element of the Hajj management, but, as the on-site representatives of the management, field staff might consider themselves at risk of criticism, and it is interesting to note that members of the field staff did not describe mismanagement. One comment (see theme 21) from a member of the latter group suggests that 'management' is seen by this participant as the responsibility of those higher up the chain of organisation, and his role as merely to implement the strategies decided upon by others.

Other issues mentioned only by the field management were the spread of rumours among Hajjis, potentially leading to problems in the crowd, and the threat posed by environmental concerns. It is possible that these themes arose only in this group because of the direct contact they have with pilgrims; members of academic and planning staff, who are more removed from the process, are less likely to have witnessed these phenomena.

In general, participants described a positive relationship between pilgrims and management, based in trust and mutual cooperation. Although it is in the interests of authorities to portray this relationship positively, this is not simply the standard management line – participants stated that they were speaking openly and trusted me. The portrayal of the relationship between crowd members and authorities was more positive than those found in previous

studies focusing on perceptions of authorities involved in crowd management. Two studies focusing on police perceptions of crowd processes (Stott & Reicher, 1998; Drury, Stott, & Farsides, 2003) have revealed the enduring presence of the myth of the ‘influential minority’, in which a small but powerful group displaying anti-social behaviour can exert a disproportionate influence on the wider crowd. In this construction, the greater mass of the crowd is positioned as suggestible and mindless, and willing to engage in destructive behaviour if they witness others doing so. The elaborated social identity model, or ESIM, (Drury & Reicher, 2000; Reicher, 1996; Stott & Reicher, 1998) proposes that norms and identities within a crowd develop in relation to the relationship with an out-group, rather than in isolation. The belief that crowds are susceptible to the malicious influence of a minority can lead authorities to treat the crowd as homogeneous, and is associated with the endorsement of coercive methods to deal with crowds. Disorder at crowd events therefore becomes a self-fulfilling prophecy, in which authorities, acting on the belief that crowds are dangerous, employ heavy-handed, indiscriminate methods to control crowd members, who in turn feel under threat by the authorities, and may react aggressively towards them. Although interviewees did talk about aggression within the crowd, they did not seem to endorse models of crowd violence as proposed by Le Bon.

Other myths about crowd behaviour that have informed crowd management approaches include ‘mass panic’ and ‘helplessness’, which, along with ‘civil disorder’ were explored by Drury, Novelli, and Stott (2013) in a study of the views of police officers, civilian safety professionals, and sports event stewards. ‘Mass panic’ and ‘civil disorder’ were endorsed by participants in that study, who rejected the myth of the crowd being helpless. In the current study, there was some support for the idea of ‘mass panic’ among all three groups, and a few instances of irrationalist psychological language and concepts, such as describing crowd members as ‘hysterical’ or behaving like a ‘herd’.

As with participants in the Drury et al. (2013) study, interviewees described resilience among crowd members, with spontaneous references to crowd self-organization, which is the basis of adaptive response. Different participants conceptualized resilience in different ways, depending on their background. Some academics discussed resilience from an engineering perspective, as a physical phenomenon. Planning staff described the resilience of crowd management measures, and the possibility that these could fail when crowd density reaches a critical point. Field staff described witnessing Hajjis help each other in the face of adverse

conditions. These findings are consistent with previous studies: Fischer & Drain's (1993) study of local emergency management directors found that participants reported instances of people behaving altruistically when faced with danger. Such behaviour was also reported in the current study, for example by the member of field management who described pilgrims risking their own lives to help each other escape a building fire.

Despite the commonalities with previous research into management perceptions of crowd behaviour, there was also a significant divergence from other studies. Although participants in the current study said that they had witnessed certain groups in the crowd behaving anti-socially, for instance acting with impatience or aggression, or protecting their own group to the detriment of other crowd members, they did not express the view that such behaviour is likely to spread to other individuals or small groups within the crowd. Participants also endorsed the idea of the Hajj crowd as a heterogeneous entity. Additionally, where management staff reported anti-social behaviour, they were keen to emphasise that this was not characteristic of the crowd as a whole, and to balance such stories with observations about pro-social behaviour they had witnessed elsewhere in the crowd. Furthermore, they seldom used irrationalist psychology to explain violence in the crowd.

What appears to distinguish this study from others, and indeed the Hajj from other crowd events, is that Hajj management staff do not always appear to view crowd members as an out-group. This is particularly true for field staff, who interact with Hajjis on a personal basis, and are more likely to take account of the needs of crowd members and understand potential causes of agitation, discomfort or disturbance among the crowd. The influence of rank or position within an organisation has been considered by other studies. Stott & Reicher (1998) noted that their participants were primarily operating at a junior level within the police force, and were therefore more likely to be exposed to danger when policing crowd events, and perhaps more likely than their superiors to endorse stricter policing methods. Drury, Stott, and Farsides (2013) tested this claim, but found no differences between those who were low and those who were high in experience of policing crowds. The current study actually found that the field staff, with more first-hand experience of the crowd, were *less* likely than academic or planning staff to view the crowd as irrational, homogeneous, or susceptible to the influence of an unruly minority.

This is in contrast to the findings of Prati and Pietrantonio (2009), who found that more experience of crowds among police led to *more* pathologising attitudes. There is, however, substantial overlap with the findings of Carter, Drury, Amlôt, Rubin, and Williams (2014), who carried out semi-structured interviews with emergency responders regarding decontamination. Those with direct experience of decontamination reported that non-compliance and excessive anxiety were rare, while those without direct experience said that they expected non-compliance and anxiety in such situations. The latter group endorsed an approach based on ‘controlling’, rather than communicating with, the public.

How can we explain the findings of the current study? The ESIM proposes that conflict arises when there is an asymmetry between the way in which the crowd is seen by its constituent members and by out-group members. In the case of the current study, and the equivalent study of Hajjis (see chapter 6), there seems to be a little disparity in the way that the two groups view the Hajj crowd. A likely explanation is the overriding significance of the Hajj as a religious gathering. Crowd members are joined, not only in frequenting the same places and participating in the same rituals, but also in the knowledge that they are all Muslims, and all in Makkah to demonstrate their devotion to God. Crucially, the management staff are also Muslims. Islam, therefore, represents the common bond of an in-group that includes both Hajjis and management staff; one that overcomes other differences, whether ethnic, cultural, economic, linguistic, or pertaining to one’s status as Hajji or staff. On most occasions, management and pilgrims had the same ideas about legitimate practice. It should be noted that the ESIM was developed to explain intergroup conflict, and describes some of the conditions for conflict (e.g., asymmetry of categorical representations). In the absence of such conditions, a peaceful crowd is predicted.

In Chapter 8, there will be a further investigation into the themes that have arisen in this and previous chapters, using a quantitative approach with a large sample size, which will make it possible to draw conclusions about crowd perceptions and safety at the Hajj with greater validity.

Chapter 8: Questionnaire survey of Hajj 1433 (October, 2012)

8.1 Introduction

In the previous empirical chapters I analysed and interpreted the data obtained from interviews in order to explore crowd experience (accounts of perceptions and behaviour) of pilgrims at the Hajj. The analysis was qualitative as it aimed to offer meaningful insights into how a given person, in a given context, makes sense of the topic of the study (the crowd at the Hajj). I looked at the ways that pilgrims experienced the crowd using IPA as a framework for analysing qualitative research data. This method was suitable for relatively small samples (Smith & Osborn, 2003). Some of the themes that emerged from the analysis in chapter four referred specifically to the crowd. These were: crowd diversity, joy in the crowd, using body language with strangers in the crowd, helping strangers in the crowd, feeling safe in the crowd, positive perceptions of Hajj management, crowd equality, unity with the crowd, and shared emotion in the crowd.

These findings of positive experiences in the crowd conflict with early theories of the crowd (e.g. Le Bon, 1908) which emphasize negativity, i.e. that crowds are aversive, inherently dangerous, and frightening, but are in line with recent social identity approaches.

Specifically, self, identity and group membership seemed to be important issues and seemed to be clearly related to the extent of positive experience, reported helpful behaviour, expectations that others will be supportive, practically and emotionally (Drury & Reicher, 1999), and feeling collective ownership of the plans and goals we make together (Haslam, 2004). Group membership can also reduce anxiety and stress (Haslam et al., 2005) and encourage us to express solidarity and cohesion in relations with others (Levine et al., 2005), and can develop as participants face danger together (Cocking, Drury, & Reicher, 2007).

These outcomes of previous empirical chapters allowed for the developments of our understanding of the crowd psychology of the Hajj. The same kinds of patterns were identified in pilgrims' accounts in (1) the October 2011 UK pilot, (2) the November 2011 Hajj pilot, and (3) the Hajj 2012 interviews. I also found that although managers distinguished between different professional roles among management (Chapter 5, Chapter 7) the Hajjis made no such distinction.

In order to go beyond a qualitative analysis, the current chapter will focus on a large scale survey of a representative sample in order to measure the extent of the beliefs and behaviours referred to in the previous chapters and to analyse the predictive relationship between a number of key variables. I surveyed 1194 pilgrims over 24 days of Dhu al-Hijjah, the last month of the Islamic calendar (October 2012), covering their experiences before, during and after the Hajj rituals. I also took estimates of crowd density and a number of demographic measures. I took a large number of self-report measures, including enjoyment in the crowd, negative experience in the crowd, perceptions that others are united, crowdedness, and types of social identification. These measures were taken across three phases of the Hajj in different locations around the Grand Mosque and at different times of the day, in order to identify the expectations and perceptions of pilgrims who came to the pilgrimage and the experience that they felt during the performance of Hajj and gains that came out of the Hajj in terms of changes in psychology and behaviour. In addition, this helped to identify the sites and times where they felt spirituality.

By taking many demographic measures (such as nationality, gender, etc.), I was also able to explore the extent to which any of these predicted my key dependent measures (enjoyment, safety, change) as controls for my main theoretical tests (below). I also explored the extent to which pilgrims saw certain locations as more spiritual and more congested than other places. I predicted that the most crowded (high-density behaviour) would be in Tawaf and the most spiritual would be on the day of Arafat.

Based on the theory described in Chapter 3 and the qualitative analysis in the previous chapters I had a number of key predictions. Firstly, I expected that there would be high levels of enjoyment in the crowd. I expected that this enjoyment would be related to identity factors such as identification as a Muslim, perception of others' identification as Muslim, and identification with the crowd (key hypothesis H1). Despite this, I also expected that people might report the event as extremely crowded, especially at high density levels. A second prediction is that there would be high levels of reported help. I also expected that for those with experience of emergencies, a similar pattern would be found. For help at the Hajj, I expected this to be predicted by identity factors (key hypothesis H2). A third prediction was that people would feel that management acted fairly and that Muslim identification, feelings of togetherness, the peacefulness of the crowd, and good communication would predict this

perception of legitimacy (key hypothesis H3). I predicted that people would say that the experience of the Hajj changed them (cf. Clingingsmith et al., 2008) and that social relational factors (Hajj crowd, perception that others are supportive, Muslim identity, others' Muslim identity, feelings of togetherness and peaceful crowd) would predict this report of change (key hypothesis H4), and I predicted that feeling in danger at Tawaf would be predicted by crowdedness at the Hajj, good communication (negatively) and perception that Hajj was well managed (negatively) (key hypothesis H5).

Finally, I carried out a series of tests on perceptions of safety in relation to crowd density. The baseline hypothesis that underpinned the analysis was that as the crowd density increased, reported perceptions of safety would decrease (key hypothesis H6). The second hypothesis was that several variables would increase reported perceptions of safety. These variables were: expectations of support, management competence, and social identification (in three measures) (key hypothesis H7). Management competence was included as a variable as it is likely that pilgrims' faith in the competence of the Hajj management to safely and effectively manage the Hajj events would lead to increased feelings of safety. The most novel hypothesis was that social identification would moderate the negative effects of density on reported perceptions of safety (key hypothesis H8). In a previous study, Neville and Reicher (2011) made a distinction between social identification with a social category and shared social identification with others in the crowd. They argued that shared social identification with others in the crowd is a better predictor than identification with a social category of behaviour in relation to others present in the crowd. As a result, I expected to find a relationship of moderation in the case of identification with the crowd and also in the case of perceptions of others' identification as Muslim (each of these relate specifically to shared identification with others in the crowd), but I expected to find no moderation effect for identification as Muslim (as this relates specifically to identification with a social category). An initial supplementary hypothesis for the moderation was that the negative relation between crowd density and safety is only likely on those individuals who are relatively low in identification. A further supplementary hypothesis was that density could actually increase feelings of safety for those individuals who are high in identification with the crowd. This is because if safety is predicated on perceptions of support from those with whom one identifies, the more of these others present (due to increased density), the greater the level of perceived safety. I also tested the hypothesis that the reason for this moderation effect is that, because identification with the crowd and perceiving that others identify as Muslims can both

increase perceptions of support, this in turn leads to an increase in reported safety; therefore support mediates the effect of identification on safety (key hypothesis H9).

8.2 Methods

A cross-sectional study was conducted through a large-scale survey of pilgrims visiting the Haram and their interaction with Hajj management who were attending Hajj from the 1st to the 24th day of the Hajj month of the Islamic year 1433 (October 2012). It was necessary to apply the research procedures used, whether interviews or questionnaire research, during a specific time period represented in the pre-Hajj period (from the 1st to the 8th of Dhu al-Hijjah), during the pilgrimage (from the 9th to the 12th of Dhu al-Hijjah) and after completion of the Hajj rituals (after the 13th of Dhu al-Hijjah), in order to capture the pilgrims' perceptions and impressions and any significant changes in their behaviour or how they felt during the course of Hajj. This study protocol was approved by the Ethical Committee, Custodian of the Two Holy Mosques Institute of Hajj Research, Umm al-Qura University, Makkah, Saudi Arabia, and the University of Sussex, Brighton, UK.

8.2.1 Preparation and management of the research

It was important to keep in mind that there were a number of challenges facing the study (including the short time available for gathering data, financial limitations and regulatory requirements). These challenges were addressed and dealt with as appropriately as possible to achieve the objectives of the study.

As described in Chapter 6, a considerable number of meetings and arrangements prior to the pilgrimage in the 2012 season were coordinated with the Institute of the Custodian of the Two Holy Mosques Umm al-Qura University in Makkah, where the Dean Assistant for scientific research expressed the institute's support for this study. He did so logistically and financially for the conviction of its scientific content. Accordingly, I worked prior to the pilgrimage season in ways which will now be discussed.

For the purpose of exploring the crowd experiences and behaviours of the main language groups of pilgrims at the Hajj 2012, the research questionnaire had to be translated from the

English original. The procedure was the same as for the interview schedule described in Chapter 6. As a first step, I translated the English language questionnaire survey into Arabic. Next, the Arabic language questionnaire survey was given to the translation department at Umm al-Qura University to translate it into other languages, namely French, Persian, Turkish, Malay and Urdu. These were then given to a different translation department based at the Institute of the Custodian of the Two Holy Mosques to re-translate all forms mentioned above into the Arabic language, to make it easier for me to review all questionnaire surveys and to ensure compatibility with the translation of the Arab version that I carried out myself. There were some modifications and adjustments to some of the questionnaire survey forms to make them compatible with each other and to comply with the translation into Arabic of the questionnaire survey. Finally, I adapted the seven questionnaire survey forms of the seven languages with an emphasis on compatibility, readability and validity of the seven questionnaire surveys with one another.

Next, all forms were back translated from these different languages to Arabic, in order to ensure the compatibility of translations with the English research questionnaire before starting data collection.

An announcement was made at Umm al-Qura University to request research assistants who spoke these languages so that we could include almost all categories of pilgrims who attended Hajj 2012. I then interviewed and selected my research assistants (23 students) in accordance with the required specifications for the study and the necessary languages. Allowances were paid to research assistants by Umm al-Qura University.

Theoretical training was implemented for two consecutive days at Umm al-Qura University before the start of the pilgrimage. This training explained the objectives and methodology requirements of the study. It outlined the literature research and stated what procedures must be adhered to, as well as what should be avoided.

Practical training was implemented between assistants so that each student could practice administering the questionnaire with someone from the assistant's group. This was to ensure adequate practice of the interview, and well as to provide guidance on best practice when delivering the interview. This would ensure that we carry out the same practice in the field on pilgrims and under the same conditions of Hajj.

8.2.2 Pilot work and procedure

Based on the 2011 Makkah pilot study, I was aware of several research difficulties. I discuss how I dealt with these in Chapter Six (section 6.1). In deciding on the sample size of this study (1200 participants), it was important to establish the right number of participants. If it was too low, it would carry the risk of inadequate information and inability to demonstrate significant effects. Too high, and there would be the risk of being inefficient (Schaefer, Kelly, & Abbey, 1986). The sample must represent, as accurately as possible, the Hajj population from which it was drawn. Furthermore, three factors were considered as important in order to carry out this study. Those factors were time, money and staff. To overcome this, coordination with Umm al-Qura University was developed. This produced financial and logistical support and knowledge of the nature and environment of pilgrimage.

I was aware of the need to include pilgrim representatives from across different continents in my work. In the application of this principle I took the advice of the Custodian of the Two Holy Mosques at the Institute of Hajj Research with respect to the sample size. According to the spatial and temporal data it was ascertained that 1200 cases distributed by languages would include a comprehensive sample of pilgrims taking part in the Hajj in 2012, including sufficient numbers (> 100) for each Hajj establishment group to allow for sub-group comparative analysis.

There is a multitude of languages spoken by pilgrims from Islamic countries where language diversity is common. The sample of pilgrims included 74 Islamic nationalities, which included seven different languages. This was extremely difficult to cope with, especially because I was keen to represent most Muslim nationalities coming for the Hajj, and, moreover, to achieve a high number of completed questionnaires in a short time with a minimum research team. I received help from graduate students at the postgraduate stage of their Master's and PhD studies at the Umm al-Qura University who had previous experience of field work, particularly in the area of working with pilgrims. The nationalities of the research field team members were the same as the sample pilgrims in the data collection with the knowledge that questionnaire translated into seven languages (Arabic, Urdu, Turkish, French, Persian, English and Malay). A final stage of piloting was undertaken at the Umrah in Ramadan 2012. The whole content of the questionnaire surveys were pilot tested before being used at the Haram two months before Hajj 2012. I ran this pilot in order to examine survey

content – i.e. whether or not the items made sense to people. This helped me to finalise aspects of item wording.

We approached participants inside the Holy Grand Mosque and its courtyard plazas. We introduced ourselves to the participants and explained to them that they could refuse to answer any questions or stop the questionnaire at any time they wished. At the beginning, we introduced ourselves by saying that we were conducting a study in social psychology at the University of Sussex, UK. As part of this degree, we were undertaking a research project that examined the crowd experience and crowd behaviour and its management during the Hajj. The questionnaire took 38 minutes to complete. Sampling procedures are described below.

8.2.3 Participants

The study sought to sample the various Muslim people by their different language groups in proportion to their representation at the Hajj, namely the Arabic, Malay, Persian, Urdu, English, French and Turkish languages, so the questionnaire was translated to all seven languages at the same time, as described above. Our sample was also representative of the seven combination and partly representative of the different nationalities of those present at the Hajj (see below).

The study focused on getting samples from different groups of pilgrims – as far as possible – whether they were pilgrims from within or from outside Saudi Arabia. For the sample, we selected 114 of who were speakers of English, 120 of French, 120 of Persian, 120 of Turkish, 150 of Malay, 150 of Urdu and 420 of Arabic.¹⁷ This resulted in a total sample of 1194 participants in this study.

Of the participants, 768 of the participants were male (64.1%) and 426 were female (35.6%). This conforms exactly to the ratio of males to females in the population taking part in Hajj 2012 (Ministry of Economy and Planning, Central Department of Statistics and Information, Saudi Arabia, 2014). Participants took part in this study were all adults (18 years old or older); 17 (1.4%) were aged below 20 years old, 101 (8.5%) were aged 20 to 29, 224 (18.8%)

¹⁷ The research assistants were instructed to select people of these language groups.

were aged 30 to 39, 465 (38.9%) were aged 40 to 49, and 387 (32.4%) were aged 50 years and over.

The distribution of the sample across the period of the Hajj were as follows, 383 (32.1%) participants were sampled in the 9 days before Hajj, the greatest number of participants, 536 (44.9%), were during Hajj over 3 days, and 275 (23.1%) in the 6 days after the Hajj rituals.

The vast majority of participants in the sample (1034 or 86.3%) performed Hajj within groups; the rest (960 or 13.7%) of the cases performed the pilgrimage independently. Their education levels varied from illiterate to doctorate level, thus 68 cases were illiterate (5.7%), 198 (16.5%) were at 'read and write' level, primary level, 205 (17.1%), secondary level, 240 (20%), degree level, 397 (33.1%), master level, 78 (6.5%) and 8 cases were doctorate level (0.7%).

The employment status of the sample was as follows: 724 (60.6%) were employed, 366 (30.7%) were retired and 104 (8.7%) were unemployed.

Additionally, the number of participants surveyed inside the Grand Mosque was 436 (36.5%) and outside the Grand Mosque in Makkah was 758 (63.5%). For the purpose of praying or during the performance of Tawaf, the questionnaires were conducted on the participants for the entire period of the pilgrimage (before, during, and after).

The study included participants from 72 countries. Arab countries were the largest group, represented by 421 cases (35.1%), Turkey and Muslims of America, Australia and Europe came in second represented by 221 cases (18.4%), third in terms of number of participants were from South Asia, represented by 165 cases (13.8%), fourth were South East Asia pilgrims represented by 155 cases (12.9%), fifth were pilgrims from Iran and Azerbaijan who were represented by 121 cases (10.1%), and sixth were the Non-Arab African Countries represented by 111 cases (9.3%). These proportions are partly in line with official statistics on the distribution of pilgrims from the different Hajj establishments, i.e. Arab and Arabian Gulf countries 26%, America, Australia and Europe 14%, South Asia 29%, South East Asia 16%,

Iran 4% and Non-Arab African Countries 11% (Ministry of Hajj, National Establishments for Hajj Affairs 2011).

In this work I recruited 21 research assistants for the purpose of data collection who were of the same nationalities (or at least language groups) as the pilgrims in order to cut down the potential for problems that I, or any assistant from Saudi Arabia as a host pilgrim state, might encounter in recruitment. Once more, the emphasis on the sincerity and accuracy of their answers should impact positively on the Hajj.

It is important to note that the period before and after the pilgrimage is considered an important period of Hajj. The majority of pilgrims arrive before the first day of the Hajj and see this period as an integral part of the pilgrimage. Muslims believe that praying at the Grand Mosque is a hundred thousand times more rewarding than praying in another mosque so they make use of the opportunity. There is also an execution of the first Tawaf that begins as soon as they arrive in Makkah and the farewell Tawaf that occurs before pilgrims return to their home states. Additionally, there is Umrah performed in the Grand Mosque before the pilgrimage starts. All of this activity means that the Grand Mosque was permanently crowded at all times in which we collected our research data.

8.3 Measures

I designed the majority of the questionnaire survey items myself with my supervisor, especially for this study. I had to design most of them myself, as there were no suitable existing items for many of the measures. The social identity questionnaires were informed by the work of previous scholars (Leach et al., 2008). Questionnaires relating to changes in self were based on the work of Clingingsmith, Khwaja, and Kremer (2003), with modifications to suit my research objectives.

The questionnaire measures (see Appendix B) used 7-point Likert-type scales, which ranged from 1 (strongly disagree) to 7 (strongly agree), unless stated otherwise.

Crowd experience: Participants' experience of being in the crowd was measured by a number of different scales constructed for the purpose. There were six items measuring positive experience being in the crowd: 'I am glad to be part of this crowd', 'I feel enthusiastic to be part of this crowd', 'I am enjoying being in this crowd', 'Being in the Hajj crowd is a positive experience for me', 'My desire is to be part of the Hajj crowd', and 'I feel emotionally exhausted in this crowd', 'I feel trapped in this crowd', and 'I feel rejected by other people in this crowd', which were found to scale reliably, $\alpha = .82$. In addition two items asked respondents whether they perceived there to be togetherness in the crowd: 'This crowd is united with each other' and 'There is a sense of togetherness in this crowd', which were found to scale reliably, $r(1189) = .21, p < .001$. Therefore, for this measure I just used the single item 'I feel a sense of togetherness with other people on the Hajj' in the analysis.

Social identification: We developed three types of measures of participants' social identification. There were three items measuring Muslim participants' social identification: 'Being a Muslim is important to me', 'Being a Muslim is a reflection of who I am', 'I think of myself in terms of my Muslim identity'; these items were partly based on measures developed by Doosje, Branscombe, Spears, and Manstead (1998; see also Leach et al., 2008), and were found to scale reliably, $\alpha = .79$. There were three items measuring the perception of other crowd members' identification as Muslims: 'The Muslim identity is important to the other people in this crowd', 'I see good Muslims', 'I see bad Muslims', which were found to scale reliably, $\alpha = .79$. Next, there were five items measuring participants' identification, feelings of unity or 'togetherness' with the rest of the crowd: 'I feel at one with the people around me', 'I feel that I am part of this crowd', 'I feel a sense of togetherness with other people on the Hajj', 'I

¹⁸ One item intended as part of this scale ('there is enough space for everyone') did not scale acceptably with the others and so was excluded.

feel unity with others', 'I feel strong ties with other people on the Hajj', which were found to scale reliably, $\alpha = .88$.

Supportive behaviour on the Hajj: Participants accounts of positive support for others were measured in two ways. There were three items measuring perceptions of others other crowd members' identification support for others were measured in two ways. There were three items measuring perceptions of others', 'If I need help, other pilgrims would help me', which were found to scale reliably, 0 ways. There were three items measuring perceptions participants' own help of others in the crowd: 'of others in the crowd scale reliably, 0 ways. There were three items measuring perceptions of others', 'If I for others' needs', which were found to scale reliably, 0 ways.

Crowd conflict: Participants found to scale reliably, 0 ways. There were three items measuring perceptions of others', 'If I for others' needs' pilgrims would help me'sitive expOn the whole, the Hajj crowd is peaceful', 'On the whole, the Hajj crowd is not aggressive', 'When there is conflict at the Hajj, it is due only to certain groups in the crowd', which were found to scale reliably, $\alpha = .75$. Moreover, there were two items measuring negative or selfish behaviour in the minority: the whole, the Hajj crowd is peaceful', 'On the whSome individuals show selfish behaviourl', 'On the w not found to scale reliably, $r = .50, p < .001$. Therefore, for this measure, I just used the single item 'Some individuals show selfish behaviour'.

Safety on the Hajj: Participants were asked about whether they felt safe on the Hajj. There were two items measuring perceptions of safety in the Hajj crowd: 'fety in the Hajj crowd about whether they felt crowd', which were found to scale at, $r = .49 p < .001$.¹⁹ In addition to that, there were two negative items of perceptions of danger at the Tawaf: asuring perceptions of t at the Hajj, it is due only to certain groups in the crowd at just $r = .50 p < .001$. Because they did not scale reliably I used just the first item in the analysis.

¹⁹ While this value is below the level usually expected for reliability, in this case I decided to retain the measure, which had been accepted in this way when presented in my paper for *PNAS* (Alnabulsi & Drury, 2014).

To assess *the experience of those who experienced an emergency on the Hajj*, I used the following items: ‘In the emergency we were able to help each other’; ‘In the emergency it was physically impossible to help other people’; ‘In the emergency I tried to help others’ and ‘The authorities responded effectively to the emergency situations’. (All were used as single items in the tests.)

Relationship with the Saudi staff at the Hajj: Participants were asked about their relationship with the Saudi staff at the Hajj. There were three items measuring legitimate treatment by Saudi staff: ‘on the whole, the Saudi staff treats us fairly’, ‘I like the Saudi staff’ and ‘The Saudi staff has provided for all our needs’, which were found to scale close to a reliable level, $\alpha = .63$. Moreover, there were nine items measuring perceptions of competence: ‘The Saudi staff have organized the events well’, ‘There are enough Saudi staff to manage the crowd safely at the entrance to Haram’, ‘There are enough Saudi staff to manage the crowd safely at the exits of Haram’, ‘There are enough Saudi staff to manage the crowd safely at the plazas of the Haram’, ‘There are enough Saudi staff to manage the crowd safely at the Tawaf’, ‘There are enough Saudi staff to manage the crowd safely at Sa’i’, ‘There are enough Saudi staff to manage the crowd safely In the Hajj in general’, ‘The Saudi staff are competent’, and ‘I trust the Saudi staff to respond effectively if there is an emergency’, which were found to scale reliably, $\alpha = .91$. Moreover, there were two items measuring good communication, ‘the Saudi authorities provide appropriate information for us’ and ‘The Saudi authorities are not communicating adequately with us’, which were **not** found to scale acceptably, $r = .41$, $p < .001$. Therefore, for this measure, I just used the first item in the tests.

Experience of changes in self through participation in the Hajj: Participants asked if they had experienced any changes in themselves throughout their participation in the Hajj. There were six items measuring various changes in self (based on the study by Clingingsmith et al., 2003): based on the study by Clingingsmith et al., 2003)anges in themselves throughout their par, based on the study by Clingingsmith et al., 2003)anges in themselves throughout their participation in the Hajj. There were six items measuring various changes in selfnage the crowd safely at the exits of Haram’, ‘There are enough Saudi staff to manage tpeople from different cultures?’, which were found to scale reliably, $\alpha = .88$.

Crowd density: The 12 research assistants were involved in the survey. They were trained to estimate the number of people per square metre (ppm^2), which is the standard measure of crowd density in the crowd safety industry (e.g., Health and Safety Executive Guide, 1999).

Finally, the study looked at the sense of spirituality of Hajj activities (prayer inside the Grand Mosque; Sa'i; Tawaf; Jamarat and standing inside the zone of Arafat) by requiring participants to answer a five-point scale (1 being the lowest and 5 being the highest) in relation to a sense of spirituality for these locations and perceived crowdedness for the same locations.

8.4 Results

Data entry and statistical analysis were performed using the Statistical Package for Social Science (SPSS) program.

Inspection of the density data revealed that 10 cases were outliers: seven participants were scored at 0ppm^2 (here the research assistant could not estimate the number of people per square metre) and three were scored at implausibly high density (12ppm^2 and 15ppm^2). The data from these participants were removed, leaving 1184 participants in the final data set.

Descriptive statistics, variance, standard deviation, and *t*-tests, were performed where appropriate. Statistical significance was set at $p < .001$. In this results section, I will first report descriptive statistics for all measures, followed by tests of structural and demographic differences, and examination of emergency experiences, congested and spiritual locations. I will then present correlations and regressions to test my key hypotheses.

8.4.1 Descriptives: One sample *t*-tests

Table 8.1 (below) shows that for all scale measures the mean differed significantly from the scale midpoint of 4.

Table 8.1 Descriptive statistics: One sample *t*-tests

	M	SD	<i>t</i>	<i>p</i>
1 <i>Crowd experience</i>				
1.1 Positive experience in the crowd	5.51	1.28	40.59	.001
1.2 Negative experience in the crowd	4.68	1.56	14.75	.001
1.3 Perceptions of unity in the crowd	5.69	1.49	51.16	.001
1.4 Crowdedness	5.38	1.82	25.98	.001
2 <i>Social identification</i>				
2.1 Identification as a Muslim	6.16	0.91	85.34	.001
2.2 Perception of other crowd members' identification as Muslims	6.10	0.85	81.45	.001
2.3 Participants' feelings of togetherness with the crowd	5.99	0.91	75.55	.001
3 <i>Supportive behaviour</i>				
3.1 Perceptions of others' helpfulness to others in the crowd	6.03	0.92	75.78	.001
3.2 Reported support for others in the crowd	5.77	1.06	57.62	.001
4 <i>Crowd conflict</i>				
4.1 Reported peacefulness of the crowd	5.62	1.01	55.20	.001
4.2 Some individuals show selfish behaviour	5.04	1.59	22.35	.001
5 <i>Safety on the Hajj</i>				
5.1 Reported experience of feeling safe in the Hajj crowd	5.82	1.11	56.72	.001
5.2 Reported experience of feeling unsafe at Tawaf crowd	5.45	1.46	34.13	.001
6 <i>Relationship with the Saudi staff at the Hajj</i>				
6.1 Reported fair treatment by staff	5.32	1.01	45.12	.001
6.2 Perceived competence of the Hajj staff	5.05	1.11	33.09	.001
6.3 Reported good communication experience in the crowd	5.00	1.55	22.24	.001
7 <i>Experience of changes in self through participation in the Hajj</i>				
7.1 Reported changes in self-experience after Hajj	6.04	0.93	75.54	.001

Note: Tests whether mean is different from scale mid-point

8.4.2 Demographic Comparisons

Here, I report on three demographic comparisons: gender, Shia vs. Sunni and the six establishments at the Hajj.

Gender: In the sample as a whole ANOVA revealed that there was a significant gender difference on just one measure – helping others in the crowd $F(1, 1180) = 15.40, p < .001$, where males were more likely to say that they gave help ($M = 6.11$) than were females ($M = 5.89$).

Shi'a vs. Sunni: In the second demographic comparisons in the sample as a whole, in comparison between pilgrims from the Shi'ite versus Sunni and other countries²⁰ one-way ANOVA showed significant differences on ten measures, as follows: for *positive experience in the crowd* a one way ANOVA was carried out with Muslim denomination (Shi'a vs. Sunni countries) as the factor and positive experiences being in the crowd as the dependent measure. This revealed a significant effect, $F(1, 1180) = 14.42, p < .001$, indicating that Shi'a participants ($M = 6.04$) enjoyed being in the crowd more than did Sunni participants ($M = 5.48$). However, for *Negative experience in the crowd*, $F(1, 1180) = 18.86, p = .001$, where more negative crowd experience was reported by pilgrims from the Shi'ite countries ($M = 5.40$) and less by those from others ($M = 4.62$). The second difference was for *crowding*, $F(1, 1180) = 56.40, p < .001$, where more space required was reported by pilgrims from the Sunni countries ($M = 5.49$) than those from the Shi'ite countries ($M = 3.92$). Third, there was a difference in importance of *Muslim identity*, $F(1, 1180) = 7.26, p = .001$, where more Muslim self-identity was reported by pilgrims from Shi'ite countries ($M = 6.43$) and slightly

²⁰ Pilgrims were divided into categories of Shi'ite country (e.g. Iran, Iraq, Bahrain and Azerbaijan), representing a rate of 6.6% of participants vs. other Muslim countries (Sunni) representing a rate of 93.4% participants. Obviously, this post hoc method creates a crude measure. Taking country of origin to make a proxy measure of religious affiliation assumes for example that Iraqi participants were Sunni, when a significant minority are Sunni.

less by those from Sunni countries ($M = 6.14$). The fourth difference was for *others' Muslim identity*, $F(1, 1180) = 4.64$, $p = .003$, where pilgrims from the Shi'ite countries ($M = 6.30$) were more likely to report that others were good Muslims than pilgrims from Sunni countries ($M = 6.09$). The fifth difference was for the feeling of one's *togetherness with the crowd*, $F(1, 1192) = 12.11$, $p = .001$; more sense of togetherness was reported by pilgrims from the Shi'ite countries ($M = 6.30$) than by the Sunni countries ($M = 5.96$). There was also a difference in reports of *helping others in the crowd*, $F(1, 1180) = 13.39$, $p < .001$, where more help was reported by pilgrims from the Shi'ite countries ($M = 6.39$) and less by the pilgrims from the Sunni countries ($M = 6.00$). The sixth difference was for perceptions of a *peaceful crowd*, $F(1, 1180) = 11.34$, $p = .009$; greater perception of a peaceful crowd was reported by pilgrims from the Sunni countries ($M = 5.64$) and slightly less by the Shi'ite countries ($M = 5.35$). The seventh difference was for perceived *competence of Hajj managers*, $F(1, 1180) = 12.45$, $p < .001$; greater perceptions of manager competence were reported by pilgrims from the Shi'ite countries ($M = 5.49$) and less by those from Sunni countries ($M = 5.03$). The eighth difference was for *good communication*, $F(1, 1180) = 4.35$, $p = .04$; greater perception of good communication was reported by pilgrims from the Shi'ite countries ($M = 5.35$) and slightly less by the Sunni countries ($M = 4.98$).

Hajj services providers: The third set of demographic comparisons compared six Establishments of Hajj service providers. One-way ANOVA showed significant differences on 15 measures. It is apparent from Table 8.1 that the group that expressed most enjoyment in the crowd were those from Iran/Azerbaijan, while the group which expressed least enjoyment were those from south Asia. The group, which expressed the *most negative crowd experience* were those from south east Asia, whereas the group that expressed the least negative experience were those from non-Arab African countries.

Table 8.2 Descriptive statistics and correlations for Hajj establishments

Establishment							
Measure	1	2	3	4	5	6	
	M	M	M	M	M	M	F
	SD	SD	SD	SD	SD	SD	

1. Enjoyment in the crowd	5.66 1.14	5.53 1.17	3.89 1.23	5.93 1.146	5.59 0.88	6.35 0.51	95.58 ***
2.Negative experiences	4.87 1.642	5.36 1.32	5.17 1.053	4.39 1.53	3.52 1.67	3.97 1.25	32.50 ***
3. Perception that others are united	5.73 1.01	5.49 1.423	5.91 0.76	5.84 1.37	5.64 1.08	5.32 1.14	5.69 ***
4.Crowdedness	5.54 1.68	3.70 1.52	6.26 0.77	5.53 1.73	5.49 1.57	2.88 2.01	12.13 ***
5.My identification as a Muslim	6.24 0.75	5.57 1.40	6.36 0.43	6.32 0.79	5.58 0.06	6.62 0.59	36.01 ***
6.Others' identification as Muslims	6.29 0.62	5.54 1.39	6.26 0.55	6.13 0.88	5.82 0.79	6.16 0.59	23.43 ***
7. My feeling of togetherness with others	6.23 0.67	5.46 1.41	6.06 0.51	5.89 1.04	5.71 0.87	6.19 0.58	21.54 ***
8. Others help in Hajj crowd	5.98 0.84	5.66 1.50	6.04 0.59	5.45 1.28	5.54 1.08	5.79 0.87	12.37 ***
9. I help others	6.15 0.74	5.53 1.50	6.35 0.48	5.96 0.95	5.68 0.84	6.24 0.67	20.37 ***
10. Peaceful crowd	5.82 0.76	5.52 1.48	6.02 0.68	5.46 1.06	5.44 0.92	4.98 1.05	21.90 ***
11.Selfish behaviour	5.22 1.47	5.45 1.59	5.38 1.18	4.83 1.75	4.99 1.72	3.93 1.56	20.95 ***
12.Feelings of safety in crowd	6.06 0.82	5.57 1.54	5.52 0.94	5.63 1.35	5.64 1.04	6.28 0.81	5.57 ***
13. Perception of danger at the Tawaf	5.49 1.32	5.41 1.48	6.30 0.83	5.30 1.59	5.28 1.37	4.69 1.84	30.72 ***
14 Perception that Hajj staff treats us fairly	5.50 0.94	5.11 1.08	5.75 0.63	4.68 1.06	5.04 0.89	5.80 0.86	5.11 ***
15.Perceptions of competence in Hajj management	5.22 1.09	4.91 1.07	5.00 0.80	4.54 1.33	5.33 0.93	5.55 0.91	19.17 ***
16.Good communication from Hajj management	5.21 1.38	5.01 1.45	5.68 1.09	4.01 1.79	5.01 1.65	5.17 1.38	4.85 ***

17.Changes in self throughout participation in the Hajj	6.34	5.56	6.17	5.96	5.74	5.87	5.56
	0.57	1.57	0.48	0.99	0.76	0.95	***

Note: 1= Arabic countries 2= South East Asia 3= South Asia 4= Turkey, Europe, America and Australia 5= Non-Arab Africa 6 = Iran & Tajikistan.

The group which conveyed the most experience that *others are united* were those from South Asia, while the group that expressed the lowest perceptions were those from Iran/Azerbaijan. The group that indicated the most *perceptions of crowdedness* in the Hajj were those from South Asia, while the group which indicated least perceptions of crowdedness were those from the Iran/Azerbaijan establishment.

The group that indicated the highest perceptions of *my identification as a Muslim* were those from Iran/Azerbaijan establishment, while the group which indicated least identification were those from SE Asia.

The group that indicated the highest perceptions that *others identify as Muslim* were those from Arabic countries, while the group which indicated least identification were those from SE Asia.

The group that indicated most *feeling of togetherness with others in the crowd* were those from Arabic countries, while the group which indicated least identification were those from SE Asia.

The group that experienced the most *help from others in the Hajj crowd* were those from Arabic countries, whereas the group that experienced the least supportiveness of others were those from Turkey, Europe, America and Australia.

The group which expressed most *helping others* were those from south Asia while the group which expressed least help for others were those from SE Asia.

The group that indicated most perceptions of a *peaceful crowd* were those from south Asia, while the group which indicated least peacefulness crowd were those from the Iran/Azerbaijan countries. The group that indicated most perceptions of *Selfish behaviour*

were those from south Asia, while the group which indicated least selfish behaviour were those from the Iran/Azerbaijan countries.

The group which indicated most perceptions of *Feelings of safety in the Hajj crowd* were those from the Iran/Azerbaijan countries, while the group which indicated least safety were those from south Asia.

The group that indicated most perceptions of *danger at the Tawaf* were those from south Asia, while the group which indicated least danger were those from the Iran/ Azerbaijan countries.

The group which indicated most *perception that Hajj staff treats us fairly* were those from the Iran/Azerbaijan, countries, while the group which indicated the least positive relationship with Hajj staff were those from the Turkey, Europe, America and Australia establishment. The group that indicated the highest *Perception of competence in the Hajj management* were those from the Iran/Azerbaijan countries, while the group which indicated least competence with Hajj staff were those from the Turkey, Europe, America and Australia establishment. The group that expressed *good communication from Hajj management* were those from the south Asia, while the group which expressed least of good communication were those from Turkey, Europe, America and Australia establishment. The group, which indicated highest *experience of changes in self throughout participation in the Hajj* were those from the Arabic countries, while the group which expressed least changes in self were those from SE Asia.

One of the more significant findings to emerge from this study is that the key psychological predictors of enjoyment were: sense of togetherness with the crowd, others' help and feelings of safety, a sense of crowd equality, and others being supportive. In addition, predictors of feeling safe in the Hajj crowd were the sense of participants' Muslim identity, others' identity, feeling of togetherness, feeling that others are supportive and perceiving the Hajj event to be well managed.

8.4.3 Structural Comparisons

I report here on: level of services, time of the interviews, and phase of Hajj.

Level of service: Level of service (LOS) is a measure used by this study to determine the density level (Number of persons occupying one square metre) – we used 3-point scales, 1 (1 to 4 ppm²), 2 (5 to 6 ppm²) and 3 (7 to 9 ppm²). This idea was originally advanced by Fruin (2002). I was interested in the effect of level of service on the following dependent measures: Positive and negative experiences, perceived unity, perceived competence of Hajj managers and managers' good communication. First, positive experience in the Hajj crowd, $F(2, 1180) = 11.83, p = .001$, where the most enjoyable experience of the crowd was reported by the safe density level from 1 to 4 persons per square meter ($M = 5.73$), the least positive experience was by those in the density level from 7 to 9 persons per square meter ($M = 5.27$); and in between these two level of service from 5 to 6 persons per square meter ($M = 5.46$). Secondly, the difference in negative experience of being in the crowd, $F(2, 1180) = 5.57, p = .004$, where the most negative experience of the crowd was reported by the density level from 7 to 9 persons per square meter ($M = 4.83$), the least negative experience was for the density level from 1 to 4 persons per square meter ($M = 4.49$); and in between these two levels from 5 to 6 persons per square meter ($M = 4.78$). The next difference was about the perception that there is unity in the Hajj crowd, $F(2, 1180) = 10.41, p = .001$, where the greatest perception of unity was reported by the density level from 1 to 4 persons per square meter ($M = 5.90$), the least unity was for the density level from 7 to 9 persons per square meter ($M = 5.59$); and in between these two the density level from 5 to 6 persons per square meter ($M = 5.57$).

The next difference was in terms of perceived competence of Hajj managers, $F(2, 1180) = 6.37, p = .003$, the least significant difference was by the density level from 1 to 4 persons per square meter ($M = 4.56$); and in between these two the level from 5 to 6 persons per square meter ($M = 4.89$).

8.4.4 Emergency Experiences

There were 162 participants who reported having seen an emergency at the Hajj previously (13.5% of all participants). 105 of the participants had seen an emergency at Hajj 2012 (8.8%), 11 of the participants had seen an emergency at Hajj 2004 (0.9%), 11 of the participants had seen an emergency at Hajj 2009 (0.9%), 9 of the participants had seen an emergency at Hajj 2004 (0.8%), 8 of the participants had seen an emergency at Hajj 2012 (0.8%), 7 of the participants had seen an emergency in the Hajj 2006 (0.9%), 5 of the

participants had seen an emergency at Hajj 2008 (0.4%) and 2 of the participants had seen an emergency at Hajj 2011 (0.2%). For the measure **‘in the emergency, we were able to help each other’**, a one sample *t*-test indicated that the reported helping of strangers in Hajj crowd was significantly greater than the scale neutral midpoint of 4 ($M = 5.31$, $SD = 1.30$), $t(165) = 12.9$, $p < .001$. Moreover, for **‘in the emergency, it was physically impossible to help people in the crowd’**, a one sample *t*-test indicated that the reported physical difficulty in helping people in the crowd was significantly greater than the scale neutral midpoint of 4 ($M = 4.75$, $SD = 1.50$), $t(164) = 6.44$, $p < .001$. Additionally, for **‘in the emergency, I tried to help others’**, a one sample *t*-test indicated that the reports of participants helping strangers in the Hajj crowd were significantly greater than the scale neutral midpoint of 4 ($M = 5.43$, $SD = 1.15$), $t(164) = 15.2$, $p < .001$. For the measure **‘in the emergency, the authorities responded effectively’**, a one sample *t*-test indicated that the reported positive perceptions of Hajj management in responding to emergency were significantly greater than the scale neutral midpoint of 4 ($M = 5.47$, $SD = 1.30$), $t(164) = 14.6$, $p < .001$.

8.4.5 Spiritual Places

One-way within-subjects ANOVA was performed to test whether there was a difference in sense of spirituality of Hajj locations (inside the Grand Mosque, the Sa’i, Tawaf, Jamarat and Arafat). The observed *F* value was statistically significant, $F(4, 4732) = 351.77$, $p < .001$; this indicated a difference of frequency of a sense of spirituality of Hajj. The most spiritual Hajj activity was reported as standing inside the zone of Arafat ($M = 3.92$), and the least spiritual Hajj activity was reported in Sa’i ($M = 2.14$), the next to most spiritual Hajj activities was reported in praying inside the Grand Mosque ($M = 3.56$), the next to the least spiritual Hajj activities was reported in Jamarat ($M = 2.38$), and between these spiritual Hajj activities was reported in Tawaf ($M = 3.00$).

The interaction between the differences of sense of spirituality of the Hajj activities and the Hajj Service Providers behaviours was not statistically significant, $F(5, 1180) = 0.208$, $p = .96$. This means that there was no difference for people from different regions in the extent to which they regarded different places as spiritual.

8.4.6 Most Congested Places

One-way within-subjects ANOVA was performed to test whether there was a difference of sense of the five most congested places for Hajj activities (Tawaf, Sa’i, Arafat, Jamarat and

Muzdalifa), the observed F value was statistically significant, $F(4, 4764) = 272.12, p < .001$, which indicated an overall difference in the sense of congested places at the Hajj. The most congested places for Hajj activities were reported in Tawaf ($M = 3.92$), and the least congested places for Hajj activities were reported in Sa'i ($M = 2.45$), the next most congested places for Hajj activities were reported in Nafrah (leaving the plan of Arafat) ($M = 3.04$), the next to least congested places for Hajj activities were reported in standing in Muzdalifa ($M = 2.62$), and between these congested places of Hajj activities was reported in Jamarat ($M = 2.92$).

8.4.7 Correlations

As shown in Table 8.2, bivariate correlations established that *enjoyment in the crowd* correlated positively with participants' perception that the crowd is united, identification as a Muslim, perception that others identify as Muslim, feelings of togetherness with others in the crowd, perception that others help in the Hajj crowd, helping others, feelings of safety in the Hajj crowd, perception of competence in the Hajj management and experience of changes in self throughout participation in the Hajj. Enjoyment in the crowd correlated negatively with negative experiences in the crowd.

Table 8.3 Bivariate correlations

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. Positive experience	1																
2. Negative experiences	-.106**	1															
3. Unity	.193**	.038	1														
4. Crowdedness	-.244**	.145**	.234**	1													
5. Muslim 'self-identity'	.211**	.161**	.240**	.053	1												
6. Other identification	.271**	.106**	.356**	.073*	.638**	1											
7. Togetherness	.300**	.121**	.371**	.079**	.504**	.661**	1										
8. I help others	.190**	.273**	.253**	.081**	.543**	.477**	.553**	1									
9. Helping of others	.153**	.161**	.273**	.194**	.367**	.477**	.562**	.616**	1								
10. Peaceful crowd	-.006	.292**	.356**	.346**	.314**	.360**	.372**	.411**	.373**	1							
11. Unselfish behaviour	-.043	.289**	.187**	.261**	.097**	.168**	.188**	.192**	.261**	.523**	1						
12. Safety in the crowd	.416**	.038	.332**	.349**	.345**	.427**	.459**	.406**	.368**	.349**	.163**	1					
13. Danger at the Tawaf	-.124**	.223**	.190**	.295**	.093**	.127**	.128**	.217**	.212**	.327**	.189**	.344**	1				
14. Relationship with staff	.032	.169**	.181**	-.013	.237**	.310**	.359**	.325**	.426**	.307**	.187**	.150**	.143**	1			
15. perceptions of competence	.159**	.117**	.038	-.202**	.093**	.215**	.210**	.199**	.272**	.134**	.129**	.256**	-.048*	.489**	1		
16. Good communication	.019	.194**	-.006	.151**	.145**	.141**	.125**	.131**	.190**	.151**	.095**	.107**	-.084**	.236**	.477**	1	
17. Changes in selves	.218**	.219**	.279**	.143**	.453**	.552**	.548**	.482**	.549**	.482**	.275**	.471**	.231**	.371**	.210**	.217**	1

Note: *p<. 9, **p<. 05, ***p<. 001 **. Correlation is significant at the 0.01 level (2-tailed). *. Correlation is significant at the 0.05 level (2-tailed).

Negative experience in the crowd correlated positively with perceptions of crowdedness, identification as a Muslim, perception that others identify as Muslim, feeling of togetherness with others in the crowd, perception that others help in the Hajj crowd, helping others, perceptions of a peaceful crowd, selfish behaviour, perception of danger at the Tawaf, perception that Hajj staff treat us fairly, perception of competence in the Hajj management, good communication from Hajj management and experiences of changes in self throughout participation in the Hajj.

Perception that others are united correlated positively with perceptions of crowdedness, my identification as a Muslim, perception that others identify as Muslim, feeling of togetherness with others in the crowd, perception that others help in Hajj crowd, helping others, perceptions of a peaceful crowd, selfish behaviour, feelings of safety in the Hajj crowd, perception of danger at the Tawaf, perception that Hajj staff treat us fairly, my experience of changes in self throughout participation in the Hajj. Perception that others are united correlated negatively with my perception of good communication by Hajj management.

Perceptions of crowdedness correlated positively with my identification as a Muslim, perception that others identify as Muslim, feeling of togetherness with others in the crowd, perception that others help in Hajj crowd, helping others, peaceful crowd, selfish behaviour, feelings of safety in the Hajj crowd, perception of danger at the Tawaf, perception that Hajj staff treat us fairly, perception of competence in the Hajj management, good communication from Hajj management and experiences of changes in self throughout participation in the Hajj.

My identification as a Muslim correlated positively with perception that others identify as Muslim, feeling of togetherness with others in the crowd, perception that others help in Hajj crowd, helping others, perceptions of a peaceful crowd, selfish behaviour, feelings of safety in the Hajj crowd, perception of danger at the Tawaf, perception that Hajj staff treat us fairly, perceptions of competence in the Hajj management, good communication from Hajj management and experiences of changes in self throughout participation in the Hajj.

Others identify as Muslim correlated positively with feeling of togetherness with others in the crowd, perception that others help in Hajj crowd, helping others, perceptions of a peaceful crowd, selfish behaviour, feelings of safety in the Hajj crowd, perception of danger at the

Tawaf, perception that Hajj staff treat us fairly, perception of competence in the Hajj management, good communication from Hajj management and experiences of changes in self throughout participation in the Hajj.

Feeling of togetherness with others in the crowd correlated positively with perception that others help in Hajj crowd, helping others, perceptions of a peaceful crowd, selfish behaviour, feelings of safety in the Hajj crowd, perception of danger at the Tawaf, perception that Hajj staff treat us fairly, perception of competence in the Hajj management, good communication from Hajj management and experiences of changes in self throughout participation in the Hajj.

Others (strangers) help in Hajj crowd correlated positively with helping others, peaceful crowd, selfish behaviour, feelings of safety in the Hajj crowd, perception of danger at the Tawaf, perception that Hajj staff treat us fairly, perception of competence in the Hajj management, good communication from Hajj management and experiences of changes in self throughout participation in the Hajj.

Helping others (strangers) in Hajj crowd correlated positively with perceptions of a peaceful crowd, selfish behaviour, feelings of safety in the Hajj crowd, perception of danger at the Tawaf, perception that Hajj staff treat us fairly, perception of competence in the Hajj management, good communication from Hajj management and experiences of changes in self throughout participation in the Hajj.

Perceptions of a peaceful crowd correlated significantly with selfish behaviour, feelings of safety in the Hajj crowd, perception of danger at the Tawaf, perception that Hajj staff treat pilgrims fairly, perception of competence in the Hajj management, good communication from Hajj management and experiences of changes in self throughout participation in the Hajj.

Selfish behaviour correlated positively with safety in Hajj crowd, perception of danger at the Tawaf, perception that Hajj staff treat pilgrims fairly, perception of competence in the Hajj management, good communication from Hajj management and experiences of changes in self throughout participation in the Hajj.

Feelings of safety in the Hajj crowd correlated positively with perception of danger at the Tawaf, perception that Hajj staff treat pilgrims fairly, perception of competence in the Hajj management, good communication from Hajj management and experiences of changes in self throughout participation in the Hajj.

Perception of danger at the Tawaf correlated positively with perception that the Hajj staff treat pilgrims fairly and experiences of changes in self throughout participation in the Hajj. Perception of danger at the Tawaf correlated negatively with perception of competence in the Hajj management, and good communication from Hajj management.

Perception that the Hajj staff treat pilgrims fairly correlated positively with perception of competence, good communication from Hajj management and experience of changes in self throughout participation in the Hajj.

Perception of competence in the Hajj management correlated positively with good communication from Hajj management and experience of changes in self throughout participation in the Hajj.

Good communication from Hajj management correlated significantly with experience of changes in self throughout participation in the Hajj.

8.3.8 Regressions

There were two considerations in carrying out my regression analyses. The first is statistical (which items correlate with which) and the second is theoretical. In relation to the second point, the predictor variables used for these tests are based on the social relational factors thought to be important in crowd safety behaviours and intimacy, such as expected support and identification with the crowd (Drury et al., 2009a; Neville & Reicher, 2011), as discussed in the Introduction.

A multiple regression was run to predict **enjoyment in the crowd** from social identification as a Muslim, others' unity, others' identity as a Muslim, feeling of togetherness, others being supportive and safety. In line with key hypothesis H1, overall, these variables predicted enjoyment in the crowd. The prediction model was statistically significant ($R^2 = .19$), $F(6,$

1180) = 49.16, $p < .001$ and accounted for approximately 19% of the variance. When controlling for all other variables, the following factors were significant predictors: feeling of togetherness ($\beta = .22, p < .001$), others being supportive (negatively) ($\beta = -.14, p < .001$), and safety ($\beta = .41, p < .001$).

A multiple regression was run to predict reports of **helping others in the crowd** from social identification as a Muslim, perception of others' Muslim identity and togetherness. Overall, these variables accounted for 40 per cent of the variance in the scores for helping others in the Hajj crowd ($R^2 = .40$), $F(3, 1180) = 264.73, p < .001$, which was significant. In support of key hypothesis H2, when controlling for all other variables, the following factors were significant predictors: identification as Muslim ($\beta = .27, p < .001$), others' Muslim identity ($\beta = .18, p < .001$), and feeling of togetherness ($\beta = .31, p < .001$).

A multiple regression was run to predict **perceptions of fair treatment** by management from Muslim identity, feeling of togetherness, peaceful crowd, and good communication. As a set, the four factors accounted for 19 per cent of the variance ($R^2 = .19$), $F(4, 1180) = 70.83, p < .001$, which was significant. In line with key hypothesis H3, when controlling for the other variables, the following factors were significant predictors: feeling of togetherness ($\beta = .29, p < .001$), peaceful crowd ($\beta = .18, p < .001$), and good communication ($\beta = .13, p < .001$).

A multiple regression was run to predict **changes in self** from enjoying Hajj crowd, perception that others are supportive, Muslim identity, others' Muslim identity, feelings of togetherness and peaceful crowd. As a set, the six factors accounted for 45 per cent of the variance in the scores for changes in self ($R^2 = .45$), $F(6, 1180) = 158.9, p < .001$, which was significant. In line with key hypothesis H4, when controlling for the other variables, the following factors were significant predictors: enjoying Hajj crowd ($\beta = .50, p < .003$), perception that others are supportive ($\beta = .12, p < .001$), Muslim identity ($\beta = .96, p < .001$), others' Muslim identity ($\beta = .20, p < .001$), togetherness (identification) with the crowd ($\beta = .20, p < .001$), and perceptions of a peaceful crowd ($\beta = .22, p < .001$).

A multiple regression was run to predict the perception that the **Tawaf is dangerous** from crowdedness in Hajj, good communication and perception that Hajj was well managed. As a set, the three factors accounted for 7 per cent of the variance in the scores for feeling that Tawaf was dangerous ($R^2 = .07$), $F(3, 1180) = 30.8, p < .001$, which was significant.

Partially in line with key hypothesis H5, when controlling for the other variables, the following factors were significant predictors: crowdedness in Hajj (negatively) ($\beta = -.26, p < .001$) and good communication (negatively) ($\beta = -.06, p < .030$).

8.3.9 Crowd Density and Perceptions of Safety

8.3.9.1 The relationship between density and other measurements

The first test was a baseline hypothesis, which concerned the effect of density on reported levels of safety. In order to test this hypothesis, we carried out a regression analysis. As expected in line with key hypothesis H6, as density increased, so safety decreased, $\beta = -.061, t(1180) = -2.087, p = .037$. Density also explained a significant proportion of variance in feelings of safety, $R^2 = .004, F(1, 1180) = 4.356, p = .037$. A multiple regression was run to test whether safety could be predicted from five variables predicted. As a set, the five factors accounted for 28 per cent of the variance, $R^2 = .28, F(5, 1176) = 82.29, p < .001$. In support of key hypothesis H7, when controlling for each of the other variables, all were significant predictors: identification as a Muslim ($\beta = .09, p = .005$), others' identification as Muslim ($\beta = .12, p = .002$), identification with the crowd ($\beta = .22, p < .001$), perceived support ($\beta = .16, p < .001$), and management competence ($\beta = .132, p < .001$). Thus, as expected, each of these variables predicted safety.

To test the hypothesis that identification with the crowd moderates the effect of density on safety, we conducted a moderation analysis using the Hayes Process tool (Field, 2013; Hayes 2013). As expected and in line with key hypothesis H8, identification with the crowd reduced the effect of density on safety – see Table 8.3.

Table 8.3 Linear model of identification with crowd and density as predictors of safety, with 95% CIs.

Variable	<i>b</i>	SE B	<i>t</i>	p
Constant	5.83 (5.78, 5.89)	0.03	198.28	<0.001
Identification with the crowd	0.56 (0.45, 0.67)	0.05	10.26	<0.001
Density (centered)	-0.01 (-0.04, 0.02)	0.02	-0.55	0.58
Identification with the crowd ×	0.07 (0.01, 0.12)	0.03	2.45	0.01

$R^2 = 0.22$.

Further, in line with predictions, simple slopes analysis (Figure 8.1) shows that at relatively low levels of identification with the crowd (blue line), as density increased so safety decreased, $b = -.07$, 95% BCa CI $[-0.139, -0.001]$, $t = -2.00$, $p = .05$. However, at high levels of identification with the crowd (the beige line), as density increased so safety actually increased, $b = .05$, 95% BCa CI $[0.01, 0.10]$, $t = 2.20$, $p = .03$. Again in line with predictions, identification as a Muslim did not moderate the relationship between density and safety, $b = .03$, SE B = .03, 95% BCa CI $[-0.03, 0.09]$, $t = 0.91$, $p = .36$.

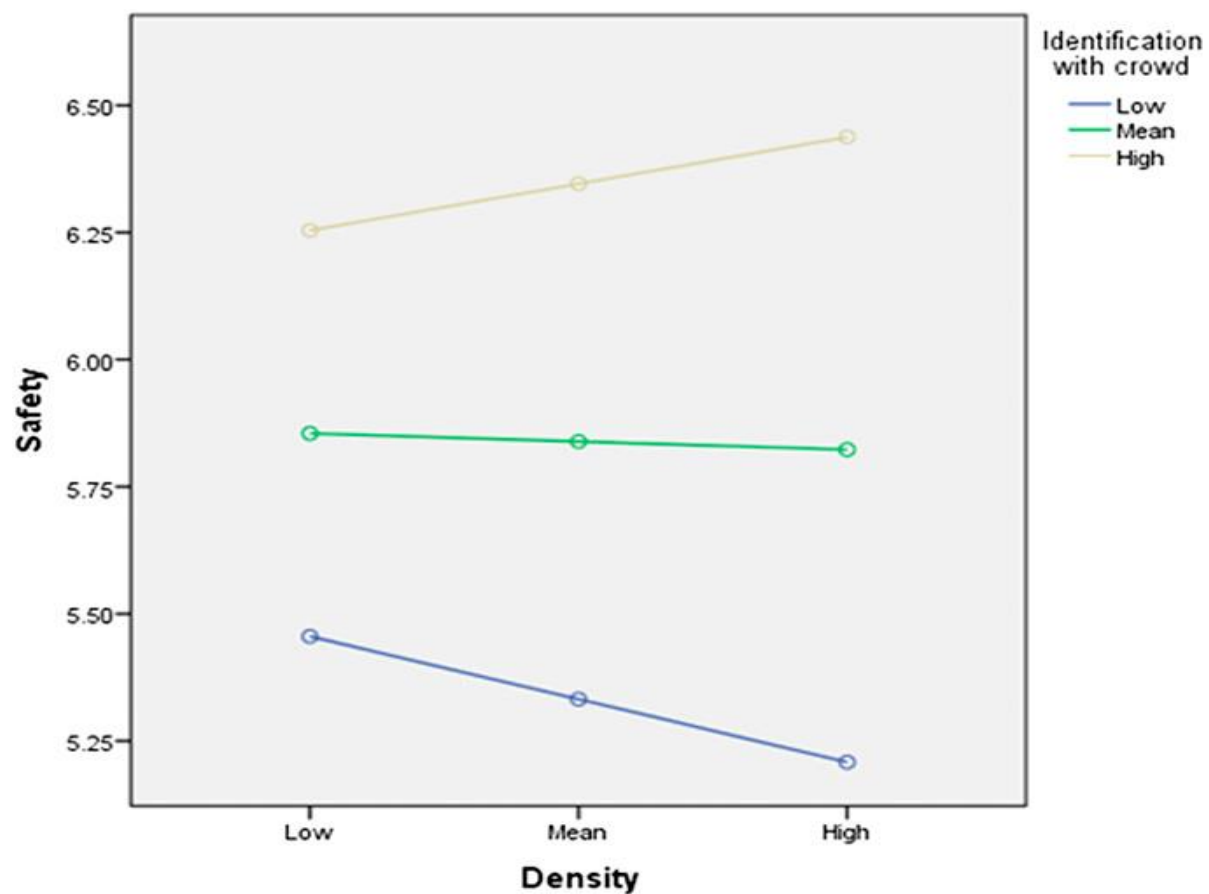


Fig. 8.1 Simple slopes equations of the regression of safety on density at three levels of identification with the crowd. Note: Low = 1 SD below the centred mean; high = 1 SD above the centred mean.

To try out the prediction that perceived support would mediate the effect of identification with the crowd on safety I carried out mediation analyses based on 5,000 bootstrap samples using the Process tool (Hayes, 2013). As anticipated and in line with key hypothesis H9, there was a significant indirect effect of identification with the crowd on feeling safe through perceptions of support, $b = 0.15$, 95% BCa CI $[0.10, 0.20]$, $\kappa^2 = .11$, which represents a

medium effect (Preacher, 2011). In other words, perceived support mediated the effect of identification with the crowd on safety; see Figure 8.2.

Further, in line with predictions, others' identification as a Muslim also moderated the relationship between density and safety, $b = 0.07$, 95% BCa CI (0.02, 0.13), $t = 2.47$, $p = 0.01$. Simple slopes analysis found that, at relatively low levels of belief that others identify as Muslims, as density increased so safety decreased, $b = -0.08$, 95% BCa CI (-0.15, -0.01), $t = -2.40$, $p = 0.02$. However, at high levels of belief that others identify as Muslim, as density increased, safety did not decrease, $b = 0.04$, 95% BCa CI (-0.01, 0.09), $t = 1.60$, $p = 0.11$. Again in line with predictions, identification as a Muslim did not moderate the relationship between density and safety, $b = 0.03$, SE B = 0.03, 95% BCa CI (-0.03, 0.09), $t = 0.91$, $p = 0.36$.

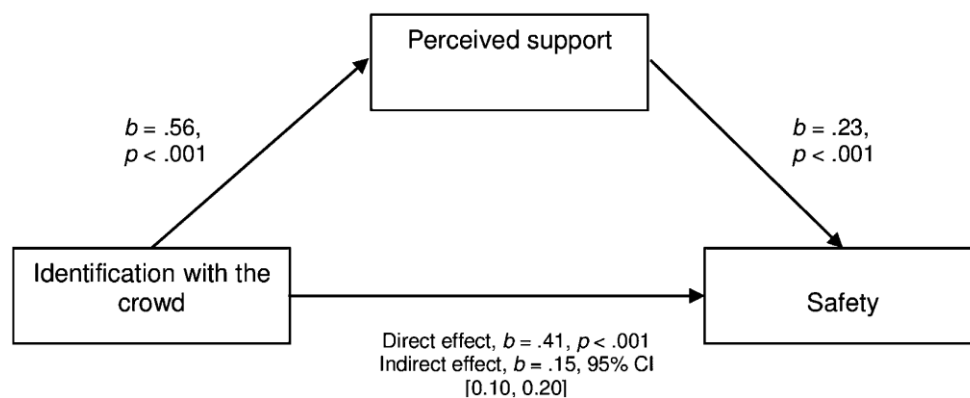


Fig. 8.2. Model of crowd identification as predictor of safety, mediated by perceived support. The confidence interval for the indirect effect is a BCa bootstrapped CI based on 5,000 samples.

Given that perceptions that others in the crowd identified as Muslim also moderated the negative consequences of density on safety, we also conducted a mediation analysis on this variable. As anticipated, there was a significant indirect effect of perceptions that others identify as Muslim with feeling safe through perceptions of support, $b = 0.16$, 95% BCa CI [0.11, 0.22], $\kappa^2 = .12$, which again presents a medium effect (Preacher, 2011).

8.3 Discussion

This chapter examined the crowd experience and crowd behaviour of participants at the Hajj, with findings that were clearly in contrast with earlier explanations of crowd psychology (Le Bon, 1908) that emphasized that crowd behaviour reflected simple endogenous and pathological crowd processes (reversion to pre-cognitive states etc.). On the contrary, this study has shown that the results are in line with initial expectations; Hajj participants of different backgrounds felt joyful being in the Hajj crowd and reported high levels of supportive behaviour on the Hajj, helping strangers in the crowd, feeling safe in the crowd, feeling of equality, unity with the crowd, shared emotion in the crowd and positive perceptions of Hajj management. As a consequence, these results tell us something new and significant about Hajj crowds and support.

Crowd experiences: the Hajj crowd experience is a poignant and emotional experience. As expected in returning to the hypothesis of this study, the result overlaps with recent work on crowd density and crowd experiences (Neville & Reicher, 2011; Novelli et al., 2010). Hajj participants of different backgrounds showed significant enjoyment being in the huge crowd of pilgrims in spite of overcrowding which reached the point of critical density. They described the experience of supportive behaviour during Hajj which was mixed with a sense of crowd equality as they dressed in the same simple white clothing to represent human equality, with strong ties and unity with other pilgrims, and shared emotions, and derived energy, power, security and safety from the crowd.

The correlation between negative experiences and such things as identification, giving help and changes in self at first appears strange. However it must be remembered that Hajj is an experience of many hardships, including standing for long periods in the sun and other sacrifices that one must go through as part of the spiritual journey. From this perspective, one might expect a relationship between sacrifice (indicated in physical hardship) and commitment to Muslim values of spirituality (indicated in identification and my other measures).

While the analysis has indicated a number of common experiences and a level of consensus across a number of measures, it is also important to discuss some key differences identified in

the Hajj crowd. One of these was between those from Shia versus those from Sunni countries. On a number of measures, the Shia seemed to enjoy the Hajj crowd more, to emphasize their Muslim identity more, and to perceive the competence of the authorities as higher. Indeed, on only one measure (perception of a peaceful crowd) did Sunni respondents score higher. It is beyond the scope of this thesis to analyse the reasons behind these differences, but I can make an educated suggestion. This is that, as a minority group, the Shia would find themselves at the Hajj in the novel position of being able to enact their collective identities with freedom of expression and collective validation. Thus the contrast for them compared to everyday life would be so much greater than for Sunnis, who would experience such validation from the wider society every day as part of normal life.

The other demographic difference that needs to be discussed is that between pilgrims from the different Hajj establishments. In the first place, it can be observed that the relatively positive experiences reported by pilgrims from Iran and Tajikistan (Hajj service provider 6 – see Table 8.2) probably reflect the process suggested above, for these are overwhelmingly Shia pilgrims. The second group with relatively high scores were those from Arab countries (Hajj service provider 1). I analysed this in a little more detail in my published paper, where I found that the explanation, at least for experiences of safety in the crowd, was the same as that for the sample as a whole. That is, it was (at least in part) because of perceived support and identification with the crowd that those from Arab countries and Iran/Tajikistan felt especially safe at the Hajj compared with pilgrims from the other countries (Alnabulsi & Drury, 2014).

These findings indicated a difference in the sense of spirituality felt at different locations during Hajj. The most spiritual Hajj activity was reported as standing inside the zone of Arafat, and the least spiritual Hajj activity was reported as being Sa'i, the next to most spiritual Hajj activity was reported as praying inside the Grand Mosque, the next to the least spiritual Hajj activity was Jamarat, and between these was Tawaf. Moreover, the most congested place was reported as being Tawaf and the least congested place was Sa'i, the next to most congested place was Nafrah (leaving the plain of Arafat), the next to least congested place was standing in Muzdalifa, and between these was Jamarat.

Although on some, but not all, measures of positive experience in the crowd, positive experiences reduced with crowdedness (level of service), and in particular for dangerous

levels of crowdedness, unsurprisingly, reported levels of positive experience were all above the scale midpoint.

One of the more significant findings to emerge from this study is that the key psychological predictors of enjoyment were the sense of togetherness (identification) with the crowd, others' help and feelings of safety, a sense of crowd equality, and others being supportive.

Social identification: It is clear from the results of this study that the participants presented evidence of shared social identification as Muslims. The experience was important to participants, as being a Muslim is an important part of who they are. In addition, 'other-identity' experience – that the Muslim identity is important to the other participants in the Hajj crowd – was key in that other participants were seen not merely as good Muslims, but as 'brothers' and 'sisters'. They also identified with the crowd. Importantly, these identity factors were linked to other aspects of the experience.

Supportive behaviour on the Hajj: The results of this study suggested that most pilgrims reported being supportive and respectful of other pilgrims. Mutual assistance among members of the crowd, and co-operation, spreads an atmosphere of friendship and trust which constitutes proper social interaction. Acceptance of others leads to behaviour characterised by respect for others and mutual helping behaviour. The results of this investigation show that the significant predictors of helping others in the Hajj crowd were participants' Muslim identity, others' identity, feeling of togetherness.

Relation between Hajjis and staff members: Participants were positive about their relationship with staff. They indicated that staff treated them fairly regardless of their ethnic and sectarian identity, that staff were professional, providing for all their needs (security, comfort, safety and other services), that there was an appropriate number of staff and that the crowd was safely managed in general to enable pilgrims to complete their pilgrimage smoothly and in the best way.

Good communication with Hajj management: The outcome of this study indicated that the Saudi authorities had communicated adequately with pilgrims and had provided appropriate information to participants.

Changes in pilgrims themselves: The analysis presented here illustrates that attending Hajj changes participants significantly. By going there Muslims have fulfilled the last pillar among the Five Pillars of Islam. Such acts brought peace of mind; participants reported during the Hajj that the Hajj had changed their views. Participants reported more unity, harmony and more empathy with others than before. Furthermore, participants felt more harmony with people of different religions and felt more positive toward people from different cultures. Hajj allowed participants to worship God with a higher degree of respect. Overall, going to the Hajj caused changes in participants for the better. The results of multiple regression analysis revealed that the key psychological predictors of changes in self were the sense of enjoying the Hajj crowd, perception that others are supportive, participants' Muslim identity, others' identity, feeling of togetherness, and perceptions of a peaceful crowd.

Emergency behaviour: The analysis revealed that participants who had been in an emergency at Hajj events reported, significantly, that even though it was physically almost impossible to help, they still helped one another and the authorities responded effectively. This is in line with predictions.

Safety of the Hajj and perceptions of a peaceful crowd: As expected, the analysis revealed that participants felt safe at the Hajj in general, and in Tawaf in particular, despite overcrowding. Moreover, respondents further felt that on the whole the Hajj crowd was peaceful and when there was any conflict it was caused by a minority. In the same context, the results make clear that only certain groups are aggressive at the Hajj and only some individuals show selfish behaviour.

While increasing levels of crowd density, reduced feelings of safety, this effect was moderated by identification with the crowd and perceptions that others identified as Muslim. Specifically, those who were high in identification with the crowd actually felt more safe as density increased. Also, those who were high in perceptions that others identified as Muslims were not affected by the increase in density. Mediation analysis was consistent with the idea that this moderation effect was due to perception that others in the crowd were supportive, which was higher for high identifiers.

8.4 Relation to Findings in Previous Chapters

From the existing study and previous chapters on the crowd psychology of the Hajj I had developed a set of results output that possessed a common scope. These results are: positive crowd experience, and crowd behaviour of participants at the Hajj, participants felt joyful being in the Hajj crowd, described supportive behaviour on the Hajj, helping strangers in the crowd, feeling safe in the crowd, crowd equality, unity/togetherness with the crowd, shared emotion in the crowd, good communication, fair treatment by management and positive perceptions of Hajj management. The results quantify and show the predictive relation between key variables, especially the role of shared identification and all other dependent variables.

Perceived crowd safety was not simply a matter of intergroup relations (good management) but also group processes (relations within the crowd). This novel finding has implications for the management of crowds at mass gatherings. It also has implications for theories of crowds, as it extends recent social identity work on collective resilience and collective joy to new types of mass relationships.

8.5 Relation to existing literature

This section situates the findings of this paper in relation to existing literature: Firstly, the recent work on social identity approaches to crowds by Reicher, Stott and Drury. This has largely been concerned with crowd conflict, but has recently been applied to mass emergencies (e.g. Drury et al., 2009a; 2009b) and crowd density (Neville & Reicher, 2011; Novelli et al., 2010). It therefore offers a general model for the psychology of crowds. Specifically, social identity is an understanding of myself in terms of my group membership, which determines how I experience proximity with others in a crowd, how I behave towards them, what I expect of them, how we respond in turn to those outside the crowd, and so on. There has been some research done in this area and I will consider the limitations of current research in contrast to the work done in this study.

Clingingsmith surveyed pilgrims only after traveling to Makkah and did not look at crowd processes while this study did. The findings of this study were more closely in line with the work on the reality of mass action and the mundane (Neville & Reicher, 2011) which posited that crowd events can be understood through social scientific concepts (such as social norms, social identities, and cognition). The same work argued that crowds are not opposed to meaningful social and political participation, but in fact are integral to it.

The early idea that crowd behaviour reflected simply endogenous and pathological crowd processes (reversion to pre-cognitive states etc.) is rejected in the work of Neville and Reicher in favour of understanding crowd action as identity-based. This work explains how participants in Hajj crowds take on the identity of the group as a whole, which is influenced by the fact that they are attending the largest and most diverse gathering of the world who gather in and around Makkah for the same purpose. They share the same goals and objectives in performing Hajj rituals in the same spaces and time and this leads to an attitude of unity and identification with the crowd.

Previous studies by Kurt Lewin and Solomon Asch (Asch, 1952, Lewin, 1951; see also Turner & Giles, 1981), which are in the tradition of social interactionism, are consistent with the results of this study. Reicher (2001) put forward the theory that the pattern of action and reaction (such as the actions of powerful others on the crowd including police, military and all those charged with managing the crowd) has been seen at a range of crowd events. These actions are influenced both by the institutional identities of the powerful others who act on the crowd, and the perceptions that they have of the crowd. While the social identity approach has recently been applied to the topic of pilgrimage (Reicher, Hopkins et al.), this work on the Mela has not looked at either emergency aspects (danger and help) or at intergroup perceptions. It did not include any data from management. In fact, this study advances Hajj studies and offers theories relating to the crowd psychology of the Hajj that have been missing from previous research.

In relation to the literature on crowd safety, the finding that crowdedness can contribute to crowd safety under certain conditions is highly novel and goes beyond existing work on the Hajj crowd in the physical sciences, computer modelling, architecture, engineering and medicine (Algadhi & Mahmassani, 1990; Still, 2014; Abubakar et al., 2012; Memish, Stephens, Steffen & Ahmed 2012), which largely neglects the positive contribution of crowd

behaviour to crowd safety. Importantly, the notion that the crowd can reduce danger also contradicts an assumption of classical crowd psychology, that the crowd is a conduit for pathology (Allport, 1924; Zimbardo, 1970). Instead, the findings presented here are in line with the social identity approach, echoing also recent evidence of the ‘social cure’ (Jetten, Haslam, & Haslam, 2012) in small groups, which likewise shows that identification with others reduces stress through increasing perceived and expected support (Haslam et al., 2005).

8.6 Strengths and Limitations of the study

While the Hajj has a number of unique features, the design of the present study gives some confidence in the validity and generalizability of these findings to other crowd situations. The measure of crowd density was taken entirely independently and therefore was not influenced by, or an influence on, respondent perceptions. The self-reporting by respondents was undertaken during their time in the crowd, which meant that there was less chance of distortion of memory. The sample was broad and included different language groups as represented proportionally at the Hajj, representative of a range of nationalities, and representative of gender division. Therefore, the findings reflect accurately the make-up of the Hajj.

While a strength of this study was its scale, this also produced difficulties. Thus even though I provided intensive training for assistants and coordinated this with the Custodian of the Two Holy Mosques at the Institute for Hajj Research, data collection was impacted by variations in the researchers’ social skills and conduct and this in turn impacted on variations within the data collection. This was inevitable given that there were so many different research assistants.

The results of this study, similarly to most survey studies and mediation analyses, are essentially correlational. There are several possible sequences of relations that make theoretical sense, including the those tested here. Other possibilities might include the perception that others are acting supportively increasing the belief that they are ‘good Muslims’. However, in this case, the measure of perceived support also included an item on expected support, which makes the reverse reading less plausible in the present case. There

are other possible reverse interpretations of these findings that are still somewhat in line with the self-categorization theory being tested here – for example, that feeling safe might lead high-identification Muslims to gravitate to the most dense areas of the crowd (Novelli, Drury & Stott, 2013).

Some researchers, when examining the effects of social identification on other aspects of wellbeing, have reported a similar reversed causal sequence. This, similarly to the present study, can be interpreted as evidence of a ‘virtuous circle’ of identification, social support and wellbeing (Gleibs, Haslam, Haslam & Jones, 2011).

Though there were some interesting findings on density and safety, this is not open only to the interpretation that there is a linear effect of increasing density on safety for those high in identification with the crowd. In fact, at a certain level ($> 7\text{-}8\text{ppm}^2$), crowd density becomes dangerous; people lose the ability to move independently (Fruin, 2002), let alone to be considerate or give support to others. Ever-increasing density does not correlate directly to increased safety; in fact, it is quite the opposite.

8.7 Conclusion

As one can see from reading the analysis, this Chapter has provided an interpretation and analysis of the study findings from interviews from a large-scale survey. The evidence is in line with previous research that suggested that being in a dense crowd is unpleasant and stressful. The Hajj crowd is very dense, but I found many positive accounts. In line with initial expectations, Hajj participants of different backgrounds felt joyful being in the Hajj crowd and described supportive behaviour such as helping strangers. In addition, participants felt safe, unified, shared emotion and equality with others in the crowd, along with positive perceptions of Hajj management. These findings therefore contrast with previous explanations of crowd psychology, which emphasize negativity and pathology, but are in line with recent social identity approaches. Finally, an implication of these findings is that these results tell us something new and significant about Hajj crowds and supported the researcher’s argument that the Hajj crowds is a ‘psychological crowd’ (e.g., Reicher, 2001; Drury & Cocking, 2007) and not just a physical crowd.

Chapter 9: Discussion and Conclusions

9.1 Summary of findings

The primary motivation for conducting the research presented in this thesis was to provide a theoretical account of the crowd psychology of the Hajj. In designing the research, as well as in interpreting results, I have been informed by the social identity approach (Reicher, Spears, & Haslam, 2010) which proposes that crowd behaviour and experience is a function of shared social identities, and that crowd events are characterised by intergroup relationships.

At most crowd events, as in the Hajj, the out-group in question is the authorities charged with maintaining order, ensuring the safety of crowd members, and responding to emergencies. For this reason, this thesis has focused not only on Hajjis themselves, but has also investigated the perceptions of the Hajj management staff working at three organisational tiers: academic researchers tasked with developing new understandings of the character and needs of the Hajj crowd; planning staff, whose role it is to implement new policies to improve the experience of those attending Hajj; and field management who interact on a face-to-face level with pilgrims in order to deliver a positive experience for those attending Hajj, and who, it might be argued, are the ‘first responders’ (cf. Drury et al., 2009b) to accidents and incidents that occur during Hajj.

The three key areas covered by the research relate to (i) crowding and spatial behaviour, (ii) mass emergency behaviour, and (iii) collective conflict. Areas of interest, therefore, centred on (i) experiences of the crowd, (ii) safety, and (iii) intergroup relations.

Specific research questions relating to crowd experiences were: How is the crowd experienced by Hajjis, given that crowding is sometimes (but not always) an aversive experience? How do Hajjis view others in the crowd? What are the psychological factors determining positive or negative experiences as part of the crowd? How and when is density a positive experience? Does the experience vary over time and location? What is the role of social identity and sense of psychological togetherness with others in these experiences? How do these positive or negative experiences in turn affect behaviours? And do they affect understandings and identity after the Hajj?

Specific research questions relating to safety were: Do Hajjis feel safe on the Hajj? What expectations of danger do they bring to the event? Which sources do they trust in relation to the source of danger and response to danger? How do they behave when faced with danger? Do they help others in need? Do they expect others to help them? Do they trust the authorities, management and staff to respond effectively? What is the role of social identity and sense of psychological togetherness with others in these experiences and behaviours?

Specific research questions relating to intergroup relations were: What are Hajjis' perceptions of other groups on the Hajj? What are their perceptions of the authorities, management and staff? Do they see them as one or more social category? Are they perceived as fair and legitimate in relation to the needs and identities of Hajjis? What expectations of these groups did Hajjis bring to the event, and do their perceptions change? What is the role of social identity and sense of psychological togetherness with others in these experiences and behaviours?

Chapter four presented the findings of the pilot study, in which I interviewed Muslims in the UK who had previously attended the Hajj in order to develop my interview schedule and explore some of the issues discussed above. This pilot study aimed to explore the crowd phenomenology of the Hajj by asking participants to describe in their own words their a) experiences and behaviour during the Hajj and b) observations of others' experiences and behaviour, particularly in relation to the Masjid al-Haram. I was especially interested in the ways in which Hajjis viewed themselves and how they relate to the experience as a whole, and whether these views are altered as a result of the collective crowd experience.

An overriding consideration of the research was of safety of pilgrims during the Hajj. The study aimed to find out whether Hajjis felt safe when performing Hajj rituals, and whether they felt they had received the necessary support to perform the rituals safely and effectively. To this end I asked participants to describe their relations with the Hajj management and their perceptions of the quality of communication and organisation provided by them. In addition to the interview questions, I provided participants with ten pictures of different Hajj management personnel and I asked participants to describe the roles which they thought each of the members of management pictured undertook, and their responses to the roles portrayed.

The most notable finding of the pilot study was that participants described their Muslim identity as being more prominent during Hajj than their ethnic or national identity. This sense of shared identity with other crowd members was promoted by engaging in the same rituals while wearing the *Ihram* robes that all Hajjis are required to wear. Perhaps because of this shared religious identity being salient for Hajjis, there were reports of a sense of equality and unity, and shared emotion within the crowd. Participants also described helping behaviour between strangers, and said that dense crowds were experienced as tolerable and even positive. As a counterpoint to these findings, there were some reports of selfish and aggressive behaviour, which participants ascribed to smaller sub-groups acting according to self-interest. Participants were generally positive about Hajj management but reported little contact with staff. When they were shown pictures of various management staff they were unable to distinguish between various types of staff members.

Based on these preliminary findings, I suggested that the Hajj crowd is a psychological crowd because they define themselves using the same social category. This is due to their shared status as religious pilgrims, emphasised by wearing the same clothing and performing the same acts. Being part of the Hajj crowd is positively influential on the individual's feelings, behaviour, values and norms (Reicher, 2001). Rather than feel less accountable for their actions, as might be expected from Zimbardo's (1970) notion of 'de-individuation', participants reported feeling responsible for others and identifying with strangers in the crowd. The results were in line with self-categorisation theory (SCT) (Turner et al., 1987), which proposes that individuals shift from personal to shared social identity according to the social context, a shift to this shared identity bringing with it a set of social norms. In the case of the Hajj crowd, these norms include mutual helping, a privileging of one's identity as a Muslim, and norms of social responsibility, empathy, and altruism.

The next stage of research was to further test the methodology of the research and its logistical feasibility, by carrying out a field pilot study at the 2011 Hajj (chapter five). As with the pilot study in chapter four, semi-structured interviews were used to investigate the pilgrims' experiences of the Hajj, this time with a larger sample of 27 participants who were interviewed in and around the Haram. Furthermore, nine members of Hajj management were interviewed in a separate study which aimed to explore the experiences of those tasked with ensuring the safe and smooth running of the Hajj. Of the nine management staff interviewed, three were from the top tier of management (decision makers), three were middle

management (responsible for planning and operations), and three were civilian experts and consultants to the management.

Participant responses in the field study replicated earlier findings to a large degree; there were almost no differences with the findings of the earlier UK pilot study. Shared social identity was a prominent theme, and participants described their Muslim identity as taking priority during the Hajj rituals. There were further reports of friendly relations with others in the crowd and instances of mutual helping behaviour. Adding support to these findings were the interviews with Hajj management staff, who also reported feeling that they themselves were part of the crowd despite being in a position of authority, even though most communication between pilgrims and management took place via the Mutawaf (representatives of different national groups).

When Hajj staff did report inappropriate behaviour (such as pushing), this was understood by participants as being linked to crowd members being unable to achieve their goals, or to misconceptions. There were limited reports of certain groups within the crowd (some Indonesian and African Hajjis) acting out of narrower self-interest and potentially causing harm to others. There was no question of influential minorities in the crowd inciting others to anti-social behaviour as traditional approaches to crowd psychology have often suggested (e.g. Reicher 1984b, 1987). Nevertheless, there were reports of ‘panic’ arising in the crowd in response to potential risk situations, and spreading between crowd members. ‘Panic’ was understood by crowd management as arising when there was sudden danger combined with limited means of escape, and a lack of information of the risk situation. The high density of the crowd was said to cause wave motions, leading to difficulties in managing the crowd. In extreme situations, this led to selfish behaviour among pilgrims, but it was stressed that such instances are the exception rather than the rule.

During this field pilot study, certain methodological considerations came to prominence, such as the importance of communicating with Hajjis in their native language, which would allow a wider and more representative sample of pilgrims. It also became apparent that, in the final 2012 study, I would have to conduct interviews with management staff personally, as my research assistants had struggled to secure interviews. My experience and relationships with staff would assist me in this. An additional decision was to reduce duration of interviews from 45 minutes to 30 minutes in the 2012 study, by removing some items. This would help

secure more participants from among the Hajjis, who have limited free time during Hajj. Additional training was also required to ensure that my assistants would elicit extended responses from Hajjis during the next stage of data gathering.

The research presented in chapter six built on the findings of the previous two chapters and described a full field study of Hajjis' experiences during Hajj 2012. A total of 70 participants were sampled, comprising 10 pilgrims from each of the seven major language groups represented at the Hajj (Arabic, English, French, Persian, Urdu, Turkish, and Malay). Interviews took place before, during, and after the five days of Hajj. As with the previous studies IPA was used to analyse data from the 10 English-speaking and 10 Urdu-speaking participants, as representative of contrasting cultures with different experience of, and attitudes towards, situations of high density.

To a large extent, the findings presented in chapter six reflected those discussed in the previous chapters, with shared identity and feelings of safety being prominent themes. These feelings of safety were attributed to several factors: faith in the abilities and intentions of management, belief that God would protect them from danger, and shared identity with other crowd members. One point of divergence was that English speakers were more likely to say that they felt safe due to shared identity and helpful behaviour among crowd members, while Urdu speakers more commonly reported feeling safe due to being present in God's house. Due to the small sample size, however, this difference should be treated with caution. Again, reports of inappropriate behaviour were limited.

Chapter seven presented findings from the full field study of the Hajj management during Hajj 2012. The study employed semi-structured interviews and IPA to explore the views of 18 Hajj management staff. The participants comprised six academic researchers, six members of planning staff, and six field management staff. Findings were largely consistent with the 2011 field pilot study of Hajj management, and the qualitative field study of the Hajjis. Participants described a positive relationship between pilgrims and management characterised by cooperation and shared values and goals. Language differences were named as a barrier to communication. Participants also linked shared religious identity among Hajjis to mutual helping behaviour. On the subject of safety there were some reports of aggression and 'panic' in response to situations which seemed overwhelming, threatening, unsafe or uncomfortable in the crowd, but only as a response to physical discomfort or fear caused by overcrowding.

In line with the findings from the UK pilot study, managers suggested that pilgrims view the staff as homogeneous, and have difficulty distinguishing between different types of management.

The findings contrasted with previous studies of authorities' perceptions of crowd behaviour, in which crowds were viewed as potentially dangerous, and susceptible to the influence of a powerful minority which can incite others to anti-social behaviour (e.g. Le Bon, 1908; see Stott & Reicher, 1998). Such beliefs on the part of authorities can be self-fulfilling, in that policing methods based on them will be more coercive, and therefore more likely to instil a sense of opposition between the crowd as in-group and the authorities as outgroup. In the case of Hajj authorities, it seems that crowd and authorities do not view each other as an outgroup, but as part of the same in-group, established by their common identity as Muslim.

My idea was that the feelings of unity reported by pilgrims were due to a shared social identity. I looked directly at the construct of social identity, using established measures, in Chapter eight.

The study presented in chapter eight aimed to test the representativeness of the claims made in the preceding qualitative research, and to test the strength of relationships between the key variables examined by conducting a large-scale ($n = 1194$) quantitative survey of Hajjis at the Haram during Hajj 2012, with data collection carried out before, during, and after the Hajj, and at different times of day, with a representative sample.

Variables measured were: crowd density; participants' identification as Muslim and perception of others' identification as Muslim; enjoyment and negative experience in the crowd; perception of crowdedness and peacefulness in the crowd; a sense of togetherness with the crowd; reports of helping others and of others helping in the crowd; feelings of safety and perceptions of danger; perception of selfish behaviour; and level of change in the self. Participants were also asked to rate the competence of Hajj management, the extent to which pilgrims were treated fairly by staff, and the level of communication from Hajj staff. The measure was assessed by the researcher's estimate; the rest were self-report items. The nationalities of the research field team members were the same as the sample pilgrims in the data collection, and the questionnaire was translated into seven languages (Arabic, Urdu, Turkish, French, English, Persian, and Malay).

The participants of this quantitative study recorded that they define themselves and others around them in social categorical terms. Participants of all backgrounds reported feelings of joy and safety at being in the crowd, helping others in the crowd, viewing supportive behaviour from others, witnessing unity and shared emotion with the crowd, and positive perceptions of Hajj management. These positive responses were in spite of the levels of crowdedness that sometimes reached critical density. Indeed, the most striking finding of this quantitative study was in regard to the relationship between identification with the crowd, crowd density and feelings of safety²¹. Those who reported high identification with the crowd were not merely able to tolerate higher levels of density, but even felt safer when crowd density increased because they felt surrounded by others whom they felt would help them if an emergency situation arose or if they stumbled while performing Hajj rituals. Those with low crowd identification showed the opposite trend in that they felt less safe as density increased.

The relationships between the variables measured in the quantitative study can shed further light on which factors contribute to how the Hajj crowd is experienced by its constituent members. Regression analyses identified six significant predictors of enjoyment in the crowd relating to (1) Hajjis' social identification as Muslim, their feelings of (2) safety and (3) togetherness with the crowd, and their perception of (4) crowd unity and that other crowd members were (5) supportive and (6) identified as Muslim. Positive feelings towards, and identification with, the crowd, also led to prosocial behaviour while performing Hajj rituals: again, social identity factors (identifying as Muslim and perceiving that others do the same) contributed to reports of helping others, as did feelings of togetherness. Whether Hajjis feel safe within the crowd was also influenced by these three factors as well as by variables

²¹ Of course this does not necessarily mean that the very dense crowds were objectively safer, and this is not my claim. In the first place, as Still (2014) has shown, densities of over 5ppm² are objectively dangerous because of possible shock waves that can easily occur in such crowds. Second, it is possible that as people feel more safe in the dense crowd they take greater risks. Against this last point, however, it is important to note that in densities of 4-5ppm² and above, pilgrims have very little choice about where to move to and so risky behaviours are limited.

relating to intragroup (the perception that others are supportive) and intergroup processes (the perception that the event is well managed). In terms of intergroup relations, it is also important that Hajjis feel fairly treated by the management.

Unsurprisingly, good communication is important, and was a significant predictor of fair treatment. Also significant, though, were Hajjis' feeling of togetherness with the crowd, and the perception that the crowd was peaceful. It may be that during those times when aggression in the crowd is at higher levels, it is harder for management to ensure that crowd members receive fair treatment, as attempts to prevent or control this aggression might lead to discomfort among bystanders in the crowd. It is important that Hajj management refrain, as far as possible, from indiscriminate policing measures that treat the crowd as homogeneous. As other studies have shown, whether authorities use targeted or indiscriminate measures can have a strong influence on the collective behaviour of a crowd (see section 9.2.2).

Participants expressed a belief in the competence of Hajj management, and that Hajj staff would come to their aid in the event of an emergency. However, the findings suggest that pilgrims find it difficult to distinguish between different types of management staff. It is possible that this can be attributed to the sense, expressed by Hajjis, that management staff belongs to the same category as themselves (i.e. Muslims present within the house of God). Another possible interpretation is that management are not a visibly distinct group to them, and so there is no attention to their different functions. Management were perceived as fair and legitimate and there was no suggestion that the authorities in place during Hajj were antagonistic towards the crowd. Other studies that have considered the perspective of authorities regarding the crowd have found that those at higher levels of experience are likely to have a more positive view of crowd members, while those with direct contact expressed more negative views in line with traditional approaches to crowd phenomena (such as de-individuation or the presence of an anti-social, influential minority (cf. Prati & Pietrantonio, 2009)). The current studies found a contrasting trend, in which field staff, who have direct contact with Hajjis, were more likely to be able to empathise with crowd members and understand their needs, and less likely to see them as homogeneous or irrational than were those at higher levels of management who do not have direct contact (cf. Carter, Drury, Amlôt, Rubin, & Williams, 2014).

9.2 Contributions

This mixed methods research project provided several unique contributions to the existing literature on the psychology of crowding, intergroup relations and perceptions of mass behaviour, and crowd safety. These are discussed in the three sections below.

9.2.1 Psychology of crowding

The first original contribution of this thesis is closely related to the social psychology of spatiality and crowding, discussed in the PhD thesis of David Novelli. His thesis provided evidence of the self-other boundary varying as a function of group-level and social identity processes, with a shared identity, bringing with it a sense of solidarity and intimacy, which might make close proximity to strangers a pleasant experience (Novelli, 2010).

While most of Novelli's studies were conducted in laboratories, the studies described in the current thesis were conducted in real high-density crowds and all the information was derived from the middle of the crowd. This study has provided an original and important insight, which is that despite increasing levels of crowd density being linked to reduced feelings of safety, this effect was moderated by identification with the crowd and perceptions that others identified as Muslim. Specifically, those who were high in identification with the crowd actually felt more safe as density increased. In addition, those who were strongly identified with perception that others identified as Muslims were not affected by the increase in density – mediation analysis was consistent with the idea that this moderation effect was because of perception that others in the crowd were supportive, which was higher the more that people identified with the crowd (Alnabulsi & Drury, 2014). This same relationship was found for those pilgrims from Arab countries and Iran compared with those from other countries, whose greater reported safety was explicable in terms of their crowd identification and perceptions of support (Alnabulsi & Drury, 2014).

These results complement existing laboratory experimental evidence of varied responses to crowded situations such as in Novelli, Drury, and Reicher (2010). This thesis has advanced

the theory on the differential role of three loci of social identification: Identification as a Muslim; identification with the crowd; and perceptions of other crowd members' identification as a Muslim (i.e. the extent to which they were seen as good ingroup members), based on the distinction introduced in Neville and Reicher (2011) between identification with a social category and identification with others in the proximal crowd.

9.2.2 Intergroup relations and perceptions of mass behaviour

Early approaches to the study of crowds argued that constituent members of a crowd either lose their individual will and succumb to the 'collective mind', losing control over their actions (Le Bon, 1908), or claimed that the crowd setting simply accentuates individual basic drives (Allport, 1924). Later work moved away from these beliefs, and introduced the concept of social identity. According to models derived from social identity principles (Reicher, 1987, 2001; Tajfel & Turner, 1979; Turner, 1982; Turner et al. 1987), crowd scenarios enable a transition from personal to social identity, and behaviour of crowd members is altered as a result.

In applying the elaborated social identity model (ESIM) to crowd policing, Stott (2009) points out that law enforcement policy and training is adapted towards the 'classical' view of crowds rather than the modern social-psychological perspective. Stott and Reicher (1998) and Drury et al. (2003) propose that the police in England and Wales hold an 'agitator' model of crowd dynamics. They also reasoned that such theoretical understanding leads to an increased likelihood that, during emergent disorder, police will use violence in an indiscriminate manner and thus could inadvertently initiate the dynamics of widespread disorder as a form of self-fulfilling prophecy. Thus the reading material for the law enforcement policy Commanders Course describes a crowd as 'a device for indulging ourselves in a form of temporary insanity by all going crazy together' (Stott, 2009, p.9). In the same study, Stott recommends that the key to effective policing of violence in crowds is to avoid the habit of applying indiscriminate force against a whole crowd which can lead to the crowd adopting a strong shared identity and responding collectively to the violence. However, force targeted against violent individuals can have the opposite effect, leading the majority of a crowd to identify themselves as a separate non-violent group.

The current thesis supports and develops a similar argument that effective policing of violence in crowds means to avoid the habit of applying indiscriminate force against a whole

crowd. Some of the Hajj management policy and training (but not all) has the classic view of crowd psychology context (see section 7.5.3.6). Some interviewees from management referred to crowd behaviour as irrational, but did not explicitly endorse coercion as a means of crowd control – although an inference could be made that certain participants considered the use of force to be appropriate). Nevertheless, this thesis is able to move beyond this in a number of ways.

While the present analysis was in line in many ways with previous research on intergroup relations in crowd events, it is also different from most previous studies, which have tended to focus on situations of conflict. That is, in the terms of the ESIM, where there are asymmetries of categorical representations (of appropriate conduct) as well as power. Here, importantly, there was generally claimed to be a shared perspective – although it should be noted that there were also some exceptions to this, as when management defined certain subgroups as troublesome.

Hajj crowd management has an advantage over other crowd management as Islamic legislation specifies certain rules regarding behaviour during Hajj, which stress tolerance, love, and gentleness in word and action. The general consensus is to avoid conflict when pilgrims are face to face in groups which begins with the actual connection and is characterised by the religious, ideological pattern of cooperation, positive interaction and good relations – not only intragroup but also intergroup. Mutual assistance among members of the crowd, and co-operation with the outgroup, spreads an air of friendship and trust which constitutes proper social interaction. Although it is by no means guaranteed that all Hajjis will adhere to these rules, it does mean that the norms of the Hajj crowd are based in prosocial, rather than oppositional, behaviour. Thirdly, everyone is treated equally and has the same opportunity in the crowd; as a result this prompts the crowd to trust management, assume a shared identity, and co-operate with the management and therefore ease its task.

9.2.3 Crowd safety

Following the 2006 Hajj crowd accident, a more scientific approach to risk assessment has developed, but arguably there has been neglect of the positive potential of the crowd itself and particularly for crowd safety. Overwhelmingly, crowd safety solutions have been construed as purely technological in nature, taking contributions from applied science, maths, and architecture, but not crowd psychology. More specifically, no social, psychological research

has been carried out on the Hajj, despite its huge cultural significance and the number of serious crowd accidents that have occurred (see section 3.1). Hence, no study has examined the role of social, psychological factors among pilgrims during the Hajj, which was the aim of this thesis as a new contribution to the field of social psychology and specifically crowd behaviour.

This thesis provides the first study of Hajj crowd psychology, and therefore the findings to emerge from this research can potentially contribute to the experiences of the millions of people performing Hajj annually and aid those involved in managing this event. Furthermore, this thesis has brought attention to the Hajj, being one of the largest global gatherings of masses at one place at the same time, as a fertile ground for conducting further psychological studies of the crowd.

Previous research has described major crowd incidents as the result of venue inadequacies, deficient crowd management and crowd violence resulting in injuries and fatalities (Perkins, 2004). High risk of accidents and injuries among attendees at large-scale gatherings has become one of the major concerns for event management, researchers and staff in the field.

According to Fruin (2002), extreme crowding results in individual loss of restraint, and can have negative psychological and physiological consequences. The term ‘crowd turbulence’ has been introduced to describe situations where, at extreme density levels, individuals within the crowd push outwards in an effort to gain more personal space. This leads to pressure waves surging through the crowd, thereby increasing the risk of accidents and crushing (Moussaid, Helbing, & Theraulaz, 2011). High-density pedestrian flows are also said to be a causal factor of crushing disasters at the Hajj (Algadhi & Mahmassani, 1990), such as the 2006 disaster in which 346 pilgrims died in the ‘stoning of the devil’ ritual (Helbing, Johansson, & Al-Aberdeen, 2007). However, research is now starting to show that dangers are reduced in situations where crowd members are considerate and exhibit helping behaviour towards others in the crowd (Drury, 2012).

It has also been proposed that social support and a sense of community can bolster an individual’s sense of self and contribute to physical and mental wellness. Therefore, it has been demonstrated that social identities constitute the basis of a ‘social cure’, capable of promoting adjustment, coping, and welfare for individuals with a range of illnesses, injuries,

trauma and stress (Haslam, Jetten, O'Brien, & Jacobs, 2004). This knowledge of social, psychological processes within the crowd can provide a basis for realistic strategies that can maintain and enhance well-being, particularly among vulnerable populations (Drury, 2012). Although recent surveys of the Hindu Mela (another large-scale religious gathering) investigated the role of social identification on factors such as wellbeing (Tewari, Khan, Hopkins, Srinivasan, & Reicher, 2012), noise (Shankar et al., 2013), and cold (Pandey, Stevenson, Shankar, Hopkins, & Reicher, 2013), these studies did not examine crowd density or safety issues as the current thesis does.

Aside from these studies, there is a body of laboratory-based research, but this has less ecological validity than the results gleaned from research conducted in the field. By conducting research during the Hajj, at the Masjid al-Haram, my intention was to achieve results that could be generalized to all categories of pilgrims. It was also hoped that gathering data about Hajjis' experiences during the event itself would increase the probability that participants would respond to the survey questionnaire rather than attempting to please the researcher.

Previous research by Alexander Berlonghi (1995) has provided a summary of related components that must be considered for each and every crowd event. Those involved in crowd management and crowd control must understand crowds and crowd conduct and not be excused from the duty of providing the public with the highest possible amount of safety and security. First of all, they must anticipate the nature of the crowd that will be in attendance. Secondly, they must be able to observe the behaviour of a crowd while an event is taking place and make timely decisions for effective action. In the final stage, they must have the ability to set up policies, design programmes and execute operations, taking into consideration the configuration of the venue and the set-up of the particular special issue. (Berlonghi, 1991, 1995).

In addition, Berlonghi (1995, pp. 242-244) provides a table summary of the characteristics of crowds and their behavioral indicators. In line with Berlonghi's table, and as a contribution of this thesis, Table 9.1 (below) provides for the first time the Hajj crowd profile (characteristics, categorization and identities), based on crowd interviewees' experience and management perceptions in this thesis.

Table 9.1 profile of Hajj crowd (characteristics, categorization and identities)

Characteristic	Description of behavioural indicators of Hajj crowd
The event	THE HAJJ: The experience of a lifetime for every Muslim.
Size	The world's largest annual religious gathering commences in Makkah at one time, with more than 3 million Muslims having travelled by land, sea and air to perform one of the five Pillars of Islam: Hajj. (Note: The Hindu Kumbh Mela is a larger gathering, but it only happens every three years and has less density as it is spread over a larger area and lasts for a longer time than Hajj).
Density	Can reach a critical density (more than 4 persons per square meter).
Time	Pilgrims come together in a specific location for a specific purpose for five days.
Crowd type	Peaceful (nonviolent), Convention (gathered to partake in the mutual interest of performing one of the five Pillars of Islam).
Collectivity	Pilgrims share a social identity, common goals and interests and act in a coherent manner.
Novelty	The Hajj crowd members act in a socially coherent manner, despite crowd diversity and coming together in an unfamiliar place.
Organization	The Hajj crowd is often described by its management as highly self-organized.
Unity of purpose	The Hajj crowd almost always has a strong sense of defined purpose.
Common motive for Hajj crowd action	To ask forgiveness from their Lord.

Psychological unity	The Hajj crowd has a firm sense of psychological unity because the crowd members perform Hajj activities together, united in the same direction and intent, at the same time and place.
Emotional intensity	Emotional intensity is likely to be high upon entering the Grand Mosque and viewing the Kaaba, as well as when standing in Arafat, and especially before sunset at the height of supplication.
Volatility (unpredictability)	The Hajj crowd behave as responsible individuals and as members of the crowd and through a potential for self-order.
Individual behaviour	The Hajj crowd is characterized by individual behaviour in control and responsibility for their own actions and for the activities of other crowd members.
Group behaviour	Individuals highly dominated by the crowd act with self-awareness, self-consciousness and sense of duty.
Degree of lawlessness	The crowd is largely disciplined at both the collective and the individual level.
Level of violence	Level of violence is limited to individuals or small groups only. Most pushing in the dense crowd is in order to create places for movement away from the pressures of the crowd.
Likelihood of injuries and deaths	A high-risk event due to the event type, placement, diversity of visitors' cultures, languages, needs and the previous record of crowd accidents.

9.3 Applying the Ideas Practically

The aim of this section is to show how we can employ the findings of this thesis in principle and in practice with regard to (1) intergroup relations and practical strategies for managing crowds, (2) the psychology of crowding and spatial behaviour experience, and (3) safety and mass emergency behaviour.

9.3.1. Intergroup relations in Hajj event, group processes and collective behaviour

The Hajj event offers three intergroup relations: (a) Intergroup relations between Hajj management and the pilgrims (visitors), (b) Intergroup relations among pilgrims themselves, (c) Intergroup relations among different types of Hajj management. This thesis covered the first two of the three above intergroup relations (See 9.4 limitations).

Firstly, I will consider the role, expectations, perceptions, practices and concerns of the authorities. Research has tended to neglect the role of the authorities (event managers, police, security, emergency response services and different crowd stewards). The central ambition of this thesis with regard to management is to understand the perceptions of management, and how these perceptions might guide their actions, particularly during emergency events. With regard to intergroup relations, participants in this thesis were generally positive about Hajj management, and perceived management competence was a predictor of safety in that pilgrims' faith in the ability of Hajj personnel to manage the event effectively would make them feel safer.

Practically, what characterises sophisticated management in keeping a crowd safe is how well they understand the psychology of the Hajj crowds. Hajj management already practise crowd psychology spontaneously and naturally from non-scientific knowledge and theories, merely through the large experience gained from dealing with the annual pilgrimage over the years and seeing the needs of pilgrims of different nationalities, beliefs, customs and practices. In light of findings regarding intergroup relations, it is clear that a positive relationship between authorities and crowd members is an important contributor to the safety of crowd events. To further enhance relations between Hajj management and pilgrims, authorities can draw on contemporary social science theory regarding crowd phenomena, in order to understand the meaning behind crowd behaviour, including beliefs and norms, and therefore identity.

In practice, management must not presume that the crowds are the same as a mob – unthinking, irrational and inherently dangerous – and must not treat all members of a crowd as a homogeneous entity. Such an approach can lead to the assumption that the only check on disorder is the police force, and that the best means of mastery is through fear and

submission, depending mainly on control of the crowd rather than crowd management. Investigations by social psychologists – including Steve Reicher, Clifford Stott and John Drury – has found that the assumptions made about crowds tend to be self-fulfilling. Assume a unified crowd and you end up with a unified crowd. Assume a dangerous crowd and treat it as dangerous by using force, and you get a dangerous crowd (Reicher et al., 2007).

In terms of crowd perceptions, where crowd members view such police actions as illegitimate, it only serves to create greater conflict and hostility between crowd members and the police. This, in turn, increases the strain between police and crowds, rather than reducing it, and can escalate destructive behaviour and widespread conflict (e.g. Hoggett & Stott, 2010; Reicher et al., 2007). In order to avoid these perceptions that can only erode public confidence in the management and add to general impressions of police illegitimacy, we need to adopt modern social psychology in understanding crowd behaviour.

Practically, Hajj management should support and encourage further practical research on the Hajj crowd, as well as making use of existing literature and training programmes in contemporary social science inquiry and theory, i.e. the social identity model (SIM) and elaborated social identity model (ESIM) (Reicher, 1984, 1987; Stott & Reicher, 1998). In addition, management can learn from successful methods which have been analysed and tested out during previous pilgrimages or elsewhere in the world, particularly those strategic and tactical approaches designed to reduce conflict and avoid incidents in crowd management events. Along with the development of management communication in the maintenance of public order during crowd events and for defending management staff from negative impacts of the critical incidents.

Secondly, the social identity approach suggests that, as well as personal identities (which are unique and which distinguish us from other people), each pilgrim has several social identities, based on their group or social category memberships (Tajfel & Turner, 1979; Turner et al., 1987). Self categorisation theory (SCT), part of the social identity approach, addresses individuals' perceptions of their own group membership and the group membership of others. The theory explains how collective behaviour is achievable in a diverse crowd of people gathering for the first time, where crowd members' commonality with others becomes salient (Turner et al., 1987). It is this process in which pilgrims' shared social identity allows them to come together as one group and act as one.

With similar results to this thesis, the social identity approach has been also applied to analysing behaviour at religious mass gatherings, through a programme of research on the Indian Mela pilgrimage.

Practically, Tewari et al. (2012) demonstrated the salutary effects of taking part in mass gathering events. Participants who took part in the Mela reported an increase in well-being over time, relative to non-attendants. The longitudinal nature of the study, and the inclusion of a control group, means that the study provides a valuable contribution to the social, psychological literature on the link between social group activities and well-being. The study underlines the positive potential of mass gatherings, which has traditionally been neglected in favour of a focus on the potential risks and negative effects of such events. The authors argue that this emphasis on risk is counterproductive, and can inhibit efforts by crowd management to understand the motives of crowd members.

This finding is in line with the finding of chapter 8 of this thesis, in which I measured crowd identity in two ways (identification with the crowd and perceptions of other crowd members' identification as Muslims). These two identifications were important in terms of moderating the effect of density on safety appraisals, but participants' identification as a Muslim was not. This shows that it really is identification with co-present others that is important in terms of the process. At many crowd events, authorities are seen as an outgroup, whereas participants in the current thesis tended to see Hajj management as part of the same ingroup, commonly defined by their religion. However, it should be noted that Hajjis see management as belonging to the ingroup only insofar as the requirements of Hajjis are satisfied. Certain needs of national subgroups within the Hajj crowd need to be met, otherwise this national identity can become more prominent than the shared religious identity. An example is provided by the catering demands of national groups at the Hajj – when pilgrims from South East Asia were not provided with noodles to eat, they staged a demonstration, which only ended when they were given the noodles that they demanded.

9.3.2 Psychology of crowding and spatial behaviour experience.

The social identity approach has been applied to aspects of crowd phenomena, including crowding and 'personal space'. Novelli, Drury, Reicher & Stott (2013) point out a contradiction, in that, despite the potentially unpleasant and risky aspects of crowding, people also search out and enjoy crowded situations. The authors gathered participants from two

crowd events (an outdoor music event and a demonstration march), and found evidence to support the claim made by self-categorization theory that crowd members will vary in their response to crowding according to their level of social identification with the crowd. Their findings opposed the idea that crowding is inherently aversive, and cannot easily be explained through the concept of 'personal space'.

This thesis has revealed similar findings – it confirms that self-categorization can have a positive impact on how crowd density is experienced and how cooperative behaviour arises among a group of strangers in the crowd. Practically, crowd managers should try to enhance their understanding of the role of shared social identities in how people perceive situations of varying density, in order to provide high quality services under crowded conditions.

It is also important to understand those circumstances in which Hajjis do not act in unity. Although reports of aggressive, selfish or dangerous behaviour were in the minority, they were still present in the responses of both Hajjis and management staff. Participants tended to explain such behaviour as either being due to crowd members being prevented from reaching their goals during crowded rituals such as Tawaf, or the result of subgroups within the crowd attempting to protect weaker members of the group by creating human chains or barriers. If Hajj organisers can better understand the motives behind these behaviours, they will be more able to prevent them through education or responding quickly. In turn this may reduce the number of potentially dangerous incidents.

Understanding the sometimes subtle differences between national subgroups within the Hajj crowd can also help the Hajj to run smoothly. A case in point occurred after the redesign of Jamarat Bridge. Iranian Hajjis, who were initially directed to the first floor, complained about the changes, as they were accustomed to carrying out the stoning of the devil ritual at the basement level. When it became apparent that this group was dissatisfied, the basement was opened up for their use and the pilgrims were redirected.

9.3.3 The safety and mass emergency behaviour of the crowd.

Crowd safety is a major concern for those serving and managing crowd events, such as the annual Hajj. There is potential for injury occurring through the dynamics of crowd action. One threat to crowd safety at such events is crowd density. Another phenomenon traditionally believed to be a threat is so called 'mass panic', i.e. uncontrolled emotion and selfish

behaviour in response to perceived threats to crowd members' safety. Recent research has failed to support the 'mass panic' hypothesis (Drury, Cocking, & Reicher, 2009b), but rather proposes that the psychological membership of crowds can have a positive influence toward safety (Alnabulsi & Drury, 2014).

Drury, Cocking, and Reicher (2009b) point to the usefulness of an approach to mass emergency behaviour, based on self-categorization theory (SCT). These authors point out that emergency planning often includes hypotheses about crowd behaviour, but that previous explanations for crowd behaviour, that rest on either 'mass panic' or the strength of pre-existing social bonds, are inadequate. In their study, survivors of mass emergency events were classified into two categories: high-identifiers and low-identifiers. It was found that shared identity in emergency situations increases positive judgments about others in the crowd, and reduces personally selfish behaviour. Crucially, this approach contends that this shared identity can emerge during the event itself, from having shared the experience of the emergency.

Practically, the findings of the large-scale quantitative study reported in chapter 8, regarding the links between identification with the crowd and perceived safety, lend support to a social identity approach to crowd safety. The negative effect of crowd density on pilgrims' feelings of safety on the Hajj is attenuated (and even reversed) when there is a strong sense of identity with the Hajj crowd. This is because identity enhances expectations of social support. These findings confirm a social identity account of crowd behaviour, and provide a novel perspective on crowd safety management (Alnabulsi & Drury, 2014). In contrast both to engineering approaches, which neglect crowd psychology, and traditional crowd psychology, which assumes that the crowd is inherently a 'problem', this study shows how the crowd can be part of the solution in crowd safety management – by preventing disaster as well as by responding adaptively when disaster strikes (Alnabulsi & Drury, 2014).

9.4 Limitations and future work

Carrying out research on an event of the scale of the Hajj must inevitably come with a range of difficulties. The special status of the Hajj as a religious gathering suggests why there is so

little previous psychological research on it. Only Muslims are able to gain access to the areas in which pilgrims perform Hajj rituals, and even then there are logistical difficulties. There is limited time available during the Hajj in which to secure participants, and Hajjis themselves are attempting to complete Hajj rituals within a short period of time. Understandably, the priority of Hajjis was to perform the necessary tasks of Hajj, which presented an obstacle to recruitment. It may be that those Hajjis with a higher level of education were overrepresented within the sample, in that they were more familiar with the type of research being carried out. Because there is a lack of official figures on Hajjis' educational backgrounds, this is a potential limitation rather than a definite one.

This was one reason that it was necessary to employ a large number of research assistants throughout the process of data gathering. During the qualitative element of the research, this may have contributed to variability in how interviews were carried out. It was also necessary to have assistants in place to allow us to survey Hajjis from a range of linguistic backgrounds – participants were much more willing to engage in the process if they were able to speak in their own language. Although employing a number of research assistants allowed me to collect data from a large number of participants, it also had disadvantages. Certain responses were not as extensive as they could have been – I would have liked to have followed up some statements by participants by asking them further questions, to encourage them to either clarify or expand on previous responses, but was unable to do so.

The scale of the field studies was such that the results can be considered representative of Hajjis and Hajj management as a whole. The earlier pilots, by contrast, had a low participant number. Although this might have limited the range of responses elicited in these early stages of research, this is not considered to be a major limitation as the principal aim of these pilots was to test the methodology and establish the direction of the subsequent research.

Of course, feeling safe and actually being safe are two very different things. This thesis doesn't prove that supportive crowds actually are safer, just that the people in them feel so. More studies will have to be done in order to determine if supportive crowds actually are safer, backing up those feelings.

This thesis covers intergroup relations during the Hajj with regard to two intergroup relations: (a) between Hajj management and pilgrims; (b) among pilgrims themselves. It doesn't,

however, cover intergroup relations among different types of Hajj management, due to time limitations and the large number of agencies providing services (more than 30 different services). Future research might focus on the relationships between different groups of Hajj management as a potential area of improvement for the provision of services for the safe running of the Hajj.

Further limitations of this study relate to the nature of the conclusions we can draw from my data, and the generalizability of the results. Self-report measures may be affected by self-presentation biases. Furthermore, because the quantitative data are correlational, it is not possible for us to establish causation. As regards generalizability, while the results are valuable for understanding the Hajj crowd and leading future research and practical measures regarding this particular religious event, it may be that religious crowds are too different for me to be able to generalize my findings to other religious pilgrimages.

A final limitation is the lack of analysis of video data of behaviour. Some video data were collected in the course of research, but logistical considerations meant that I was unable to analyse it. Future work could combine this kind of 'objective' data with self-report data, by asking Hajjis and management staff to comment on some of the behaviours (such as following others, or 'crowd turbulence') that from the outside are sometimes considered irrational.

9.5 Conclusions

This thesis provided a unique contribution to the understanding of a major religious event, in that it is the first study of the crowd psychology of the annual Hajj. It employed self-categorization theory (SCT) and documented the perspective of pilgrims from a social psychological point of view, as well as eliciting the perceptions of the Hajj management. Specifically, the thesis focused on crowd perceptions, feelings of safety and the causes for these feelings, and relations between subgroups in the crowd and between pilgrims and management. A large scale study of 1194 pilgrims at the Hajj found that identification with the crowd predicted enjoyment of the crowd. Similarly, for those high in identification with the crowd, crowd density increased perceptions of safety. Perceived support was found to mediate these positive effects of social identity on feeling safe. In addition to these

quantitative findings, the qualitative aspects of the research also lent support to the notion that the Hajj crowd is a psychological crowd, characterised by an overriding unity in thought and action, desire to help strangers within the crowd and expectations that supportive behaviour will be reciprocated by others.

Overall, the findings of this study suggest that the large numbers of pilgrims present at the Hajj do not necessarily pose an inherent threat to the safety of those who comprise the Hajj crowd. On the contrary, the Hajj crowd is seen as a source of support and comfort for those in attendance. In recent years, engineering projects such as the redesign of Jamarat Bridge have significantly improved the safety of the Hajj. The psychological insights into the Hajj crowd provided by the current study can further contribute to the safe and smooth running of future Hajj events.

In examination of the findings against extant literature related to this study we find that in very recent years, social identity approaches to crowd behaviour have received considerable attention from social psychologists on studying crowd events, crowd actions, conflict, the explanation of human social behaviour and change in relations to give efficient knowledge into the ways that crowds work in society (Reicher, 1982, 1984, 1987).

In this study, firstly, I expected that there would be high levels of enjoyment in the crowd. I expected that this enjoyment would be related to identity factors such as identification as a Muslim, perception of others' identification as Muslim, and overall identification with the crowd. (Despite this, I also expected that people might report that the event was extremely crowded, especially during highly dense periods.) This expectation was met, and the results of exploring the crowd experience and crowd behaviour of participants at the Hajj were in line with the social identity approach to crowds such as Reicher's social identity model (SIM; Reicher, 1984, 1987) and elaborated social identity model (ESIM; Drury & Reicher, 2000; Reicher, 1996; Stott & Reicher, 1998) of crowd behaviour, which view crowd behaviour as social action proceeding according to collective norms (Reicher, 1984), rather than being irrational. In yet another interesting study on the experience of collective participation (shared identity, relatedness and emotionality; Reicher & Neville, 2011), the study results reported that perception of shared identity, and not results of self-categorisation, determined the attributes of participants' collective experiences. Moreover, shared identity transformed

within-crowd relatedness to provide a sense of connectedness, validation and recognition. These results are consistent with our finding of crowd experience and behaviour of participants at the Hajj. Pilgrims within the crowd have shown a shared intergroup membership, cooperation, trust, a decrease in stress, and enjoyment in the crowd.

A second prediction was that I expected that there would be high levels of reported help predicted by identity factors; for those with experience of emergencies, the same pattern would be found. These predictions were borne out by findings, which again were consistent with the social shared identity approach (Drury, Reicher, & Stott, 2012). The analysis of the Hajj crowds presented evidence of shared identity, peacefulness and helping behaviour that correlated positively to participants' reports of helping others and witnessing others help in the Hajj crowd (Neville & Reicher, 2011). The findings also argued against the earliest classic crowd theory by Le Bon (1895/1968), that independent identity was lost in the crowd and is replaced by a 'racial unconscious'. On the contrary, the results have shown consistency with recent studies in collective resilience in mass emergencies and disasters. Drury (2011) argues that crowds can provide the mutual support, co-ordinated activity and other features of resilience that enable people to cope psychologically with mass emergencies and disasters. This was the case in our study. The Hajj crowd helped each other, psychologically and behaviourally. Reicher (2011) provides examples of a wide range of crowd phenomena such as crowd cooperation in mass emergencies and behaviours in crowd situations, and the collective empowerment is a consequence of the number and the integration of participants in the crowd. Our currently reported results do show similar indicators in that the Hajj crowd is based on shared social identity and collective coordination. Hajj crowd members adopt a common perspective in their action. They have a shared sense of 'we are performing the pilgrimage together', in the same place at the same time, in equal manner and sense of joy, harmony, equality and solidarity at being in the Hajj crowd. These results are consistent with our finding of crowd experience and behaviour of participants at the Hajj.

The Hajj crowd displayed cooperation, trust, a decrease in stress, enjoyment in the crowd, peacefulness and helping behaviour (cf. Reicher & Haslam, 2006; Haslam & Reicher, 2006; Novelli et al., 2010; Levine et al., 2002; The Prayag Magh Mela Research Group (PMMRG), 2007; Drury et al., 2009). This study was similar in all the study results indicated above but different in the research method as they were qualitative only, with a small number of participants, whereas my study was more comprehensive, with a larger scale survey on a

representative sample.

A third prediction was that the event would be perceived as peaceful and safe, and that identity factors would predict the experience of safety. The results of exploring collective experience of safety of participants at the Hajj were in line with again the social identity model of collective resilience (Drury, 2011). Again, the Drury studies were qualitative only, with a small number of participants as compared to this study.

A fourth prediction is that people would feel that the management acted well and that factors such as safety, peacefulness, and perceived group relations would predict this. The perceptions of competence met expectations; these findings are somewhat consistent with previous studies that have reported the importance of seeing management actions as legitimate ('fair'). Numerous studies have attempted to explain that in order to develop our understanding of crowd conflict, we need to analyse the way that crowds are managed, and the actions of powerful others outside the crowd (e.g. police, military and all those charged with managing the crowd). The present study confirms previous findings and contributes additional evidence that supports a positive relationship between Hajj management and Hajji perceptions of competent management, well-being, safe events, good communication and a sense of crowd control.

Lastly, I predicted that participants would say that the experience of Hajj changed them (cf. Clingingsmith et al., 2008) and that social relational factors (identification, helpfulness etc.) predicted this report of change. The reported changes in self met expectations and are in line with one of the few empirical studies that dealt with the social events of Hajj – Clingingsmith et al. (2008) reported that the changes in attitudes observed seem to be shaped by the religious context. It induces a shift from localized ideology and practices towards universal Islamic practice, increases tolerance, and leads to more favourable attitudes toward women. In addition, the study found no evidence that by raising cohesion within the Muslim community, the Hajj threatens non-Muslims. These findings are reasonably similar to my study as both types of study report positive experiences and tolerance in Islam's global gathering of Hajj. In spite of that, this study didn't look at people's experience in the crowd while my study reported change and related it to aspects of the experience in the Hajj crowd. In addition, this study investigated the impact of a pilgrimage on only pilgrims from one country, Pakistan. Since the pilgrims come from more than 160 countries, this makes it

difficult to generalize' the results of the study (from one country) on pilgrimage in general, which is what has been done in my study where we included all Hajj categories and languages of pilgrims to generate further insights on pilgrimage in general.

While the social identity approach has recently been applied to the topic of pilgrimage, this work suggests that crowd members can feel a sense of connectedness with others, recognition of their participation, and validation of group-relevant beliefs. The experience of these forms of relatedness is then seen to facilitate identity-enactment and group commitment. The Clingingsmith et al. study does not take into account event emergency aspects (danger and help) or intergroup perceptions. The study does not offer any data from management, my research will therefore be novel since (a) it is the first study of the crowd psychology of the Hajj and (b) it is the first to look at intergroup perceptions at a pilgrimage.

It is my belief that this study, the first to examine crowd phenomena at the Hajj from a psychological perspective, has shown how, given the right circumstances in terms of intragroup and intergroup relations, the crowd can act as part of the solution at large-scale gatherings, rather than as a source of problems. Management can make use of the greater understanding of crowd psychology provided by this and other similar studies, in ways outlined above.

On a personal level, finding out about the relevant factors that influence crowd and management actions has given me a greater insight into the Hajj crowd, and has helped me to understand the behaviour of the woman I described at the beginning of this thesis. On that day I was shocked by her behaviour, as I couldn't understand her distress and anger in relation to the good work that I know Hajj management do. But now I understand the complex nature of her response and I feel empathy for her act of assertion, independence and mourning. There are many ways that we can learn from the mistakes of the past to make future Hajj events a better experience for both management and pilgrims by deconstructing our roles to find the human beneath. In this way we can create an empathetic environment for pilgrims and management to come to understand that they work together, not in opposition. It is my hope and belief that the work I have undertaken during the course of this thesis will help pilgrims like the woman I met that first day, without compromising their autonomy, dignity or human rights. If my research is capable of facilitating future shifts in attitudes that

lead to such conditions, then I cannot ask for more.

Bibliography

- Abdulrahman, A. (2011). *Expansions of urban development in Mecca: An exploratory study*. Umm Al Qura University. Institute of the Custodian of the Two Holy Mosques for Hajj and Umrah Research. Makkah, Saudi Arabia: Umm Al-Qura University.
- Abu Resize, O. (2005). *Crowding in the Two Holy Mosques: Suggested Solutions*. Riyadh, Saudi Arabia: King Fahd National Library.
- Abubakar, I. (2012). Global perspectives for prevention of infectious diseases associated with mass gatherings. *Lancet Infectious Diseases* 12(1), 66-74.
- Aguirre, B. E. (2005). Emergency evacuations, panic and social psychology. *Psychiatry: Interpersonal and Biological Processes*, 68(2), 121-129.
- Aguirre, B. E., Torres, M. R., Gill, K. B., & Hotchkiss, H. L. (2011). Normative collective behaviour in the Station building fire. *Social Science Quarterly*, 92(1), 100-118.
- Aguirre, B. E., Wenger, D. & Vigo, G. (1998). A test of the emergent norm theory of collective behaviour. *Sociological Forum*, 13(2), 301-321.
- Ahmed, Q. A., Arabi, Y. M., & Memish, Z. A. (25 March, 2006). Review of health risks at the Hajj. *The Lancet*. Retrieved from [www.thelancet.com/journals/lancet/article/PIIS0140-6736\(06\)68429-8/abstract](http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(06)68429-8/abstract)
- Aiello, J., Thompson, D. E., & Brodzinsky, D. M. (1983). How funny is crowding anyway?; Effects of room size, group size, and the introduction of humour. *Basic and Applied Social Psychology*. 4, 193-207.
- Al Ghazali. (2009). *The secrets of pilgrimage* (I. Umer, Trans.). Malaysia: Islamic Book Trust.
- Al Gamdi, A., Al-Seriani, M., Mirza, M., & Kutbi, Z. (1995). Task complexity of the civil defense directorate in the context of the Hajj season. *British Journal of the Arts and Social Sciences*, 12(10), 155-170.
- Al Hanbali, I. R. (2007). *The journey to Allah*. Birmingham, UK: Daar us-Sunnah Publishers.
- Al Hasani, A. (2009). *The Guiding Helper: Main Text and Explanatory Notes*. Lulu.com.

- Al Hilali, M. & K.M. (Trans.) *The Noble Qu'ran Surah Al-Hajj (The Pilgrimage) 22:26-7*. Dar-us-Salam: Dar-us-Salam Publications. Retrieved from <http://www.darussalam.com>
- Al Saud, M. (2009). Morphometric Analysis of Wadi Aurnah Drainage System, Western Arabian Peninsula. *The Open Hydrology Journal*, 3(1), 1-10.
- Al Sharif, R. (2004). *The role of awareness in preventing overcrowding: Implementation priorities*. Jeddah, Saudi Arabia: King Abdul Aziz University Press.
- Al Yafi. A. (1993). *Management of Hajj Mobility Systems: A Logistical Perspective*. Amsterdam: Joh. Enschede En Zonen.
- Al Zahrani, A., May, M., & Temple, S. (2013). Developing a Transport Strategy for the Holy City of Makkah (Mecca) *AET*. Available at <http://abstracts.aetransport.org/paper/index/id/133/confid/1>
- Alasfi, M. M. (1994). Hajj role in establishing peace in social relations. In *Islamic Encyclopaedia (1)*. Retrieved from <http://www.balagh.com/mosoa/pages/tex.php?tid=1635>.
- Algadhi S. A. H., & Mahmassani, H. S. (1990). Modelling crowd behaviour and movement: Application to Makkah pilgrimage. In M. Koshi (Ed.), *Transportation and Traffic Theory* (pp. 59–78). Oxford: Elsevier.
- Allport, F. H. (1924). *Social Psychology*. Boston: Houghton Mifflin.
- Alnabulsi, H. H. (2009). How can vulnerability and risk be reduced in large-scale gatherings? (Unpublished MA Thesis). Oxford Brooks University: Oxford.
- Alnabulsi, H., & Drury, J. (2014). Social identification moderates the effect of crowd density on safety at the Hajj. *Proceedings of the National Academy of Sciences*, 111, 9091-9096. doi: 10.1073/pnas.1404953111.
- Alsawydani, S., Badarinath, K., & Douglas, D. (1995). *GIS based emergency management plan for Hajj period*. Canada: Canadian Geomatics.
- Ashforth, B. E., & Mael, F. (1989). Social identity theory and the organization. *Academy of Management Review*, 14, 20-39.
- Ball, R. & Drury, J. (2012). Representing the riots: The (mis) use of figures to sustain ideological explanation. *Radical Statistics*, 106, 4-21.

- Barnes, R. & Branfoot, C. (Eds.). (2006). *Pilgrimage: The Sacred Journey*. Oxford: Ashmolean Museum.
- Berk, R. (1974). A gaming approach to crowd behaviour. *American Sociological Review*, 39(3), 355-73.
- Berlonghi, A. E. (1995). Understanding and planning for different spectator crowds. *Safety Science*, 18, 239-247.
- Berlonghi, M. (1991). *The special event risk management manual*. Australia: Event Risk Management.
- Bianchi, R. (2004). *Guests of God*. Oxford: Oxford University Press.
- Blumer, H. (1939). Collective behaviour. In R. E. Park (Ed.), *Principles of sociology* (pp. 219-288). New York: Barnes & Noble.
- Brown, R. (1986). *Social psychology* (2nd ed.). New York: The Free Press.
- Brown, R. W. (1954). Mass phenomena. In G. Lindzey (Ed.), *Handbook of social psychology* (pp. 833-876). Cambridge, MA: Addison-Wesley.
- Bryman, A. (2004). *Social research methods*. Oxford: Oxford University Press.
- Calhoun, J. B. (1962). Population density and social pathology. *Scientific American*, 206, 139-148.
- Carter, H., Drury, J., Amlôt, R., Rubin, G. J., & Williams, R. (2013). Perceived responder legitimacy and group identification predict cooperation and compliance in a mass decontamination field exercise. *Basic and Applied Social Psychology*, 35(6), 575-585.
- Carter, H., Drury, J., Amlôt, R., Rubin, G. J., & Williams, R. (2014). Effective responder communication improves efficiency and psychological outcomes in a mass decontamination field experiment: Implications for public behaviour in the event of a chemical incident. *PLoS ONE*, 9(3), e89846. doi:10.1371/ journal.pone.0089846.
- Cassidy, C., Hopkins, N., Levine, M., Pandey, J., Reicher, S., & Singh, P. (2007). Social identity and collective behaviour: Some lessons from Indian research at the Magh Mela at Prayag. *Psychological Studies*, 52, 286-293.
- Central Intelligence Agency (2010). *Religions: The World Factbook*. United States. Retrieved 2010-08-25.

- Chan, Y-K. (1999). Density, crowding, and factors intervening in their relationship: Evidence from a hyper-dense metropolis. *Social Indicators Research*, 48(1), 103-124.
- Chertkoff, J. M. & Kushigian, R. H. (1999). *Don't panic: The psychology of emergency egress and ingress*. Westport, CT: Praeger.
- Clingingsmith, D., Asim K., & Michael K. *Estimating the Impact of the Hajj: Religion and Tolerance in Islam's Global Gathering*. KSG Working Paper RWP08-22, 200.
- Clingingsmith, D., Khwaja, A. I., & Kremer, M. (2009). Estimating the impact of the Hajj: Religion and tolerance in Islam's global gathering. *Quarterly Journal of Economics*, 124, 1133-1170.
- Cocking, C. & Drury, J. (2008). The mass psychology of disasters and emergency evacuations: A research report and implications for the Fire and Rescue Service. *Fire Safety, Technology and Management*, 10, 13-19.
- Cocking, C., Drury, J. & Reicher, S. (2009). The psychology of crowd behaviour in emergency evacuations: Results from two interview studies and implications for the fire & rescue services. *Irish Journal of Psychology*, 30, 59-73.
- Coleman, S. & Elsner, J. (1995). *Pilgrimage: Past and Present in World Religion*. Cambridge: Harvard University Press.
- Cornwell, B. (2003). Bonded fatalities: Relational and ecological dimensions of a fire evacuation. *The Sociological Quarterly*, 44, 617-638.
- Cox, V., Paulus, P., & McCain, G. (1984). Prison crowding research: The relevance for prison housing standards and a general approach regarding crowding phenomena. *American Psychologist*, 39, 1148-1160.
- D'Atri, D. A. (1975). Psychophysiological responses to crowding. *Environment and Behaviour*, 7, 237-252.
- D'Atri, D. A., Fitzgerald, C. F., Stanislav, M. P., Kasl, V., & Ostfeld, O. M. (1981). Crowding in prison: The relationship between changes in housing mode and blood pressure. *Psychosomatic Medicine*, 43(2), 95-105.
- Davids, I. (2006). *Getting the Best out of Al-Hajj* (2nd Ed.). Darussalam: King Fahd National Library.

- De Waal, F. B. M., Aureli, F. & Judge, P. G. (2000). Coping with crowding. *Scientific American*, 282, 76-81.
- Denzin, N. K. (1978). *The Research Act* (2nd ed.). New York: McGraw-Hill.
- Dodge, C. H. (2009). *The 'Everything' Understanding Islam Book: A Complete Guide to Muslim Beliefs, Practices, and Culture* (2nd. Ed.). Maryland: Adams Media Corporation.
- Donald, I. & Canter, D. (1992). Intentionality and fatality during the King's Cross underground fire. *European Journal of Social Psychology*, 22, 203-218.
- Doosje, B., Branscombe, N. R., Spears, A., & Manstead, A. S. R. (1998). Guilty by association: When one's group has a negative history. *Journal of Personality and Social Psychology*, 75, 872-886.
- Drever, E. (1995). *Using semi-structured interviews in small-scale research: A teacher's guide*. Edinburgh: Scottish Council for Research in Education.
- Drury, J. (2012). Collective resilience in mass emergencies and disasters: A social identity model. In J. Jetten, C. Haslam, & S. A. Haslam (Eds.), *The Social Cure: Identity, Health, and Well-Being* (pp. 195-215). Hove: Psychology Press.
- Drury, J. & Cocking, C. (2007). The mass psychology of disasters and emergency evacuations: A research report and implications for practice. Unpublished manuscript. University of Sussex, Brighton.
<http://www.sussex.ac.uk/affiliates/panic/applications.html>
- Drury, J., Cocking, C. & Reicher, S. D. (2009a). Everyone for themselves? A comparative study of crowd solidarity among emergency survivors. *British Journal of Social Psychology*, 48, 487-506.
- Drury, J. & Novelli, D. (2011). Collective joy and the power of the crowd: A social psychological perspective on Melanie Manchot's exhibition 'Gathering'. Brighton: Fabrica Gallery.
- Drury, J. & Reicher, S. (1999). The intergroup dynamics of collective empowerment: Substantiating the social identity model of crowd behaviour. *Group Processes and Intergroup Relations*, 2, 381-402
- Drury J. & Reicher S. (2000). Collective action and psychological change: The emergence of new social identities. *British Journal of Social Psychology*, 39, 579-604.

- Drury, J. & Reicher, S. (2005). Explaining enduring empowerment: A comparative study of collective action and psychological outcomes. *European Journal of Social Psychology*, 35, 35-58.
- Drury, J. & Reicher, S. (2009). Collective psychological empowerment as a model of social change: Researching crowds and power. *Journal of Social Issues*, 65(4), 707-725.
- Drury, J. & Stott, C. (2011). Contextualising the crowd in contemporary social science. *Contemporary Social Science*, 6(3), 275-288.
- Drury, J. & Winter, G. (2004). Social identity as a source of strength in mass emergencies and other crowd events. *International Journal of Mental Health*, 32, 77-93.
- Drury, J., Cocking, C. & Reicher, S. (2009) Everyone for themselves?: A comparative study of crowd solidarity among emergency survivors. *British Journal of Social Psychology*, 48, 487–506.
- Drury, J., Cocking, C. & Reicher, S. D. (2009b) The nature of collective resilience: Survivor reactions to the 2005 London bombings, *International Journal of Mass Emergencies and Disasters*, 27, 66–95.
- Drury, J., Cocking, C., Reicher, S., Burton, A., Schofield, D., Hardwick, A., Graham, D. & Langston, P. (2009). Cooperation versus competition in a mass emergency evacuation: A new laboratory simulation and a new theoretical model. *Behavior Research Methods*, 41, 957-970.
- Drury, J., Novelli, D., & Stott, C. (2013a). Psychological disaster myths in the perception and management of mass emergencies. *Journal of Applied Social Psychology*, 43, 2259-2270.
- Drury, J., Novelli, D., & Stott, C. (2013b). Representing crowd behaviour in emergency planning guidance: ‘Mass panic’ or collective resilience? *Resilience: International Policies, Practices and Discourses*, 1(1), 18-37.
- Drury, J., Reicher, S., & Stott, C. (2003). Transforming the boundaries of collective identity: From the local anti-road campaign to global resistance? *Social Movement Studies*, 2, 191-212.

- Drury, J., Reicher, S. & Stott, C. (2012). The psychology of collective action: crowds and change. In B. Wagoner, E. Jensen, & J. A. Oldmeadow (Eds.), *Culture and social change: transforming society through the power of ideas* (pp. 19-38). Charlotte, NC: Information Age Publishing.
- Drury, J., Stott, C., & Farsides, T. (2003). The role of police perception and practices in the development of 'public disorder'. *Journal of Applied Social Psychology*, 33(7), 1480-1500.
- Durkheim, E. (1965). *The Elementary Forms of Religious Life*. Translated by J.W. Swain. New York: Fress Press.
- Dynes, R. R. (2003). Finding order in disorder: Continuities in the 9-11 response. *International Journal of Mass Emergencies and Disasters*, 21, 9-23.
- El Khouly, E. (2010). *Hajj the spiritual climax*. Retrieved from <http://www.islamicity.com>
- Elton, R. H., & Anderson, B. V. (1977). The social behavior of a group of baboons (*Papio anubis*) under artificial crowding. *Primates*, 18, 225-234.
- Ernst, C. (2004). *Following Muhammad: Rethinking Islam in the Contemporary World*. Carolina: University of North Carolina Press.
- Evans, G. W. & Wener, W. E. (2007). Crowding and personal space invasion on the train: Please don't make me sit in the middle. *Journal of Environmental Psychology*, 27, 90-94.
- Fade, S. (2004). Using interpretative phenomenological analysis for public health nutrition and dietetic research: a practical guide. *Proceedings of the Nutrition Society*, 63, 647-653. DOI:10.1079/PNS2004398.
- Festinger, L., Pepitone, A., & Newcomb, T. (1952). Some consequences of de-individuation in a group. *Journal of Social Psychology*, 47, 382-389.
- Field, A. (2013). *Discovering Statistics Using IBM SPSS Statistics* (4th Ed.). London: Sage.
- Fischer, H. W. & Drain, E. M. (1993). Local offices of emergency preparedness (LEMA) belief in disaster mythology: what has changed and why? *Disaster Prevention and Management*, 2(3), 17-24.
- Fontana, D. (2003). *Psychology, Religion and Spirituality*. Leicester: BPS Blackwell.

- Franklin, T., Franklin, C., & Pratt, T. (2006). Examining the empirical relationship between prison crowding and inmate misconduct: A meta-analysis of conflicting research results. *Journal of Criminal Justice*, 34, 401-412.
- Freedman, J. L. (1975). *Crowding and behaviour*. San Francisco: W. H. Freeman & Co.
- Freedman, J. L., Heshka, S., & Levy, A. (1975). Population density and pathology: Is there a relationship? *Journal of Experimental Social Psychology*, 11, 539-552.
- Freud, S. (1921). Group psychology and the analysis of the ego. In J. Strachey (Ed.), *Standard Edition of The Complete Psychological Works, Volume 18* (1953-1964). London: Hogarth Press.
- Fritz, C. E., and Williams, H. B. (1957). The human being in disasters: A research perspective. *The Annals of the American Academy of Political and Social Science*, 309, 42-51.
- Fruin, J. J. (2002). The causes and prevention of crowd disasters. Originally presented at the First International Conference on Engineering for Crowd Safety, London, England, March 1993 (Revised exclusively for crowdsafe.com, January 2002). Available at www.crowdsafe.com/FruinCauses.pdf. Accessed May 25, 2014.
- Fruin, J. J. (1993). The causes and prevention of crowd disaster. In R. A. Smith and J. F. Dickie (Eds.), *Engineering for Crowd Safety* (pp. 99-108). Amsterdam: Elsevier.
- Gaes, G. (1994). Prison crowding research reexamined. *The Prison Journal*, 74, 329-363.
- Gagnon, A. & Bourhis, R. Y. (1996). Discrimination in the minimal group paradigm: Social identity or self-interest? *Personality and Social Psychology Bulletin*, 22, 1289-1301.
- Galea, E. (Ed.) (2003). *Pedestrian and evacuation dynamics 2003: Proceedings of the 2nd international conference on pedestrian and evacuation dynamics*, Greenwich, UK: University of Greenwich.
- Giddens, A. (2013). *Sociology*. Cambridge: Polity Press.
- Gill, J. R., & Landi, K. (2004). Traumatic asphyxial deaths due to an uncontrolled crowd. *The American journal of forensic medicine and pathology*, 25(4), 358-361.

- Gleibs I. H., Haslam, C., Haslam, S. A., & Jones, J. M. (2011). Water clubs in residential care: Is it the water or the club that enhances health and well-being? *Psychology & Health*, 26(10), 1361-1377.
- Goffman, E. (1971). *Relations in Public: Microstudies of the Public Order*. London: Allen Lane.
- Goldman, P. (1979). *The death and life of Malcolm X*. Urbana: University of Illinois Press.
- Griffith, W., & Veitch, R. (1971). Hot and crowded: Influences of population density and temperature on interpersonal affective behavior. *Journal of Personality and Social Psychology*, 17, 92-98.
- Hagi, M. (2010). *What is the Wisdom Behind Circumambulating Kaaba Seven Times?*
Retrieved from <http://www.questionsonislam.com/question/what-wisdom-behind-circumambulating-kaaba-seven-times-what-meaning-tawaf-circumambulation?page=1>.
- Hajj Portal (2011). *Hajj Experiences*. Retrieved from <http://www.hajj.org.au>.
- Hammoudi. A. (2006). *A season in Mecca*. Cambridge, UK: Polity Press.
- Haslam, S. A. (1997). Stereotyping and social influence: Foundations of stereotype consensus. In R. Spears, P. J. Oakes, N. Ellemers, & A. Haslam (Eds.), *The social psychology of stereotyping and group life* (pp. 119-143). Oxford: Blackwell.
- Haslam, J. & Haslam, S. A. (2012). *The Social Cure*. Abingdon: Psychology Press.
- Haslam, S. A., Jetten, J., O'Brien, A., & Jacobs, E. (2004). Social identity, social influence, and reactions to potentially stressful tasks: Support for the self-categorization model of stress. *Stress Health*, 20, 3-9.
- Haslam, S.A., O'Brien, A., Jetten, J., Vormedal, K., & Penna, S. (2005). Taking the strain: Social identity, social support, and the experience of stress. *British Journal of Social Psychology*, 44(3), 355-370.
- Haslam, S. A., Oakes, P. J., Reynolds, K. J., & Turner, J. C. (1999). Social identity salience and the emergence of stereotype consensus. *Personality and Social Psychology Bulletin*, 25, 809-818.
- Haslam, S. A. & Reicher, S. D. (2007). Beyond the banality of evil: Three dynamics of an interactionist social psychology of tyranny. *Personality and Social Psychology Bulletin*, 33,

615-622.

- Hayes, A. F. (2013). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. New York: Guilford Press.
- Helbing, D., Johansson, A., Al-Abideen, H. Z. (2007). Dynamics of crowd disasters: An empirical study. *Physical review. E, Statistical, nonlinear, and soft matter physics*, 75, 046109.
- Helbing, D. & Mukerji, P. (2012) Crowd disasters as systemic failures: Analysis of the Love Parade Disaster. *EPJ Data Science*, 1, 7
- Hofman, M. (1998) *Journey to Makkah*. Germany: Amana Publications.
- Hogg, M. A. and Tindale, S. (Eds.). (2001). *Blackwell handbook of social psychology: Group processes*. Oxford: Blackwell Publishing.
- Hoggett, J., & Stott, C. (2010). The role of crowd theory in determining the use of force in public order policing. *Policing and Society*, 20(2), 223-236.
- Hooker, Richard (July 14, 1999). Arkan ad-din the five pillars of religion. (<http://www.wsu.edu/~dee/GLOSSARY/5PILLARS.HTM>). United States: Washington State University. Retrieved 2013-11-17.
- Hopkins, N. & Reicher, S. (1996). The construction of social categories and processes of social change. In G. Breakwell & E. Lyons (Eds.), *Changing European Identities* (pp. 69-94). Oxford: Butterworth-Heinemann.
- Hopkins, N., Reicher, S. & Levine, M. (1997). On the parallels between social cognition and the 'new racism'. *British Journal of Social Psychology*, 36, 305-329.
- Horrie, C., & Chippindale, P. (2003). *What is Islam?* London: Virgin Books.
- Janis, I. L., & Leventhal, H. (1968). Human reactions to stress. In E. F. Borgatta & W. Lambert (Eds.), *Handbook of personality theory and research*. Chicago: Rand McNally.
- Jick, T. D. (1979). Mixing qualitative and quantitative methods: Triangulation in action. *Administrative Science Quarterly*, 24, 602-611.
- Johnson, N. R. (1987). Panic at 'The Who Concert Stampede': An empirical assessment. *Social Problems*, 34, 362-373.

- Johnson, N. R. (1988). Fire in a crowded theatre: A descriptive investigation of the emergence of panic. *International Journal of Mass Emergencies and Disasters*, 6, 7-26.
- Johnson, R. & Downing, L. (1979) De-individuation and violence of cues: effects on prosocial and antisocial behaviour. *Journal of Personality and Social Psychology*, 37, 1532-1538.
- Killian, L. M. (1972). *Collective behaviour*. Englewood Cliffs, NJ: Prentice-Hall.
- King Khalid bin Abdul Aziz Database (First Edition) King Khalid Foundation - Developed by Harf Information Technology (1980). *The number of pilgrims coming to the Kingdom for Hajj*. Government Publications.
- Kitab Ul-Hajj. (2011). *The book of pilgrimage to Makkah: Online Islam Base Publications*. Retrieved from www.islambase.tk.
- Kugihara, N. (2001). Effects of aggressive behaviour and group size on collective escape in an emergency: A test between a social identity model and deindividuation theory. *British Journal of Social Psychology*, 40, 575-598.
- Kurtz, L. (2007). *Gods in the Global Village: The World's Religions in Sociological Perspective*. (2nd Ed.). California: Pibe Forge Press.
- Le Bon, G. (1968). *The Crowd: A study of the popular mind* (Original work published 1895). Dunwoody, GA: Norman S. Berg.
- Lea, M., Spears, R., & de Groot, D. (2001). Knowing me, knowing you: Anonymity effects on social identity processes within groups. *Personality and Social Psychology Bulletin*, 27, 526-537.
- Leibman, M. (1970). The effects of sex and race norms on personal space. *Environment and Behavior*, 2, 208-246.
- Mahmassani, H. (2005) *Transportation and traffic theory*. USA: Elsevier Ltd.
- Maqsood, R. W. (2008). *Need to know: Islam*. London: Harper Collins Publishers.
- Martin, E. D. (1920). *The behaviour of crowds*. London: Ernest Benn.
- Matthews, A. & Matthews, D. (1996). *A Guide to Hajj*. Riyadh, Saudi Arabia: Umrah. Dar-Al-Hadyah.

- Mawdudi, S. (1982). *Origin and Significance of the Hajj*. Retrieved from The Islamic Foundation website: <http://www.islamicity.com/mosque/hajj/letsbemuslims.htm>
- Mawdudi, S. (2011). *Let us be Muslims*. London: The Islamic Foundation.
- Mawson, A. R. (2005). Understanding mass panic and other collective responses to threat and disasters. *Psychiatry: Interpersonal and Biological Processes*, 68(2), 95-113.
- McCain, G., Cox, V. C., & Paulus, P. B. (1976). The relationship between illness complaints and degree of crowding in a prison environment. *Environment and Behavior*, 8, 283-290.
- McDougall, W. (1920). *The group mind*. London: Cambridge University Press.
- McPhail, C. (1991). *The myth of the madding crowd*. New York: Aldine de Gruyter.
- Memish, Z. (2013) Hajj and the public health significance of mass gatherings, *Eastern Mediterranean Health Journal*, 12, 56-65.
- Memish, Z. A., Stephens, G. M., Steffen, R., & Ahmed, Q. A. (2012) Emergence of medicine for mass gatherings: lessons from the Hajj. *Lancet Infectious Diseases* 12(1), 56-65.
- Messerschmidt, D. A. and Sharma, J. (1981) *Hindu pilgrimage in the Nepal*. London: Wipf and Stock.
- Ministries of Health (2013). Preparations for the 1435H Hajj Season Available at <http://www.moh.gov.sa/en/Hajj/FAQs/Pages/FAQs11.aspx>. Accessed May 12, 2014.
- Ministry of Economy and Planning, Central Department of Statistics and Information, Saudi Arabia (2014). The latest statistical information. Available at www.cdsi.gov.sa/index.php. Accessed May 25, 2014.
- Ministry of Foreign Affairs (2014) The service of Islam and Muslims. Available at <http://embassies.mofa.gov.sa/sites/NewZealand/AR/AboutKingdom/KingdomAchievements/Pages/default.aspx/>. Accessed May 25, 2014.
- Ministry of Hajj (2013) Deputy Ministry for Planning and Development, the General Directorate for Information Technology Hajj 1433 (Ministry of Hajj, Makkah, Kingdom of Saudi Arabia).
- Ministry of Transport, Saudi Arabia (2012). Transport and Communication Statistics of Saudi Arabia, 2012 Available at <http://knoema.com/atlas/sources/Ministry-of-Transport-Saudi-Arabia>

- Mohamed, Mamdouh N. (1996). *Hajj to Umrah: From A to Z*. UK: Mamdouh Mohamed.
- Moussaïd, M., Helbing, D., & Theraulaz, G. (2011). How simple rules determine pedestrian behaviour and crowd disasters. *Proceedings of the National Academy of Sciences*, 108, 6884-6888.
- Muhaiyaddeen. M. (2008). *Hajj: The Inner Pilgrimage*. Philadelphia: The Fellowship Press.
- Murad. H. S. (2011). *Journal of Islamic thought and civilization*, 1(2). Department of Journal of Islamic thought and civilization. Lahore, Pakistan.
- Murad, M. (2011). *The Book of Hajj and Umrah*. Islam Base Publications. Retrieved from www.islamhouse.com.
- National Institute of Science, standard ISO/DIS 31000 (2009). *Principles and guidelines on implementation. International Organization for Standardization*. Retrieved from http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=43170
- Neville, F. & Reicher, S. (2011). The experience of collective participation: Shared identity, relatedness, and emotionality. *Contemporary Social Science*, 6(3), 377-396.
- Nojoom, M. S. O. (2005). The development of an information management system at the Custodian of the Two Holy Mosques Institute of Hajj Research, Saudi Arabia: Institute of Hajj Research.
- Novelli, D. (2010). The social psychology of spatiality and crowding. Unpublished DPhil thesis. University of Sussex, Falmer, Brighton. Available online at: http://sro.sussex.ac.uk/6275/1/Novelli,_David_Lee.pdf/.
- Novelli, D., Drury, J., Reicher, S., & Stott, C. (2013). Crowdedness mediates the effect of social identification on positive emotion in a crowd: A survey of two crowd events. *PLoS ONE*, 8(11).
- Novelli, D., Drury, J. & Reicher, S. (2010). Come together: two studies concerning the impact of group relations on 'personal space'. *British Journal of Social Psychology*, 49, 223-236.
- Olaveson, T. (2001). Collective effervescence and communitas: Processual models of ritual and society in Emile Durkheim and Victor Turner. *Dialectical Anthropology*, 26, 89-124.

- Pandey, K., Stevenson, C., Shankar, S., Hopkins, N. P., & Reicher, S. D. (2013). Cold comfort at the Magh Mela: Social identity processes and physical hardship. *British Journal of Social Psychology*.
- Paoli, T., Tacconi, G., Borgognini Tarli, S. M. & Palagi, E. (2007). Influence of feeding and short-term crowding on the sexual repertoire of captive bonobos (*Pan paniscus*). *Annales Zoologici Fennici*, 44, 81-88.
- Park, R. (1982). *The crowd and the public*. Chicago: University of Chicago Press. (Original work published 1904).
- Pattani, A. (2004). *Squatters phenomenon problem for Hajj regulations in Makkah*. Retrieved from: www.makkahnewspaper.com/makkahNews/.../79886.
- Paulus, P. B., McCain, G., & Cox, V. C. (1978). Death rates, psychiatric commitments, blood pressure, and perceived crowding as a function of institutional crowding. *Environmental Psychology and Nonverbal Behaviour*, 3, 107-116.
- Peachy, W., Thomas, M., Sylvester, T., Palmer, I., Zarabozo, J., & Al-Timim, A. (1997). *A Brief Illustrated Guide to Understanding Islam*. Houston, Texas, USA: Darussalam Publishers.
- Perkins, L. B. (2004). *Crowd safety & survival: Practical event and public gathering safety tips*. Morrisville, N.C.: Lulu Press.
- Peters, F. (1995). *The Hajj: The Muslim pilgrimage to Mecca and the holy places*. Princeton: Princeton University Press.
- Pickering, W. S. F. (2009). *Durkheim's sociology of religion*. Cambridge: James Clarke and Co.
- Pietrantoni, L., & Prati, G. (2009). Psicologia dell'emergenza. Icon. *PLoS ONE*, 8(11), e78983. doi:10.1371/journal.pone.0078983
- Postmes, T. & Spears, R. (1998). De-individuation and anti-normative behaviour: a meta-analysis. *Psychological Bulletin*, 123, 234-259
- Prati, G., & Pietrantoni, L. (2009). Elaborating the police perspective: The role of perceptions and experience in the explanation of crowd conflict. *European Journal of Social Psychology*, 39, 991-1001.
- Prayag Magh Mela Research Group (2007). Living the Magh Mela at Prayag: Collective identity, collective experience and the impact of participation in a mass event. *Psychological Studies*

- (*Special Issue on the Social Psychology of Collectivity*), 52, 293-301.
- Preacher, K. J. & Kelley, K. (2011) Effect size measures for mediation models: Quantitative strategies for communicating indirect effects. *Psychological Methods* 16(29), 93-115.
- Prerost, F. J. (1981). Positive mood-inhibiting potential of human crowding. *Psychological Reports*, 48, 43-48.
- Quarantelli, E. L. (1954). The nature and conditions of panic. *American Journal of Sociology*, 60, 267-275.
- Quarantelli, E. L. (1957). The behaviour of panic. *Sociology and Social Research*, 60, 187-194.
- Quarantelli, E. L. (1960). Images of withdrawal behaviour in disasters: Some basic misconceptions. *Social Problems*, 8, 68-79.
- Quarantelli, E. L. (1977). Panic behaviour: Some empirical observations. In D. J. Conway (Ed.), *Human Response to Tall Buildings* (pp. 336-350). Stroudsburg, PA: Dowden, Hutchinson and Ross.
- Rafiabadi, H. (2009). *The Philosophy of Hajj*. Retrieved from <http://www.theintellectual.info/islamic-beliefs/331-the-philosophy-of-hajj>.
- Reicher, S. (1984a). The St Paul's 'riot': An explanation of the limits of crowd action in terms of a social identity model. *European Journal of Social Psychology*, 14, 1-21.
- Reicher, S. (1984b). Social influence in the crowd: Attitudinal and behavioural effects of deindividuation in conditions of high and low group salience. *British Journal of Social Psychology*, 23, 341-50.
- Reicher, S. (1985). Psychological Theory as Intergroup Perspective: A Comparative Analysis of "Scientific" and "Lay" Accounts of Crowd Events
- Reicher, S. (1996). The Battle of Westminster: Developing the social identity model of crowd behaviour in order to explain the initiation and development of collective conflict. *European Journal of Social Psychology*, 26, 115-34.

- Reicher, S. (2001) The psychology of crowd dynamics. In M. A. Hogg & R. S. Tindale (Eds) Blackwell handbook of social psychology: Group processes (pp. 182-208). Oxford: Blackwell.
- Reicher, S. (2007). Knowledge-based public order policing: Principles and practice. *Policing: A Journal of Policy and Practice*, 1, 403-415.
- Reicher, S. (2011). Mass action and mundane reality: An argument for putting crowd analysis at the centre of the social sciences. *Contemporary Social Science*, 6, 433-449.
- Reicher, S., & Drury, J. (2011). Collective identity, political participation and the making of the social self. In A. Azzi, X. Chryssochoou, B. Klandermans, & B. Simon (Eds.), *Identity and participation in culturally diverse societies: A multidisciplinary perspective* (pp. 158-176). Oxford: Wiley-Blackwell.
- Reicher, S., Haslam, S. A., & Hopkins, N. (2005). Social identity and the dynamics of leadership: Leaders and followers as collaborative agents in the transformation of social reality. *Leadership Quarterly*, 16, 547-568.
- Reicher, S., Levine, M. & Gordijn, E. (1998). More on deindividuation, power relations between groups and the expression of social identity: Three studies on the effects of visibility to the in-group. *British Journal of Social Psychology*, 37, 15-40.
- Reicher, S. & Potter, J. (1985). Psychological theory as intergroup perspective: A comparative analysis of 'scientific' and 'lay' accounts of crowd events. *Human Relations*, 38, 167-189.
- Reicher, S., Spears, R., & Haslam, S. A. (2010). The social identity approach in social psychology. In M. S. Wetherell & C. T. Mohanty (Eds.), *The Sage Identities Handbook* (pp. 45-62). London: Sage.
- Reicher, S., Spears, R. & Postmes, T. (1995). A social identity model of de-individuation phenomena. *European Review of Social Psychology*, 6, 161-198.
- Reicher, S., & Stott, C. (2011). *Mad mobs and Englishmen? Myths and realities of the 2011 riots*. London: Constable & Robinson.
- Reicher, S., Stott, C., Drury, J, Adang, O., Cronin, P., & Livingstone, A. (2007). Knowledge-based public order policing: Principles and practice. *Policing*, 1, 403-415.
- Reicher, S. (1987). Crowd behaviour as social action. In J. C. Turner, M. A. Hogg, P. J. Oakes, S. D. Reicher & M. S. Wetherell (Eds.), *Rediscovering the social group: A self-categorization theory* (pp. 171-202). Oxford: Blackwell.

- Robson, C. (1993). *Real world research: A resource for social scientists and practitioner-researchers*. Oxford: Blackwell.
- Ross, E. A. (1908). *Social psychology: An outline and source book*. New York: Macmillan.
- Sabq online newspaper. Available at <http://sabq.org/wqGfde>. Accessed on 20-10-2013.
- Route of the Main Hajj Pilgrimage. [Online image]. (2011). Retrieved November 6, 2013 from <http://www.bbc.co.uk/religion/galleries/hajj/>
- Sahih al-Bakhari. (Trans. Muhsin, M.) (2007-2009). Retrieved May 3, 2013 from <http://www.usc.edu/schools/college/crcc/engagement/resources/texts/muslim/hadith/bukhari/>
- Saloma, C. & Perez, G. (2005). Herding in real escape panic. In N. Waldau-Drexler, P. Gattermann, H. Knoflacher, & M. H. Schreckenber (Eds.), *Pedestrian and Evacuation Dynamics* (pp. 465-470). Berlin: Springer.
- Schaefer, J. T, Kelly, D. K., & Abbey, R. F., (1986). A minimum assumption tornado-hazard probability model. *Journal of Climate and Applied Meteorology*, 12, 1934-1945.
- Schultz, D. P. (Ed.). (1964). *Panic behaviour: Discussions and readings*. New York: Random House.
- Schultz-Gambard, J. (1977). Social determinants of crowding. In M. R. Gürkaynak & W. A. LeCompte (Eds.), *Human consequences of crowding* (pp. 61-167). New York: Plenum Press.
- Schumm, W. R., & Kohler, A. L. (2006). Social cohesion and the five pillars of Islam: A comparative perspective. *American Journal of Islamic Social Sciences*, 23(2), 126-136.
- Shankar, S., Stevenson, C., Pandey, K., Tewari, S., Hopkins, N. P., & Reicher, S. D. (2013). A calming cacophony: Social identity can shape the experience of loud noise. *Journal of Environmental Psychology*, 36, 87-95.
- Shacham, M., & Lahad, M. (2004). Stress reactions and coping resources mobilized by children under shelling and evacuation. *Australasian Journal of Disaster and Trauma Studies*, 2. Retrieved from <http://www.massey.ac.nz/~trauma/issues/2004-2/shacham.htm>.
- Shariati, A. (2005). Hajj: Reflection on its rituals. Retrieved from <http://www.newworldencyclopedia.org/entry/Hajj>

- Siegel, P. & Alwang, J. (1999). An asset-based approach to social risk management: A conceptual framework. *Social Protection Discussion Paper No. 9926*. The World Bank: Washington, D.C. Retrieved from www.worldbank.org/sp
- Silvers, J. (2000), *Risk management for meetings and events*. USA: Elsevier Ltd.
- Sime, J. D. (1980). The concept of panic. In D. Canter (Ed.), *Fires and Human Behaviour* (pp. 63-81). Chichester: Wiley.
- Sime, J. D. (1983). Affiliative behavior during escape to building exits. *Journal of Environmental Psychology*, 3, 21-41.
- Sime, J. D. (1995). Crowd psychology and engineering. *Safety Science*, 21, 1-14.
- Smelser, N. J., (1962). *Theory of collective behaviour*. London: Routledge and Kegan Paul.
- Smith, E. R. (1999). Affective and cognitive implications of a group becoming part of the self: New models of prejudice and of the self-concept. In D. Abrams & M. A. Hogg (Eds.), *Social identity and social cognition* (pp. 183-196). Oxford: Blackwell.
- Smith, E.R., & Mackie, D.M. (2007). *Social Psychology* (3rd Ed.). Hove: Taylor & Francis.
- Smith, J. A. (2004). Reflecting on the development of interpretive phenomenological analysis and its contribution to qualitative research in psychology. *Qualitative Research in Psychology*, 1, 39-54.
- Smith, J. A. & Eatough, V. (2006). Interpretive phenomenological analysis, in G. Breakwell, S. Hammond, C. Fife-Schaw and J. A. Smith (Eds.) *Research Methods in Psychology* (2nd ed.) London: Sage.
- Smith, J. A., Flowers, P. & Larkin, M. (2009). *Interpretative phenomenological analysis: Theory, method, research*. London: Sage.
- Smith, J., Jarman, M. & Osborn, M. (1999). Doing interpretative phenomenological analysis. In M. Murray & K. Chamberlain (Eds.), *Qualitative health psychology* (pp. 218-240). London: Sage.
- Smith, J. A., & Osborn, M. (2003). Interpretive phenomenological analysis. In J. A. Smith (Ed.), *Qualitative psychology: A practical guide to research methods* (pp. 51-80). London: Sage.

- Sohrabi, M. B., Zofaghar, P., Rezvanirad, Z., Ghiasoddin, A., Yahyaei, E., Eskandari, Z., & Mirzapour, A. (2013). *A comparison of depression before and after Hajj pilgrimage*. Retrieved from http://hpmjournal.org/files_site/paperlist/Journal1-1-140315132610.pdf
- Solnit, R. (2009). *A paradise built in hell: The extraordinary communities that arise in disaster*. New York: Viking.
- Sommer, R. (1969). *Personal space: The behavioural basis of design*. Englewood Cliffs, NJ: Prentice-Hall.
- Spiegelman, J. M. (2005). Divine among in Islam: The Hajj or pilgrimage to Mecca. *Psychological Perspectives*, 48(1), 136-142.
- Spiegelmann, M. J. (2003) *The Divine WABA Within, Among, Between, and Around: A Jungian Exploration of Spiritual Paths*. Enfield: Airlift Publishers.
- Standard ISO 31000. (2009). Risk management: Principles and guidelines on implementation.
- Still, G. K. (2014). *Introduction to crowd science*. Boca Raton, Florida: CRC Press.
- Stokols, D. (1972). A social-psychological model of human crowding phenomena. *Journal of the American Planning Association*, 38, 72-83.
- Stott, C. J. (2009). *Crowd psychology and public order policing*. Report submitted to the HMIC inquiry into the policing of the London G20 protests.
- Stott, C., Adang, O., Livingstone, A., & Schreiber, M. (2007). Variability in the collective behaviour of England fans at Euro 2004: 'Hooliganism', public order policing and social change. *European Journal of Social Psychology*, 38, 75-100.
- Stott, C. & Drury, J. (1999). The intergroup dynamics of empowerment: A social identity model. In P. Bagguley & J. Hearn (Eds.), *Transforming Politics: Power and Resistance* (pp. 32-45). London: Macmillan.
- Stott, C., & Drury, J. (2000). Crowds, context and identity: Dynamic categorization processes in the 'poll tax riot'. *Human Relations*, 53, 247-273.
- Stott, C., Drury, J., & Reicher, S. (2012). From 'prejudice' to collective action. In J. Dixon and M. Levine (Eds.), *Beyond prejudice: Extending the social psychology of conflict, inequality and social change* (286-303). Cambridge: Cambridge University Press.

- Stott, C., Hoggett, J. & Pearson, G. (2011). Keeping the peace: Social identity, procedural justice and the policing of football crowds. *British Journal of Criminology*, 52(2), 381-399.
- Stott, C. & Reicher, S. (1998). Crowd action as intergroup process: Introducing the police perspective. *European Journal of Social Psychology*, 26, 509-29.
- Stott, C., & Reicher, S. D. (1998). How conflict escalates: The intergroup dynamics of collective football crowd 'violence'. *Sociology*, 32, 353-77.
- Strauss, A. L. (1944). The literature on panic. *Journal of Abnormal and Social Psychology*, 39, 317-328.
- Tajfel, H. (1981). Social stereotypes and social groups. In J. C. Turner & H. Giles (Eds.), *Intergroup Behaviour* (pp. 144-167). Oxford: Blackwell.
- Tajfel, H. (1972). Social categorization. English manuscript of 'La catégorization sociale'. In S. Moscovici (Ed.), *Introduction à la psychologie sociale vol. 1* (pp. 272-302). Paris: Larousse.
- Tajfel, H. (1978). The achievement of intergroup differentiation. In: H. Tajfel (Ed.) *Differentiation between social groups* (pp. 77-100). London: Academic Press.
- Tajfel, H. (1979). Individuals and groups in social psychology. *British Journal of Social and Clinical Psychology*, 18, 183-190.
- Tajfel, H., Flament, C., Billig, M. G. & Bundy, R. P. (1971). Social categorization and intergroup behaviour. *European Journal of Social Psychology*, 1, 149-178.
- Tajfel, H., & Turner, J.C. (1979). An Integrative Theory of Intergroup Relations. In Worchel, S. and Austin, W. G. (Eds.), *Psychology of Intergroup Relations*. (pp. 33-47) Monterrey, CA: Brooks-Cole.
- Tajfel, H. and Turner, J. C. (1986). The social identity theory of intergroup behavior. In S. Worchel and L. W. Austin (Eds.), *Psychology of Intergroup Relations* (pp. 7-24). Chicago: Nelson-Hall.
- Temple, S., Al Zahrani, A. & May, M. (2013). Developing a Transport Strategy for the Holy City of Makkah (Mecca) AET. Represented in European Transport 2013 conference.

- Tewari, S., Khan, S., Hopkins, N., Srinivasan, N., & Reicher, S. (2012). Participation in mass gatherings can benefit well-being: Longitudinal and control data from a North Indian Hindu pilgrimage event. *PLoS ONE* 7(10), e47291.
doi:10.1371/journal.pone.0047291doi:10.1371/journal.pone.0047291.
- The Holy Qur'an*, Surah Al-Hajj, 22:26.
- Tilly, C., Tilly, L. & Tilly, R. (1975). *The rebellious century: 1830-1930*. London: Dent.
- Turner, J. C. (1982). Towards a cognitive redefinition of the social group. In H. Tajfel (Ed.), *Social identity and intergroup behavior* (pp. 15-40). Cambridge: Cambridge University Press.
- Turner, J. C. (1991). *Social Influence*. Milton-Keynes: Open University Press.
- Turner, J. C. (1999). Some current issues in research on social identity and self-categorization theories. In N. Ellemers, R. Spears, & B. Doosje (Eds.), *Social Identity* (pp. 6-34). Oxford: Blackwell.
- Turner, J. C. (2005). Explaining the nature of power: A three-process theory. *European Journal of Social Psychology*, 35, 1-22.
- Turner, J. C., Hogg, M. A., Oakes, P. J., Reicher, S. D. & Wetherell, M. S. (1987). *Rediscovering the social group: A self-categorization theory*. Oxford: Blackwell.
- Turner, J. C., Oakes, P., Haslam, A. S., & McGarry, C. (1994). Self and Collective: Cognition and Social Context. *Personality and Social Psychology Bulletin*, 20, 454-463.
- Turner, J. Q., & Giles, H. (1981). The social psychology of intergroup behaviour. In J. Turner & H. Giles (Eds.), *Intergroup behaviour* (1-32). Oxford: Basil Blackwell.
- Turner, R. & Killian, L. (1987). *Collective Behaviour* (3rd ed.). Englewood Cliffs, NJ: Prentice Hall.
- Turner, V. (1973). The center out there: Pilgrim's goal. *History of Religions*, 12, 191-230.
- Turner, V. (1974). *Dramas, fields and metaphors*. Ithaca: Cornell University Press.
- Uddin, M., Ozair, G., (2004). An analytical overview of stampede at Jamarat site – root causes.
- UK National Travel Health Network and Centre (2014). Foreign travel advice to Hajj Saudi Arabia (2014). Retrieved from
http://www.nathnac.org/pro/clinical_updates/hajj_100614.htm

- Umm Al-Qura University (2014). Retrieved August 11 2014 from <http://uqu.edu.sa/page/en/3192>
- US Riot Commission. (1968). *Report of the national advisory commission on civil disorders*. New York: Bantam.
- Veitch, R., & Arkkelin, D. (1995). *Environmental psychology: An interdisciplinary perspective*. Englewood Cliffs, NJ: Prentice Hall.
- Waddington, P. A. J. (1994). *Liberty and order: Public order policing in a capital city*. London: UCL Press.
- Wener, R. E., & Keys, C. (1988). The effects of changes in jail population densities on crowding, sick calls, and spatial behaviour. *Journal of Applied Social Psychology*, 18, 852-866.
- Willig, C. (2008). *Introducing qualitative research in psychology: Adventures in theory and method* (2nd ed.). Maidenhead: Open University Press.
- Worchel, S., & Teddlie, L. (1976). The experience of crowding: A two-factor theory. *Journal of Personality and Social Psychology*, 34, 30-40.
- Worchel, S., & Yohai, S. (1979). The role of attribution in the experience of crowding. *Journal of Experimental Social Psychology*, 15, 91-104.
- Zain Al-Abideen, H (2001). World Conference for King Fahd bin Abdul Aziz and his achievements. King Saud University. K. S. A.
- Zimbardo, P. G. (1970). The human choice: Individuation, reason and order versus de-individuation, impulse and chaos. In W. J. Arnold & D. Levine (Eds.) *Nebraska Symposium on Motivation 1969* (pp. 237-307). Nebraska: University of Nebraska Press.

Appendix A

THE SERVICE PROVIDERS SUPERVISED BY THE MINISTRY of Hajj

Services are directly provided to pilgrims and Mu`tamirs by a number of establishments and companies licensed by the Ministry of Hajj, and they perform their duties under the supervision of the Ministry. It approves their operational plans, and hence, monitors and evaluates their performance and calls to account those who have been proved to have violated their assigned duties. The number of employees working in these bodies is about 40,000 employees. The service providers are as follows:

INTERNATIONAL PILGRIMS SERVICE PROVIDERS

- Tawafa Establishments: six Tawafa Establishments located in Makkah Al-Mukarramah, the United Agents Office in pilgrims entry ports, United Agents Office, and National Guides Establishment in Al-Madinah Al-Munawwarah, with which 450 field service groups have been affiliated.
- General Syndicate of Vehicles and 17 pilgrims transportation companies, owning 19904 buses.
- Related service providers: housing and food...etc.
- d. Official Hajj Missions, which include more than 70 missions, in addition to more than 2300 external travel companies and agents.

DOMESTIC PILGRIMS SERVICE PROVIDERS

Licensed and operative domestic pilgrims companies and establishments, which total 236 establishments, and have more than 700 branches in various regions of the Kingdom.

UMRAH SERVICE PROVIDERS:

- Licensed and operative `Umrah companies and establishments, which total 54 establishments.
- External agents for `Umrah companies and establishments, which exceed 1600 external agents.
- E-service companies and establishments.
- Related service providers: housing and food...etc.

RULES REGULATING THE RELATIONSHIP BETWEEN THE MINISTRY AND PILGRIMS AND MU`TAMIRS SERVICE PROVIDERS UNDER ITS SUPERVISION:

The relationship between the Ministry of Hajj and the establishments and companies providing services directly to the Guests of Allah, including pilgrims, Mu`tamirs, and visitors of the Prophet's Mosque, is governed by rules, regulations, the decisions of the Council of Ministers, and the following Royal Decrees. They identify the tasks and duties assigned to these companies and establishments. Also, they identify the monitorial and supervisory role assumed by the Ministry of Hajj on these bodies, and lay down the disciplinary penalties which are to be applied to the negligent bodies, according to the following:

Establishments working in the field of international pilgrims' service (Tawafa Establishments)

1. Royal Decree no. M/12, dated 5/9/1385 A.H. and its executive regulation.
2. Council of Ministers decision no. 494, dated 23/3/1396 A.H.
3. Royal Decree no. M/13, dated 4/3/1398 A.H.
4. Council of Ministers decision no. 81, dated 7/3/1428 A.H.

COMPANIES AND ESTABLISHMENTS WORKING IN THE FIELD OF DOMESTIC PILGRIMS' SERVICE

Rules governing domestic pilgrims' service promulgated by the Royal Decree no. 93, dated 10/6/1420 A.H., and its executive regulation promulgated by virtue of the decision of His Highness the Minister of Hajj no. 68121/Q/M, dated 27/4/1428 A.H.

COMPANIES AND ESTABLISHMENTS WORKING IN THE FIELD OF MU`TAMIRS' SERVICE

Rules governing Mu`tamirs' services promulgated by the Royal Decree no. 93, dated 10/6/1420 A.H., and its executive regulation promulgated by the decision of His Highness the Minister of Hajj no. 197/Q/M, dated 21/12/1420 A.H.

GENERAL SYNDICATE OF VEHICLES

- The regulations of the General Syndicate of Vehicles promulgated by the Royal Decree no. 11501 on 3/7/1373 A.H.
- The amendments to the regulations by virtue of the Council of Ministers decision no. 28 on 1/2/1425 A.H. and the Royal Decree no. M/27 on 11/4/1425 A.H.

TAWAFA ESTABLISHMENTS

They refer to Mutawwifs, pilgrims' guides, agents, and Zamazemah. They include the following:

First: Six Tawafa Establishments located in Makkah Al-Mukarramah and the Sacred Sites, each of them serving the pilgrims of one of the world regions stated in its name. None of them are permitted to serve the pilgrims of another region, except in a very limited range and according to certain regulations within the frame of what is known as free choice. This most likely applies to first degree relatives. Tawafa Establishments are distributed thereby including more than one country, as follows:

- National Tawafa Establishment for South East Asian Pilgrims.
- National Tawafa Establishment for South Asian Pilgrims.
- National Tawafa Establishment for Non-Arab African countries.
- National Tawafa Establishment for Pilgrims of the Arabian Countries.
- National Tawafa Establishment for Muslims of Europe, the Americas, and Australia.
- National Tawafa Establishment for Pilgrims of Iran.

Second: The Zamazemah United Office, whose spatial range covers Makkah Al-Mukarramah.

Third: The National Guides Establishment, whose spatial range covers Al-Madinah Al-Munawwarah.



Fourth: The United Agents Establishment, whose spatial range covers the cities of air, land, and sea ports.



Tawafa Establishments aim to provide the best services to international pilgrims and visitors of the Prophet's Mosque, and to improve and enhance these services. Also, they aim to facilitate matters for the international pilgrims and Mu'tamirs so they are able to perform their rituals easily and overcome the hardships they may encounter during their stay in the Kingdom. Additionally, they seek to raise their staff's level of performance, enhance their efficiency, and improve their capabilities.

Source : MINISTRY of Hajj website : Retrieved from :

<http://www.haj.gov.sa/en-us/information/aboutministry/pages/workinministry.aspx>

Appendix B: Questionnaire Survey of the Hajj 1433

 University of Sussex	Psychology of Hajj 1433 AH		Umm Al-Qura University Custodian of the Two Holy Mosques Institute of Hajj Research						
The questionnaire number	Student number:	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/>						
1	Date of interview.	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>							
2	Time of the interview ①In the morning ②In the afternoon ③after Asser ④Evening ⑤Before dawn.	<input type="text"/>							
3	Location of the interview: ①Inside the Grand Mosque ②Outside the Grand Mosque.	<input type="text"/>							
4	Estimated density? (Number of persons per square meter) persons/ m2.	<input type="text"/> <input type="text"/>							
5	Is the respondent in the ①middle of crowd ②edge of crowd ③away from crowd?	<input type="text"/>							
performed Hajj .I									
6	I would like to ask if you have to perform the Hajj before or not.?	①Yes ②No	<input type="text"/>						
7	How many times you performed the Hajj before?	①this is my first time ②More than one time	<input type="text"/>						
8	Did you come for Hajj alone or with a group?	①alone ②with a group	<input type="text"/>						
We would like to ask how you are experiencing being in this crowd today. .II									
#	Questions	1 Strongly Disagree	2 Disagree	3 Disagree a little	4 Don't know	5 Agree a little	6 Agree	7 Strongly Agree	
9	I am glad to be part of this crowd								<input type="text"/>
10	I feel enthusiastic to be part of this crowd								<input type="text"/>

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11	I am enjoying being in this crowd								<input type="checkbox"/>
12	Being in the Hajj crowd is a positive experience for me								<input type="checkbox"/>
13	My desire is to be part of the Hajj crowd								<input type="checkbox"/>
14	I feel good being part of the Hajj crowd								<input type="checkbox"/>
15	I feel physically exhausted in this crowd								<input type="checkbox"/>
16	I feel emotionally exhausted in this crowd								<input type="checkbox"/>
17	I feel trapped in this crowd								<input type="checkbox"/>
18	I feel rejected by other people in this crowd								<input type="checkbox"/>
#	Questions	1 Strongly Disagree	2 Disagree	3 Disagree a little	4 Don't know	5 Agree a little	6 Agree	7 Strongly Agree	
19	This crowd is united with each other								<input type="checkbox"/>
20	There is a sense of togetherness in this crowd'								<input type="checkbox"/>
Now we would like to ask whether you find it crowded today: .III									
21	I would like more space								<input type="checkbox"/>
22	There is enough space for everyone								<input type="checkbox"/>
23	It is too crowded here								<input type="checkbox"/>

Please put in order of your opinion of the most spiritual Hajj activities: .IV



24	<p>Place the appropriate number sequence in the appropriate box, so that the number (5) of the highest sense of spirituality of the minimum number of (1)</p>	
	<p>Active pilgrimage following:</p> <ol style="list-style-type: none"> 1. Prayer inside the Grand Mosque 2. Sa'ee 3. Tawaf 4. Jamarat 5. Stand inside Zone Arafat 	<div><input type="checkbox"/></div> <div><input type="checkbox"/></div> <div><input type="checkbox"/></div> <div><input type="checkbox"/></div> <div><input type="checkbox"/></div>



Now please put in order your opinion most crowded Sites during Hajj from your experience of Hajj.



25	<p>Place the appropriate number in the appropriate box, taking into consideration</p> <p>That number (5) of the highest congestion and No. (1) for the least in all congestion of the following:</p> <ol style="list-style-type: none"> 1.Tawaf. 2. Sa’ee (rushing between Safa and Marwa) 3. Nafrāh of Mount Arafat. (Leave Arafat) 4. Jamarat 5. Stand in Muzdalifah 	<div><input type="checkbox"/></div> <div><input type="checkbox"/></div> <div><input type="checkbox"/></div> <div><input type="checkbox"/></div> <div><input type="checkbox"/></div>



Now we would like to ask you about your identity and how you see those around you .VI



#	Questions	1 Strongly Disagree	2 Disagree	3 Disagree a little	4 Don't know	5 Agree a little	6 Agree	7 Strongly Agree	
26	Being a Muslim is important to me								<input type="checkbox"/>
27	Being a Muslim is a reflection of who I am								<input type="checkbox"/>



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28	I think of myself in terms of my Muslim identity								<input type="checkbox"/>
29	The Muslim identity is important to the other people in this crowd								<input type="checkbox"/>
30	I think of the other people here as Muslims brothers								<input type="checkbox"/>
31	in my view, other people in this crowd are good Muslims								<input type="checkbox"/>
32	I feel at one with the people around me								<input type="checkbox"/>
33	I feel that I am part of this crowd								<input type="checkbox"/>
34	I feel a sense of togetherness with other people on the Hajj								<input type="checkbox"/>
35	I feel unity with others								<input type="checkbox"/>
36	I feel strong ties with other people on the Hajj								<input type="checkbox"/>
Now we would like to ask you about supportive behaviour on the Hajj. .VII									
37	In my view, most pilgrims are supportive of others								<input type="checkbox"/>
38	In my view, most pilgrims are respectful of others								<input type="checkbox"/>
39	If I need help, other pilgrims would help me								<input type="checkbox"/>

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40	I am willing to help others on the Hajj who need support								<input type="checkbox"/>
41	I have been helpful to others								<input type="checkbox"/>
42	I have shown concern for others' needs								<input type="checkbox"/>
Now we would like to ask you about whether there is any conflict in the crowd..VIII									
#	Questions	1 Strongly Disagree	2 Disagree	3 Disagree a little	4 Don't know	5 Agree a little	6 Agree	7 Strongly Agree	
43	On the whole, the Hajj crowd is peaceful								<input type="checkbox"/>
44	On the whole, the Hajj crowd is not aggressive								<input type="checkbox"/>
45	When there is conflict at the Hajj, it is due only to certain groups in the crowd								<input type="checkbox"/>
46	only certain groups are aggressive at the Hajj								<input type="checkbox"/>
47	Selfish behaviour is rare in the Hajj crowd								<input type="checkbox"/>
48	some individuals shows selfish behaviour								<input type="checkbox"/>
Now we would like to ask you about whether you feel safe on the Hajj. .IX									
49	I feel safe on the Hajj								<input type="checkbox"/>
50	I feel safe in the crowd								<input type="checkbox"/>
51	I feel safe at Tawaf								<input type="checkbox"/>

 University of Sussex		Psychology of Hajj 1433 AH				Umm Al-Qura University Custodian of the Two Holy Mosques Institute of Hajj Research			
52	Tawaf can be dangerous								<input type="checkbox"/>
53	Tawaf can be overcrowded								<input type="checkbox"/>
54	Have you seen an emergency on the Hajj before?	yes ① No ②							<input type="checkbox"/>
55	If you have seen an emergency on the Hajj which year was it? <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	If , not then go to Question 60							
For those who experienced an emergency on the Hajj before only .X									
56	In the emergency, we were able to help each other								<input type="checkbox"/>
57	In the emergency, it was physically impossible to help people								<input type="checkbox"/>
58	in the emergency, I tried to help others								<input type="checkbox"/>
59	in the emergency, the authorities responded effectively								<input type="checkbox"/>
XI. Now we would like to ask you about your relationship with the Saudi staff at the Hajj.									
#	Questions	1 Strongly Disagree	2 Disagr ee	3 Disagre e a little	4 Don't know	5 Agree a little	6 Agree	7 Strongly Agree	
60	On the whole, the Saudi staff treat us fairly								<input type="checkbox"/>
61	The Saudi staff are hostile to us								<input type="checkbox"/>
62	I like the Saudi staff								<input type="checkbox"/>
63	The Saudi staff have provided for all our needs								<input type="checkbox"/>

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64	The Saudi staff have organized the events well								<input type="checkbox"/>
65	There are enough Saudi staff to manage the crowd safely at the entrance to Haram								<input type="checkbox"/>
66	There are enough Saudi staff to manage the crowd safely at the exits of Haram								<input type="checkbox"/>
67	There are enough Saudi staff to manage the crowd safely at the plazas of the Haram								<input type="checkbox"/>
68	There are enough Saudi staff to manage the crowd safely at the Tawaf								<input type="checkbox"/>
69	There are enough Saudi staff to manage the crowd safely at Sa'ee								<input type="checkbox"/>
70	There are enough Saudi staff to manage the crowd safely In the Hajj in general								<input type="checkbox"/>
71	I trust the Saudi staff to respond effectively if there is an emergency								<input type="checkbox"/>
72	The Saudi staff are competent								<input type="checkbox"/>
73	The Saudi authorities provide appropriate information for us								<input type="checkbox"/>
74	The Saudi authorities are not communicating adequately with us.								<input type="checkbox"/>
XII. Now we would like to ask you about any changes in yourself that you may have experienced through your participation in the Hajj.									
#	Questions	1 Strongly Disagree	2 Disagr ee	3 Disagre e a little	4 Don't know	5 Agree a little	6 Agree	7 Strongly Agree	

 University of Sussex		Psychology of Hajj 1433 AH				Umm Al-Qura University Custodian of the Two Holy Mosques Institute of Hajj Research			
75	Compared to before you came to Hajj: Is your Muslim identity now more important to you?								<input type="checkbox"/>
76	compared to before you came to Hajj: Do you now feel more unity with other Muslims?								<input type="checkbox"/>
77	Compared to before you came to Hajj: Do you now feel more harmony with other Muslims?								<input type="checkbox"/>
78	Compared to before you came to Hajj: Do you now feel more empathy to others?								<input type="checkbox"/>
79	Compared to before you came to Hajj: Do you now feel more harmony with people with different religions?								<input type="checkbox"/>
80	Compared to before you came to Hajj: Are you now more positive towards people from different cultures?								<input type="checkbox"/>
Finally, we need to get some demographic information about you.XIII									
81	What is your ethnic background and country of origin?								<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
82	What age group do you belong to?	①less than 20 years old ②from 20 to 29 years ③from 30 to 39 ④from 40 to 49 ⑤of 50 years and over							<input type="checkbox"/>
83	Please state your gender			①Male ②Female				<input type="checkbox"/>	
84	What is your current marital status?			①Single ②Married ③Divorced ④widower / widow				<input type="checkbox"/>	

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85	educational qualification	① literate ② Reads and writes ③ primary level ④ Secondary level ⑤ degree level ⑥ Master level ⑦ Doctorate level	<input type="checkbox"/>	
86	What is your practiced	① employed ② Retired ③ Unemployed	<input type="checkbox"/>	