On the role of death in life: An integrated socio-psychological perspective on Islamophobic prejudice in the UK

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Declaration of authorship

I declare that this work was carried out in accordance with the Regulations of the University of London. I declare that this submission is my own work, and to the best of my knowledge does not represent the works of others, published or unpublished, except where duly acknowledged in the text. No part of this thesis has been submitted for a higher degree at another university or institution.

Signed: **Date:**

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Abstract

The thesis explores the psychological antecedents of Islamophobic prejudice in the UK, through the lens of the Identity-Representations Model (IRM). The IRM attempts to combine the insights of Social Identity Theory, Intergroup Threat Theory, Identity Process Theory, Essentialism, and above all else, Terror Management Theory, in attempt to provide a stronger understanding of Islamophobic prejudice.

Seven studies were conducted in the thesis. The first two studies found that realistic and symbolic threats are related to a range of identity motives threats (esteem, efficacy, distinctiveness, belonging, continuity, and meaning). In addition, national identification, and ingroup/outgroup essentialism were identified as antecedents of threat perception.

Studies 3 and 4 explored whether these identity motives function to manage existential anxiety. Two experiments supported this assertion as reminders of death increased the need to write about oneself in a way that affirms these motives, whilst threats to these motives increase death-thought accessibility (DTA).

Study 5 then demonstrated that national essentialism and identification were related to levels of DTA after exposure to worldview threat. In addition, the findings suggested that DTA moderated the relationship of national essentialism and identification to levels of ingroup bias after worldview threat.

The final two studies considered how to reduce prejudice towards Muslims, and improve intergroup relations. The findings demonstrated that promoting tolerance as an ingroup norm could reduce opposition to Muslim rights, but this depended on the type of death reminder used. When reminded of terrorism, promoting tolerance instead increased opposition to Muslim rights.

The present thesis marks a novel contribution into how various socio-psychological perspectives could be deployed to explain Islamophobic prejudice in the UK. The discussion considers some future avenues for research, including the possibility of individual differences in motive importance, as well as some potential issues with an approach such as the IRM.

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Introduction

The question of why humans struggle to peacefully co-exist with those that are different from them is one that has captured the attention of scholars for centuries. History is abundant with examples of human oppression, discrimination and hostility towards so-called inferiors, as well as genocidal atrocities (Pyszczynski, Solomon, & Greenberg, 2003). Yet despite considerable effort and common interest amongst scholars to understand this question, prejudice is still an ongoing societal problem. Even today, millions of individuals worldwide face subjugation, discrimination and hostility based on their *inter alia* ethnic, religious, racial, sexual or class background. Whilst efforts have been made to reduce prejudice, perhaps most notably through increasing intergroup contact (see Pettigrew, 1998), discrimination unfortunately still exists with progress being slow, and in some cases on the rise (European Union Agency for Fundamental Rights, 2017; U.S. Department of Justice, 2015).

Perhaps one of the most prevalent prejudices in modern times, particularly in the West, is that of prejudice towards Muslims or so-called *Islamophobia*. Islam is the world's second largest religion with approximately 1.6 billion Muslims (Pew, 2010). Recent estimates have suggested that there are almost 47 million Muslims living in the West, and in Britain, Muslims constitute a visible minority with approximately 2.78 million of the UK population identifying as Muslim (Office of National Statistics, 2011; Pew, 2010). It is also the fastest growing minority group in Britain, with expectations that by 2050 the Muslim population in the UK will more than double to 11.3% (Pew, 2010).

The term Islamophobia remains highly controversial in academic circles, in part due to a lack of agreement over its precise meaning. For example, some scholars have defined it almost exclusively as a fear of Islam and Muslims (e.g., Abbas, 2004;

Lee, Gibbons, Thompson, & Timani, 2009); whilst others have suggested that it refers to hostility towards Islam, but not necessarily Muslims (Zúquete, 2008). Whilst a lack of a consistent definition causes problems for the studying of Islamophobic prejudice in the social sciences, the current thesis defines Islamophobia as an umbrella term for "indiscriminate negative attitudes and emotions towards Islam or Muslims" (Bleich, 2011, p.1585).

Islamophobia in the West

Current attitudinal trends of Islamophobia across the West paint a bleak picture for Islamic-West relations. Muslims are typically stereotyped as being unfriendly, fanatical, violent and threatening (Abrams & Houston, 2006; Field, 2007; Pew, 2011), and viewed as unwilling to integrate with Western society (Pew 2016). These negative perceptions of Muslims are reflected in recent attitudinal surveys across Western countries. For example, in a recent US survey, the average American held negative attitudes towards Muslims, and only 25% of respondents held warm feelings towards Muslims (Pew, 2017). Similar patterns are evidenced across Europe, with Muslims generally being viewed negatively, and Britain being no exception (Pew, 2016, Strabac, Aalberg, & Valenta, 2014). According to recent estimates, over 1 in 4 British individuals have a negative view of Muslims, and attitudes towards Muslims have been on the decline since the 2015 Parisian Bataclan attack that took the lives of 130 civilians (Pew, 2016).

Indeed, concern over the rise in Islamic-related terrorism has been an undeniable factor in the increased anti-Islamic sentiment across the West. For example, research conducted after 9/11 indicates that there was an increase in anti-Muslim attitudes in both Europe and the US (Sheridan, 2006; Sheridan & Gillet,

2005), with Muslims also reporting experiencing increased discrimination (Islamic Human Rights Commission, 2004). Similar spikes in Islamophobic sentiment have also been identified with other terrorist atrocities, such as after the Charlie Hebdo attacks (Lieptye & McAloney-Kocaman, 2015). Given the relationship between terrorism and attitudes towards Muslims, it is perhaps concerning that over one third of UK mainstream press articles concerning Muslims contain themes of terrorism (Moore, Mason & Lewis, 2008). Moreover, numerous sociological analyses of UK media reporting have emphasised that Muslims are noticeable in the media for themes of terrorism, threat and deviance (e.g., Richardson, 2004; Moore et al., 2008; Saeed, 2007; Poole, 2002, 2011; see also Ahmed & Matthes, 2017 for a recent meta-analysis of Western media representations of Muslims). This emphasis of Islamic-related terrorism in media reporting may increase the perception of Muslims as violent, threatening and in conflict with dominant British values.

Indeed, British public opinion appears to echo these media sentiments regarding Muslims. In the UK, opinion is generally divided about whether growing diversity is a good for British society, particularly because of ongoing concerns over terrorism and extremism (Pew, 2011; 2016). Whilst fortunately, the majority of British citizens do not think most Muslims support extremist groups such as ISIS, at the same time, only a minority of the British public believe "very few" British-Muslims support ISIS (Pew, 2016). This fear of Islamic-related terrorism has led to concerns over immigration, especially amongst those who hold unfavourable opinions of Muslims, as there is a belief that increases in refugees will increase the possibility of future terrorist events (Pew 2016).

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Of course, whilst it is largely undeniable that recent terrorist events have affected attitudes towards Muslims across the West, Islamophobia is a new term for an old notion, with the West and Islamic cultural divides stemming back decades (Ansari, 2004; Said, 1978). In Britain, much of this anti-Islamic sentiment may have originated from the large-scale immigration at the end of the Second World War; but at the time this was generally subsumed within a broader anti-Asian attitude, with the 'Muslim identity' of secondary importance (Field, 2007; Poynting & Mason, 2007).

In contrast, scholars have argued that the collapse of the Soviet Union in the 1980s coincided with the emergence of Muslims as the new global figure of threat or 'evil other' (Poynting & Mason, 2007). This was compounded by the *Satanic Verses* affair in 1989 that caused international controversy, as well as high-profile media attention on Islam and Muslims (Runnymede Trust, 1997; Field, 2007). Furthermore, the 1991 Gulf War placed Britain in an allied coalition in direct conflict with a Muslim country (Lewis, 1994). These events are believed to have divided Islam and the West in terms of their perceived compatibility, a so-called "clash of civilisations" (Abbas, 2007; Huntington, 1993).

Indeed, the perceived erosion of national identity appears to be a central issue in the role of Islamophobia. In the UK, an overwhelming majority of the British public believe language, customs, and traditions to be an important feature of national identity (Pew, 2016). Moreover, over 1 in 2 British individuals believe birthplace is important to one's national identity, and over 1 in 3 believe the Christian roots of national identity are important (Pew, 2016). These conceptions of national identity, juxtaposed with perceptions of Muslims as having very different customs and traditions, place Muslims in a position where they are in direct conflict to one's

national identity (e.g., Alba, 2005; Cinnirella, 2012; Smeekes, Verkuyten, & Poppe, 2011).

The rise of Islamic terrorism and extremism has further compounded this debate over the compatibility of Muslim and British identities, and sparked attention over the concern of Muslims willingness to integrate into British society (Abbas, 2007). This in turn has increased anti-Muslim hostility and prejudice to unprecedented levels. For example, Bleich (2009) compared UK and European opinion polls of attitudes towards Muslims over a 20-year period and found that such attitudes have become more negative since 1988, with surges in anti-Muslim hostility after high-profile events. Given the UK has suffered a recent spate of terrorist events in the last 12 months; there are legitimate concerns that anti-Muslim hostility might again be on the rise. This might be evidenced by the recent attack on Muslims in Finsbury Park, London that the Muslim Council of Britain described as the "most violent manifestation" of Islamophobia to date (Muslim Council of Britain, 2017).

Moreover, the last few years has seen a wave of so-called right-wing movements across the US and Europe. These have included the UK's vote to leave the EU, as well as the US' decision to elect Donald Trump as President. Both these movements strongly campaigned off anti-immigration rhetoric, which in part has been driven by increased anti-Muslim sentiment and fears of Islamic-related terrorism. Whilst it would be simplistic to say that this was the only factor driving these campaigns, it is undeniable that immigration and terrorism were central issues throughout these elections, and that these campaigns may have been somewhat successful because of this. Indeed, in one of his first acts as President, Donald Trump implemented his highly controversial "Muslim travel ban", and following the UK's

decision to leave the EU, there was a dramatic increase in religiously or racially aggravated hate crime (European Union Agency for Fundamental Rights, 2017). It is our belief that these occurrences represent the clear need to find strategies to combat the escalating prejudice towards Muslims and the continuing decline of West-Islam relations.

The Psychology of Prejudice

Psychologists have devoted considerable attention to the phenomenon of prejudice. Theoretical perspectives on prejudice have shifted considerably throughout the decades, not only through an increasing body of research on the subject, but also in relation to the current social contexts at the time. For example, Duckitt (1992) in his review of the historical developments of understanding prejudice noted that in response to the mass genocide of Jewish folk at the hands of the Nazis, the notion of a universal or *natural* cause of prejudice was deemed undesirable. This sparked a search for personality and individual difference explanations to prejudice (see for example, Authoritarian personality; Adorno, Frenkel-Brunswick, Levinson, & Sanford, 1950).

Social Psychologists have criticised the approach to explain prejudice from individual differences in personality. Whilst many criticisms of this approach exist, perhaps the most notable is one that suggests that a personality account is problematic in explaining the shared formation of prejudicial attitudes amongst groups, and the historical fluctuations in prejudicial attitudes (Brown, 2011). Importantly, this approach also overlooks the plethora of socio-psychological research that notes our attitudes are often influenced by others, the groups that we belong to, and the relationships that exist between one's own group and other groups (Brown, 2000).

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Indeed, over the last few decades, Social Psychology has become littered with several theoretical perspectives about group psychology and intergroup relations that attempt in some way to understand the nature of prejudice, its antecedents, and the way it can be reduced. Whilst we will be unable to explore all of them here in the present thesis, these theories are often micro in nature and attempt to lay claim to specific psychological phenomena. Whilst undoubtedly insightful, in our view, these theories are insufficient in capturing the full complexity of prejudice and its antecedents, as well as the larger social frame that prejudice exists within (for similar ideas *see* Breakwell, 1986; Pyszczynski, Solomon, & Greenberg, 2015). Moreover, the interface and reconciliation of these theories remains under-researched and somewhat controversial (Cinnirella, 2014). However, it is the contention of this thesis that an approach that combines the efforts of multiple socio-psychological perspectives can offer a stronger understanding to the antecedents of prejudice, than any one single approach could offer.

Therefore, it is the aim of this thesis to explore how multiple socio-psychological perspectives concerning prejudice and intergroup relations can be combined in such a way to elucidate more clearly on the antecedents of Islamophobic prejudice. It is our hope that such an approach can provide not only a stronger understanding of the rise of anti-Islamic sentiment across the West, but also ways in which this can be countered. The thesis will explore the Identity-Representations Model (IRM; Cinnirella, 2014); an eclectic framework that attempts to address the interface between multiple socio-psychological theories to understand Islamophobic prejudice in the UK.

Thesis overview

The present thesis therefore attempts to explore how several prominent socio-psychological theories can be deployed within a singular framework to understand Islamophobic prejudice. The aim of using such a framework is the belief that this will yield an approach that is greater than the sum of its parts. It should be noted that despite the current focus on Islamophobia in the UK, the approach outlined should generalise across a variety of intergroup and cross-cultural contexts, thus being able to explain a range of prejudices beyond the current scope of the thesis.

Chapter II outlines the theoretical frameworks that are deployed in the thesis to examine Islamophobic prejudice. Specifically, Social Identity Theory (Tajfel & Turner, 1986); Intergroup Threat Theory (Stephan & Stephan, 2000); Identity Process Theory (Breakwell, 1986; Vignoles, Regalia, Manzi, Golledge, & Scabini, 2006) and Terror Management Theory (Greenberg, Pyszczynski, & Solomon, 1986) will be covered, outlining their basic tenets, research and relevance to prejudicial attitudes. In addition, the chapter introduces the IRM (Cinnirella, 2014), that aims to combine these approaches to explain fluctuations in anti-Islamic sentiment. The chapter will outline some of the key arguments of the IRM, as well as consider some conceptual refinements and additions (e.g., Essentialism; Haslam, Rothschild, & Ernst, 2000) that could be incorporated into the framework.

Chapter III marks the beginning of the quantitative research that has been conducted in the PhD. This chapter specifically focuses on the key tenet of the IRM, the relationship between intergroup threats and identity motives. The chapter outlines two cross-sectional studies exploring this; as well as the role of essentialist beliefs and social identification as potential antecedents to the perceptions threat.

The next chapter then considers the role of Terror Management processes in identity, threat, and coping. Specifically, the chapter considers the extent to which several fundamental human motives, that are important in identity construction and maintenance, may serve the need of managing concerns over the inevitability of death. Two experimental studies are reported and their findings are discussed in relation to both identity motivation, and to the current focus of the thesis: Islamophobic prejudice.

Chapter V then continues to explore the role of Terror Management Theory in Islamophobic prejudice. Given that the media constitute a major source of information for the public, and reporting of Muslims is highly noticeable for themes of symbolic threat, this chapter presents an experimental exploration of how exposure to symbolically threatening news articles about Muslims may increase *Death-Thought Accessibility*. It also attempts to explore how social identity and essentialist beliefs may moderate levels of death-thought accessibility when exposed to symbolic threats to worldview.

Finally, Chapter VI and Chapter VII presents the last studies conducted in the thesis. These particularly attempt to utilise the previous findings, and the multi-theoretical approach, to evaluate and consider ways in which Islamophobic prejudice in the UK can be reduced. Two empirical studies are reported. The first chapter considers the extent to which countering stereotypes of Muslims may reduce Islamophobic prejudice. The second chapter considers the extent to which the ingroup can be framed in a way that promotes prosocial norms that can reduce prejudice and opposition towards Muslims.

Chapter VIII offers a general discussion and concluding remarks based on an evaluation of the research conducted within this thesis. The chapter particularly

considers the theoretical implications of the research, potential advantages to the approach utilised, but also some of the disadvantages concerning the theoretical eclecticism deployed, as well as limitations of the research designs used. Some directions for future research are outlined.

Chapter II:

Theoretical perspectives on identity, threat and prejudice

The present chapter provides an overview of the socio-psychological lenses that are deployed in the Identity-Representations Model (IRM; Cinnirella, 2014). The chapter will first give brief overviews of Social Identity Theory (Tajfel & Turner, 1986), Intergroup Threat Theory (Stephan & Stephan, 2000), Terror Management Theory (Greenberg et al., 1986) and Identity Process Theory (Breakwell, 1986; Vignoles et al., 2006), outlining the main tenets of each theory, and how these may apply to prejudice, specifically Islamophobia in the UK. Research from each tradition will also be explored.

Next, the chapter focuses on how the IRM proposes that these approaches can be combined into a single model. In addition, the thesis considers some of the issues surrounding the IRM approach, and attempts to elaborate and clarify them by offering a re-conceptualised model that provides a stronger integration of the theories than is currently offered. Moreover, the thesis also explores how aspects of Essentialism (e.g., Haslam et al., 2000) can be introduced into the current theorising to elucidate more antecedents of the perception of threat than are currently offered by the IRM.

Before outlining each of the theories, and the IRM itself, it should be noted that the current approach to understanding prejudice carries the assumption that media reporting and representations of Muslims are important in understanding prejudice. A lot of literature has been devoted to the subject of media effects, the processes by which media news content affects individual attitudes, as well as whether media representations 'form' attitudes, or simply 'harden' pre-existing attitudes due to selective exposure effects (e.g., McCombs & Shaw, 1972; Scheufele & Tewksbury, 2007; Zillmann & Bryant, 1985). Although it goes beyond the scope of this thesis to explore the extent to which the media affects individual perception and attitudes, it

nonetheless bears the assumption that media reporting has been important in the increased Islamophobic sentiment witnessed across the West (e.g., Sheridan, 2006; Sheridan & Gillet, 2005). This is because the frequency with which Muslims are reported in the media, especially concerning terrorism (e.g., Moore et al., 2008), may constitute an agenda-setting effect making the issue salient in the minds of the British public (e.g., Cinnirella, 2012; McCombs & Shaw, 1972). Moreover, the way in which the media has covered Muslims is important in understanding the way in which threat perception is concretised in the mind of the British public (Cinnirella, 2014; Jaspal & Cinnirella, 2010). As such, throughout this literature review reference will be made to sociological analyses of media reporting in the UK.

In addition, it should be noted that it would be impossible to outline all the components of these theories, their strengths and weaknesses, and their amassed empirical support in this review. Suffice to say that all these approaches to understanding intergroup phenomena have amassed considerable empirical support, and their strengths and limitations have been reviewed quite eloquently elsewhere (see *inter alia* Brown, 2000; Burke, Martens, & Faucher, 2010; Hayes, Schimel, Arndt, & Faucher, 2010; Hornsey, 2008; Riek, Mania & Gaertner, 2006; Pysszczynski et al., 2015). Instead, the purpose of this chapter is to give an overview to each approach, some of their research pertinent to the subject of intergroup relations and Islamophobic prejudice, before explaining how the IRM combines these approaches into a framework that can explore the antecedents of Islamophobia from multiple levels of analysis.

Social Identity Theory

Social Identity Theory (SIT; Tajfel & Turner, 1986) is primarily a theory that was intended to elucidate the problems associated with intergroup relations. The core notion of SIT is that it distinguishes between personal and social identities, the latter which is defined as the "part of an individual's self-concept which derives from his/her knowledge of his/her membership in a social group (or groups) together with the value or emotional significance attached to that membership" (Tajfel, 1978, p.63). Accordingly, because of their relevance to the self-concept, SIT posits that individuals are motivated to view their social identities positively to enhance self-esteem, and that one way this can be achieved is by making favourable intergroup comparisons.

Early research in SIT utilised a *minimal group paradigm* whereby individuals were allocated to groups based on arbitrary or minimal criteria. These studies demonstrated that when individuals were asked to make choices that affect both the ingroup and outgroup (e.g., a resources allocation task), that members would favour their own group at the expense of the outgroup, even if there were choices that represented better options for absolute ingroup gain (e.g., Tajfel, Billig, Bundy, & Flament, 1971). In other words, choices were not made based on maximising profit, but on maximising differentiation (Tajfel, 1970). Moreover, findings show that even trivial categorisations can result in ingroup biases (for a review *see* Brewer, 1979).

These minimal group studies illustrate the seemingly endemic nature of categorisation and the importance of positively *differentiating* one's own group from another, presumably to enhance self-esteem. Indeed, research suggests that when given the opportunity to positively discriminate in an intergroup setting, self-esteem is increased; whilst being denied this opportunity decreases self-esteem (Lemyre &

Smith, 1985; Oakes & Turner, 1980). As such, it would seem apparent that intergroup differentiation (at least in part) is a product of attempting to achieve a positive view of oneself and group. Although there remains some debate over the precise relationship between self-esteem and ingroup bias, or whether there are other motives beyond self-esteem that motivate bias, the general association between self-esteem and intergroup discrimination seems borne out (*see* Brown, 2000 for a review of this point).

As such, an SIT approach to prejudice places heavy focus on an *'us'* and *'them'* mentality, with ingroup-outgroup differentiation being achieved in a way that views the ingroup in a positive manner. In relation to Islamophobia, 'the Muslim world' is often differentiated from 'the Western world' (Said, 1978; Ansari, 2004), possibly echoing this need for intergroup differentiation. Moreover, sociological analyses of UK media reporting seem to suggest that Muslims are portrayed in ways that contrast with British identity (e.g., Poole, 2002; Richardson, 2004). Possibly because of the 'hyper-visibility' of Muslims in the media that presents them as the 'other', they become a strong source of differentiation for the ingroup identity in terms of outlining "who we are" but also "who we are not", placing them in a position of direct conflict with the ingroup (Jaspal & Cinnirella, 2010).

One of the most important contributions of SIT is its assumption that the relevance of a group to the self-concept will moderate the level of intergroup discrimination. Thus, strong identifiers are presumed to be more motivated to make favourable intergroup comparisons because of the need to maintain and/or enhance self-esteem. At the same time, this also makes strong identifiers more susceptible to perceived threats to identity because of its subjective importance to the self-concept (e.g., Branscombe, Ellemers, Spears & Doosje, 1999). Numerous studies have

supported the role of strength of social identification in perceiving threat (*see* Riek et al., 2006 for a meta-analysis), and in relation to Islamophobia, strength of national identification has been found to be related to both threat perception and prejudice towards Muslims (e.g., Ciftci, 2012; Cinnirella, 2014; Velasco-González, Verkuyten, Weesie, & Poppe, 2008).

Not only does strength of social identification appear to make individuals more susceptible to perceiving threats to identity, it may also moderate responses or strategies that group members may utilise in response to a perceived threat to social identity. SIT proposes that at times of threatened identity, members may choose to dissociate themselves from the group or re-affirm their membership and engage in increased intergroup discrimination. Both responses are presumed to be protective strategies to maintain and/or enhance levels of self-esteem (e.g., Tajfel & Turner, 1986). However, the choice of strategy appears to differ based on strength of identification, presumably because distancing strategies become more psychologically and/or physically difficult as one increasingly identifies with the group (as it holds important significance to one's self-esteem and/or self-concept). Indeed, research appears to support the idea that when threat is perceived, those who weakly identify tend to dissociate themselves from the group, whereas in contrast high identifiers are more likely to re-affirm their membership under threat perception and choose to engage with increased intergroup discrimination (e.g., Branscombe & Wann, 1994; Wann & Branscombe, 1990). Moreover, high identifiers are also more likely to react with increased anger than low identifiers when experiencing threat (Yzerbyt, Dumont, Wigboldus, & Gordijn, 2003).

Similarly, strength of identification also moderates the extent to which individuals feel the need to live up to the norms and values promoted within one's group (Doosje, Ellemers, & Spears, 1999). Research demonstrates that strength of national identification for both American and Indonesian participants affected levels of individualism and collectivism because of the different salient group norms (Jetten, Postmes, & Mcauliffe, 2002). In some cases, this commitment and conformity to group norms amongst high identifiers can shape responses towards outgroups (Ellemers, Spears, & Doosje, 2002), and the response can depend on what group norm is salient (e.g., Smeekes, Verkuyten, & Poppe, 2012; Smeekes & Verkuyten, 2014a). For example, Smeekes et al. (2012) found that when participants were reminded of the Christian or tolerant roots of Dutch national identity, this subsequently affected responses towards Muslim rights, but only amongst those high in national identification.

Whilst reactions towards others and coping strategies in response to perceived identity threat may be affected by strength of identification, these responses may also be affected by the group's characteristics. Groups can vary on several dimensions including size, function, distribution and longevity (*see* Deaux, Reid, Mizrahi, & Ethier, 1995; Deaux, Reid, Mizrahi, & Cotting, 1999), that can impact the ways in which group members cope with perceived threat and the need to comply with group norms. What might be of relevance to the current focus of the thesis, is the fact that some identities, such as the nation, are ascribed (e.g., given) rather than idiosyncratic (e.g., chosen) in nature, instilled from an early age, and are particularly enduring with deep historical roots (Cinnirella, 2012; Connor, 1994; Luhtanen & Crocker, 1992;

Smith, 1991)[1]. As such, the nature of national identity may make the possibility of distancing oneself from the group psychologically or physically difficult, reinforcing the need for intergroup discrimination when facing perceived threats to identity. Similarly, as a relatively enduring group identity, living up to the norms promoted within them might be especially important in satisfying existential concerns (e.g., Castano & Dechesne, 2005). Finally, the ascribed, enduring nature of the nation may also increase beliefs that the group is natural, impermeable, historically stable, and invariant to socio-cultural shaping (we return to this point later).

In short then, from an SIT perspective, it is presumed that high British identifiers exposed to negative media portrayals of Muslims are more likely to perceive Muslims as threatening to identity, and are additionally more likely to engage in intergroup discrimination (including prejudice) because of experiencing threats to identity. This contribution of SIT makes it a valuable framework for understanding intergroup relations, particularly in relation to the need to make favourable intergroup comparisons, and the notion that strength of identification is a moderator of threat perception and/or response. However, whilst the research appears to support the relationship between identity and prejudice, it also demonstrates that the relationship tends to be modest (e.g., Brown, 2000; Riek et al, 2006). This might be due to the need to consider more than simply strength of identification, and examine the contents, characteristics, and beliefs about the group. Indeed, some researchers have suggested it is a failure of Social Psychology to ignore "the ideological character of identity

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[1] The notion of idiosyncratic and ascribed identities could also apply to the Muslim identity as well given that one's religious background can often be prescribed to the individual rather than chosen. However, as discussed later in the chapter, it is the beliefs about these groups that are particularly important in understanding threat perception and threat response. Nonetheless, the nature of these groups as somewhat ascribed may make them more prone to essentialist thinking.

definitions" that may underpin this relationship between in-group identification and out-group discrimination (Reicher & Hopkins, 2001, p. 99).

Moreover, whilst SIT has been valuable in outlining the importance of social identity and the experience of threatened identity, it arguably lacks nuance in comparison to other approaches, in elucidating both on the motivational antecedents to identification, as well as outlining identity threat (Cinnirella, 2014). For example, many researchers have argued that identity formation and maintenance goes beyond just concerns over self-esteem as is traditionally implied by SIT (e.g., Breakwell, 1986; Vignoles, Chryssochoou, & Breakwell, 2002; Vignoles et al., 2006). Whilst the Social Identity tradition has considered other motives beyond self-enhancement such as *optimal distinctiveness* and *uncertainty reduction* (e.g., Brewer, 1991; Hogg, 2000); there is noticeable fragmentation within these approaches to understanding identity processes and how they might be integrated. Therefore, there is a need to consider other approaches offering additional unique insights, and in doing so look to construct a stronger overview of the antecedents of prejudice.

Intergroup Threat Theory

For decades, researchers have consistently referred to the concept of threat as fundamental in producing negative intergroup relations (e.g., Allport, 1954; Sherif, 1966). However, the research being conducted on threat, and the various conceptualisations of 'threat' deployed by theoreticians remained separate and in conflict (Stephan & Stephan, 2000). Dissatisfied with these distinct approaches, Intergroup Threat Theory (ITT; Stephan & Stephan, 2000) attempted to combine these efforts to produce a broader understanding of the role of threat perception in producing prejudice.

Whilst the basic model of ITT includes four types of threat: realistic threats, symbolic threats, intergroup anxiety and stereotyping; we focus only on the former two in the current thesis. This is guided in part by research that has suggested that Islamophobia may be best characterised by perceived realistic and symbolic threats (e.g., Croucher, 2013; Hitlan, Carrillo, Aikman, Zárate, 2007; van der Noll, Poppe, & Verkuyten, 2010; Velasco-González et al., 2008) or a so-called hybrid threat of the two (Jaspal & Cinnirella, 2010). Moreover, there are also concerns whether the latter two represent actual types of threat, and not antecedents or consequences of experiencing threat. For example, Stephan et al. (2002) compared models exploring outgroup attitudes and found that the model that deployed stereotyping as an antecedent of perceiving symbolic and realistic threats was superior (see also Riek et al., 2006).

Realistic threat has its roots in Realistic Group Conflict Theory (RGCT; Sherif, 1966). This proposed that when two groups are in competition for a scarce resource, such as land, power or wealth, it causes the potential for prejudice to arise between the groups as the intergroup relationship becomes a 'zero-sum game' in which victory of one group inevitably means the defeat of the other (a state labelled in RGCT as 'negative interdependence'). Whilst this theory limits the concept of realistic threats to intergroup competition, ITT broadens the nature of realistic threats to include any threat to the welfare of the group, such as its continued existence, or to its members (Stephan & Stephan, 2000).

The concept of realistic threat has typically been deployed in three ways. The first concerns an *economic* threat whereby there is a perceived threat over a scarce resource such as jobs, housing, or money, sticking closely to the roots of RGCT. For

example, anti-immigration hostility may be best characterised by concerns over the competition for jobs and benefits (e.g., McClaren & Johnson, 2007). The second concerns *political* threats, whereby there is some threat to power or control (e.g., Bobo, 1988). Finally, realistic threats also encompass *physical* threats where there is concern over the safety, health, or well-being of the group and its members. This would encompass warfare, but also particularly pertinent to the case of Islamophobia, the ongoing concerns surrounding terrorism.

In comparison to realistic threats that concern a threat to something tangible, whether economic, political or physical, symbolic threats concern the "perceived differences between groups in their morals, values, standards, beliefs and attitudes" (Stephan & Stephan, 2000, p.26). This threat has its roots in theories of symbolic racism (e.g., Sears, 1988), which suggests that prejudice is the result of conflicting values, rather than conflicting goals (which would be more in line with realistic threats). For example, in the case of Islamophobia, concerns over the compatibility between Muslim and British values is often played out across the front pages of the UK media, by focusing on such issues as the veil and conversion (e.g., Moore et al., 2008; Poole, 2002). By doing so, this positions Muslims and Islam as restrictive and regressive, and threatening to the tolerant values of liberal Britain (Poole, 2011).

Where ITT also differs from the previous theories it was predicated on, is its emphasis on the *perceived* experience of a realistic or symbolic threat, rather than the experience of threat having to be real (Stephan & Stephan, 2000). In addition, it makes distinctions between experiencing these threats at a *personal* or *collective* level. That is, for example, a person could feel their job is in jeopardy (personal realistic threat) or that the group is in competition with another group over a scarce resource

(collective realistic threat). Research has tended to corroborate the distinction between these two threat types, and the independence they have in predicting a range of conflicts and prejudices (e.g., Stephan, Ybarra, Martinez, Schwarzald, & Tur-Kaspa, 1998; Stephan, Ybarra, & Bachman, 1999), although some research indicates that attitudes might be most negative when experiencing both realistic and symbolic threats (Stephan, Renfro, Esses, Stephan, & Martin, 2005).

This coalesces with evidence from both the US and Europe that anti-Muslim attitudes are predicted by both perceived symbolic and realistic threats (e.g., Ciftci, 2012; Croucher, 2013; Doosje, Zimmerman, Küpper, Zick, & Meertens, 2009; Hitlan et al., 2007; van der Noll et al., 2010; Velasco-González et al., 2008). In addition, realistic threats have either been deployed as economic threats (e.g., Croucher, 2013; Hitlan et al., 2007; Velasco-González et al., 2008), presumably because Muslims tend to be immigrants in these countries, and anti-immigration attitudes are highly predicted by levels of perceived economic threat (McLaren & Johnson, 2007). They have also been deployed as a safety-based threat due to terrorism (e.g., Doosje et al., 2009; van der Noll et al., 2010). Consequently, it appears that Islamophobic prejudice may be driven by perceptions of symbolic threat, realistic physical threat, *and* realistic economic threat.

Some researchers have suggested that due to the realistic and symbolic nature of Islamophobic prejudice, Muslims may pose a perceived hybridised threat of the two (Jaspal & Cinnirella, 2010). They argue that because media representations of Muslims focus heavily on the differences in values between Islam and the West, but concurrently this is entwined with discourse and fear surrounding Islamic terrorism (for sociological analyses of UK media reporting, see Poole, 2002; Moore et al., 2008;

Richardson, 2004), that Muslims may pose a perceived hybridised threat to British identity. As such, Islamophobia may be a unique prejudice that blurs the distinction between the two threat types (*see also* Cinnirella, 2012)

Despite the usefulness of ITT in outlining types of threat and how these may relate to different prejudices, a potential failure of ITT is its inability to elucidate how perceiving threat may affect identity processes (Cinnirella, 2014). In contrast, Identity Process Theory (Breakwell, 1986) may offer more nuanced insight into the motivational underpinnings to the identity, threat and prejudice link.

Identity Process Theory

Identity Process Theory (IPT; Breakwell, 1986) is a holistic socio-psychological approach designed to understand identity formation, threat, and coping. Its development was largely generated out of dissatisfaction with approaches such as SIT that underappreciated the full-range of motivational forces underpinning identity (Breakwell, 1993), but also to unify the separate research traditions examining individual- and group-level identity (Vignoles, Chryssochoou, & Breakwell, 2000; Vignoles et al., 2006).

IPT states that one's sense of self is made up of many aspects or *identity elements*, whether personal, relational or group level in nature of self-representation (although see Vignoles, 2017 for some issues with these distinctions). It suggests that the extent to which individuals emphasise elements (e.g., Britishness) of themselves within their own identity structure depends on the degree to which a certain element satisfies *identity motives* that permit the identity to be adaptive and useful. Therefore, these motives guide the development of identity structures in a way that achieves a desirable end-state for one's sense of self. In the original conceptualisation of IPT,

Breakwell (1986) identified four guiding motives to identity. These were how much a specific identity provides the individual with a sense of self-worth (self-esteem); a sense of continuity across time and situation (continuity); a sense of competency and control (efficacy); and a sense of uniqueness (distinctiveness). Later revisions by Vignoles and colleagues (2002, 2006) added the motives of belonging, which describes the sense of closeness to others, and of meaning which refers to the sense of purpose an identity provides to one's life.

It should be noted that IPT does not necessarily state that this is an exhaustive list of identity motives and instead actively encourages the introduction of new motives within its framework (Breakwell, 1986; Vignoles et al., 2006). However, for the current thesis we limit our theorising to just these six motives. Moreover, some questions might be raised as to the 'universality' of these motives, a line of inquiry that has been acknowledged by IPT researchers (e.g., Vignoles et al., 2000), given that it was originally formulated to apply to Westernised cultures (Breakwell, 1986). However, given the focus of this thesis is to explore Islamophobia in the UK, consideration of cross-cultural variations in the existence, importance or expression of these motives goes beyond the current scope of the thesis. Finally, whilst it is likely these motives share some reciprocity in an interconnected network; in comparison to other theories that emphasise self-esteem as a superordinate motive (e.g., Abrams & Hogg, 1988), IPT argues that these motives should be considered as independent and distinct from self-esteem in their contribution to identity (Vignoles et al., 2002). In line with this, we believe that acknowledging the role of each motive in threat construction and response is important in understanding Islamophobic reactions.

In short then, a central claim to IPT is that the more an identity *satisfies* (and does not frustrate) these motives, the more *central* to identity it will be construed (Vignoles et al., 2006). Moreover, given that IPT stresses that certain identities gain privilege in one's identity structure over time due to their satisfaction of these motives, it carries a similar assumption to SIT that these identities require continual maintenance but also carry more sensitivity to perceived threats. In addition, like with ITT, IPT acknowledges that threat is a subjective experience (Breakwell, 1986). However, IPT provides the valuable contribution of outlining that threat perception is experiencing that one's identity is undermined as a source of these identity motives. For example, a Social Psychologist might feel threatened by a Neuroscientist because they perceive the other research tradition is threatening the continuation of their profession (continuity threat), but also perceive the methodological approach as more "scientific" which in turn might affect the sense of competency that one might associate with being a Social Psychologist (efficacy threat).

When perceived threats to these motives are experienced, IPT suggests that relevant coping strategies are activated to alleviate the threat, with the goal of re-establishing and/or modifying the identity as a source of these motives (Breakwell, 1986). These coping strategies can be deployed at an intrapsychic, interpersonal or intergroup level. This includes *inter alia* choosing to deny a situation as threatening (Breakwell, 1986), removing or distancing oneself from the group (e.g., Breakwell, 1986; Tajfel, 1978) or re-defining (*remooring*) identities to alleviate a specific context as threatening (Ethier & Deaux, 1994; see Vignoles, 2017 for further examples of responses to threat). For example, if one feels that they do not meet the criteria of group membership (e.g., do not have the psychological characteristics of a group member); this could represent a perceived threat to belonging. To alleviate this threat,

one might re-define the identity in a different way that emphasises one's belongingness to the group such as emphasising heritage.

Whilst not the only potential coping strategy, an IPT lens would propose that prejudice is one form of coping response to perceived threats (Jaspal & Cinnirella, 2010; Vignoles, 2017). Moreover, it is the assumption of this thesis that when specific types of perceived threat compromise several identity motives, this reduces the number of available coping mechanisms that can effectively deal with the threat, and in turn increases the possibility of prejudice as a response to threatened identity (Cinnirella, 2014). This might be particularly germane to the case of British Identity, because as an ascribed identity where removal from the group may be difficult, the number of available coping strategies at one's disposal may be limited.

IPT also emphasises the interface between the individual and the social, particularly relating to how the latter may affect upon the former in terms of shaping identity processes (Breakwell, 1986). Individuals may use *social representations,* which are shared constructions of reality that allow individuals to interpret the social reality meaningfully and shape personal identity structures (Breakwell, 1986, 1993; see Social Representations Theory, Moscovici, 1981). Social representations operate via two basic processes. The first process is *objectification* where new abstract information can be concretised into something tangible. For example, the idea of Islam can be rendered concrete by thinking about the veil (Jaspal & Cinnirella, 2010). The second process is *anchoring* where unfamiliar information is integrated into something that is already *known*. For example, current Islam-West conflict may be *anchored* into previous known historical conflict, or into common-sense dyads such as (im-) morality and (ab-) normality (Jaspal & Cinnirella, 2010; see *also* Liu & Hilton, 2005). Thus,

for example, Britain may be represented at one end as moral and tolerant, and Muslims may be viewed at the other end as immoral and intolerant. In addition, social representations are therefore also important to understanding how a threat is constructed, perceived, and coped with. Jaspal and Cinnirella (2010) have argued that understanding media social representations is therefore an important component in understanding how realistic and symbolic threats are perceived by the individual, and their subsequent shape in terms of identity motive threat and response.

Empirically assessing IPT's claims has been somewhat of a challenge for researchers' due to its multifaceted approach to identity, with multiple motives influencing identity structures. Perhaps the best approach was developed by Vignoles et al. (2002, 2006) who developed a method that attempts to elicit the contents of one's identity repertoire. This asks participants to freely recall aspects of themselves in order to elicit identity contents, and then requires participants to rate these aspects across each motive as well as their perceived importance to the self (centrality). Using this method, Vignoles et al. (2002, 2006) demonstrated that each motive made an independent contribution to identity, explaining a total 53.8% of the variance in identity ratings. In addition, this method has been used to demonstrate that changes in identification over time are related to changes in satisfaction of these motives (Easterbrook & Vignoles, 2012), and that these motives influence future desired and feared selves (Vignoles, Manzi, Regalia, Jemmolo, & Scabini, 2008).

IPT however has largely been ignored by the wider academic community, and especially outside Europe, possibly due to a perception that its complexity is difficult to test quantitatively, despite its theoretical foundations being informed by a rich history of empirical research (*see* Vignoles, 2014). This contrasts with the other

theories that are considered in the thesis that have a long history of empirically testable hypotheses and support. IPT may therefore benefit from being integrated with these approaches to lend itself to being more empirically testable. Similarly, some of the other approaches considered in the thesis may benefit from IPT's holistic and multifaceted approach to identity, threat and coping that more clearly elucidates a range of motivational forces relevant to identity construction and maintenance.

Terror Management Theory

From the outset, Terror Management Theory (TMT; Greenberg et al., 1986) was developed to answer basic questions concerning human behaviour. Dissatisfied with socio-cognitive approaches that attempted to elucidate psychological processes, and tended to be preoccupied in explaining laboratory phenomena rather than real-world behaviour, TMT sought to address the "*why*" questions behind human behaviour (Pyszczynski et al., 2015).

TMT is primarily derived from the integrative works of cultural anthropologist Ernest Becker (1971, 1973), and starts with two simple observations. Firstly, that human beings are like animals in that we are biological entities whose bodies are designed and orientated towards self-preservation. Secondly, that human beings differ from animals by having presumably unique cognitive abilities such as self-awareness and abstract thought. Whilst undoubtedly these capabilities have been advantageous to humans, they also present a conflict to a biological species with a desire for continued existence, because they permit the knowledge that death is uncontrollable and inevitable. Thus, TMT proposes that the human awareness of the inevitability of death, juxtaposed with the biological desire to survive, provide the active ingredients to the potential for a paralyzing anxiety known as *existential terror*.

TMT argues that human beings have used the same cognitive capabilities of symbolic and abstract thought that caused this problem to arise in the first place, to manage it. It proposes that humans invest in- and identify with- cultural worldviews that manage the awareness of death via a dual-component anxiety buffer. Firstly, cultural worldviews provide a stable, orderly, and meaningful sense of reality. Secondly, cultural worldviews provide associated standards of conduct that if lived up to, can afford individuals with a sense of self-esteem. In that sense, TMT, unlike other theories reviewed here, proposes that motives such as self-esteem are not in and of themselves psychological end-states, but serve (at least in part) the superordinate need of managing existential anxiety (Pyszczynski et al., 1997). Finally, by living up to the standards promoted in one's worldview, TMT proposes that a person might be able to transcend death either literally (e.g., religious beliefs promise an afterlife) or symbolically (e.g., children, achievements, affiliation to causes and groups).

Eligibility for immortality requires that individuals maintain faith in their worldview, but also live up to the standards of value that are promoted within them. However, because there are so many competing or contradictory worldviews; and very few assurances of the validity of our own as well as our own personal value, their ability to manage this anxiety is a fragile one. Thus, for individuals to go about their daily lives with relative equanimity despite the awareness of their inevitable mortality, worldviews and one's own worth require continual maintenance in the form of consensual validation (Solomon, Greenberg, & Pyszczynski, 1991). In contrast, exposure to others who impinge upon the correctness of one's beliefs reduces the effectiveness of one's worldview in buffering from this anxiety. In short then, people are generally motivated to prefer, endorse, and exaggerate the value of those who share or bolster one's worldview, and avoid, dismiss and denigrate those who subscribe to

alternative worldviews that impinge upon the validity of one's own worldview (Greenberg et al., 1986).

Over three decades, TMT has accumulated a strong and extensive record of empirical evidence supporting its core assumptions over the impact of death awareness on human behaviour. The evidence amassed in support for TMT does not just cover topics of prejudice, identity and intergroup relations that is the focus of the current thesis, but extends across a wide array of domains that we would not be able to do justice here (for extensive reviews *see* Burke et al., 2010; Hayes et al., 2010). This evidence supporting TMT has been distilled across three separate, logical hypotheses that are derived from TM theorising. Two of these, the *Mortality Salience* hypothesis and *Death-Thought Accessibility* hypothesis, we believe to be very important in elucidating on Islamophobic prejudice, and are deployed in the current thesis (for a review of the *Anxiety-Buffering Hypothesis* see Pyszczynski, Greenberg, Solomon, Arndt, & Schimel, 2004). We will briefly outline each one, and explore the evidence supporting its role and its importance to Islamophobic prejudice.

Mortality Salience Hypothesis

The Mortality Salience (MS) hypothesis is by far the most extensively used and tested hypothesis to assess TMT claims (Burke et al., 2010). It proposes that if self-esteem and worldviews serve to protect against the awareness of death, then reminders of death should increase the need to maintain these psychological structures. Typically, MS studies include asking participants to write about two open-ended questions concerning their own death (v control topic), and then after a brief delay to allow thoughts of death to fade from conscious awareness, complete dependent measures that aim to measure the bolstering of one's worldview. However, various

manipulations of death have been used including exposure to terrorism news (e.g., Das, Bushman, Bezemer, Kerkhof, & Vermeulen, 2009); subtle natural reminders of death (e.g., Osborn, Johnson, & Fisher, 2006; Pyszczynski et al., 1996); and subliminal death reminders (e.g., Arndt, Greenberg, Pyszczynski, & Solomon, 1997) that all demonstrate similar worldview-bolstering, distal effects.

TMT research has highlighted that the effects of MS appear to be unique to death-related thoughts, and are not the result of exposure to a negative or aversive topic (e.g., Greenberg, Simon, Harmon-Jones, Solomon, Pyszczynski, & Lyon, 1995; although *see* Proulx & Heine, 2008 as an example of non-MS induced worldview defence). Nor do they appear to be the result of increased negative affect or physiological arousal (e.g., Greenberg, Simon, Pyszczynski, Solomon & Chatel, 1992; Greenberg et al., 1995; although *see* Lambert, Eadeh, Scherer, Peak, Schott, & Slochower, 2014 for qualifications on MS and negative affect claims). Over the course of more than 250 experiments, the MS hypothesis has been robustly tested, producing reliable effects that appear to support TMT claims (for a meta-analysis on MS studies *see* Burke et al., 2010).

Worldview defence

Various research using the MS hypothesis has explored its effects on intergroup relations and behaviour. Notably, the most germane to the current focus of Islamophobia in the UK are the studies examining worldview defence. Given that it is argued that MS increases the need to maintain one's worldview, then it should follow that MS should cause a polarising effect on attitudes and behaviours towards others dependent on whether that individual is perceived to support or violate one's worldview. Perhaps the most notable MS worldview defence study was by Rosenblatt,

Greenberg, Solomon, Pyszczynski, and Lyon (1989) who explored the effects of MS in municipal court judges. They hypothesised that as upholding the law was a central part to a judge's worldview, after being reminded of death, judges should become more punitive to a law offender. Supporting this assertion, their findings showed that judges who had been reminded of their own death were more punitive towards a prostitute, setting bail bonds that were 9 times higher ($450) than the control group ($50).

The most common method of examining MS effects on worldview defence typically includes having participants evaluate the author of an essay that either threatens or bolsters one's worldview (e.g., Arndt et al., 1997a; Greenberg, Pyszczynski, Solomon, Simon & Breus, 1994; Harmon-Jones, Simon, Greenberg, Pyszczynski, Solomon, & McGregor, 1997; Heine, Harihara, & Niiya, 2002). These demonstrate that after MS, participants are likely to defend their worldview by derogating the author of the threatening essay. Moreover, McGregor and colleagues (1998a) have extended this finding by demonstrating that after being exposed to an essay that threatened participants' worldview, they were more likely to allocate higher amounts of hot sauce, a proxy for aggression, to the essay writer.

Thus, like with the other theories reviewed so far, TMT research therefore shares in common the supposition that MS effects on worldview defence are contingent on exposure to a threat or perceiving 'others' as threatening or different. When another group is perceived to conflict with one's own group, then MS should motivate aggressive or derogatory tendencies towards others in defence of one's own worldview (although this should not necessarily be considered the only response; *see* Solomon et al., 1991 for an overview to responses to threat). Research conducted by

Hirschberger, Pyszczynski, & Ein-Dor (2009) particularly highlights the importance of how the 'other' is perceived in reactions after MS. They found that after MS, when the other group was framed as hostile, this increased support for violent resolutions to conflict, however when the other group was framed as co-operative, MS decreased the support for violence (for similar ideas, *see* Lieberman, Arndt, Personius, & Cook, 2001).

Additionally, TMT would also raise concerns regarding media reporting of Muslims. This is because they often pose them as to conflict with mainstream British values, and in some cases, propose a wish to annihilate them (e.g., Moore et al., 2008; Poole, 2002). However, unlike other theories reviewed so far, TMT brings an added layer of nuance by suggesting that British identity (and its associated values) represent important anxiety buffers in the awareness of death, thus suggesting the need to defend these values to maintain them as anxiety buffers. Moreover, TMT also offers additional insight into why attitudes towards Muslims may have intensified after 9/11 (e.g., Sheridan, 2006; Yum & Schenck-Hamlin, 2005; *see also* Lieptye & McAloney-Kocaman, 2015 for reactions after Charlie Hebdo attacks). It also highlights a problem caused by the constant media agenda of terrorism-related news, as these mortality reminders may serve to increase prejudice and derogation towards Muslims (see Das et al., 2009 for example of how exposure to terrorism news increases prejudice towards Muslims).

In addition to the role of perceived threat moderating responses to MS, considerable attention has been given to the role of self-esteem as a moderator of MS effects. This is perhaps unsurprising given the importance that TMT places on the need for self-esteem to defend from death-related concerns. Despite support for self-esteem

moderating individual responses after MS, the precise relationship is not fully clear. Harmon-Jones and colleagues (1997) found that high self-esteem mitigates defensive reactions after MS, something that is corroborated by other researchers (e.g., Arndt & Greenberg, 1999; Halloran & Brown, 2007). In contrast, other findings suggest that the polarising effect of MS on attitudes is only apparent in those with high self-esteem (e.g., Baldin & Wesley, 1996; Juhl & Routledge, 2014).

What is the reason for this discrepancy in findings? Juhl and Routledge (2014) have suggested that the way in which self-esteem moderates MS effects may in part depend on the type of self-esteem (e.g., state versus trait). They suggest that self-esteem does protect individuals from the awareness of death, but those high in self-esteem are more inclined to engage in defensiveness to protect this self-esteem. Thus, findings that demonstrate self-esteem mitigates defensive reactions after MS have typically manipulated self-esteem after MS (e.g., Arndt & Greenberg, 1999; Harmon-Jones et al., 1997; Halloran & Brown, 2007). This elevated self-esteem should therefore insulate from the effects of MS and mitigate defensive reactions. In contrast, when dispositional self-esteem is high, individuals will feel especially motivated to defend and maintain their worldview as TMT proposes that those high in self-esteem are the ones that are living up to the standards of worth promoted in their worldview, thus have the most need to maintain their worldview.

It should be noted that whilst the role of self-esteem is considered in the present thesis, it explores a slightly different type of self-esteem; namely self-esteem that is associated with (or derived from) a social identity (cf. collective self-esteem; Luhtanen & Crocker, 1992). What role should this type of self-esteem play in prejudice formation? We would expect that self-esteem associated with a social identity might

operate similarly to the trait self-esteem mentioned above. That is, those who derive a strong sense of self-worth from their respective social identity will be highly motivated to defend it when necessary. Prior MS research has suggested that death awareness increases the desire to engage or identify with behaviours that are relevant to one's self-esteem (Ben-Ari, Florian, & Mikulincer, 1999; Ferraro, Shiv, & Bettman, 2005; Goldenberg, McCoy, Pyszczynski, Greenberg, & Solomon, 2000; Hansen, Winzeler, & Topolinski, 2010). Thus, it is likely that those who view their nation as a source of self-esteem should increase identification in attempt to bolster their self-esteem after MS (Castano & Dechesne, 2005). Of course, at the same time, whether this intensifies or mitigates worldview defence would likely depend on whether one perceives one's nation to be under attack. If one perceives the legitimacy of their worldview to be questioned, it potentially compromises their self-esteem, thus intensifying reactions to worldview violators. Supporting this notion, Arndt and Greenberg (1999) demonstrate that whilst elevated self-esteem mitigates defensive reactions after MS, if this source of self-esteem is then called into question then the effects are reversed with reactions being intensified.

Other TMT research has explored more subtle effects that MS may have on worldview defence. For example, Greenberg, Schimel, Martens, Solomon, and Pyszczynski (2001) posited that if an outcome of MS is to become more favourable to those who espouse or uphold one's worldview, then this might lead to less negative reactions to ingroup members who espouse prejudicial themes. They reasoned that as prejudice towards outgroups can often be entwined with espousing ingroup pride, then MS may reduce reactions towards those who espouse prejudice because they are the same time bolstering one's worldview. Across a series of studies, they demonstrated

that after MS, White participants were less likely to view another White individual espousing racial pride as racist or view them as guilty of a racial crime.

What seems important here is that MS may not necessarily cause individuals to react in hostile ways towards others, but may also decrease the tendency to derogate ingroup members who hold prejudicial attitudes because they are at the same time providing support for one's worldview. This passive tendency towards ingroup members holding prejudicial attitudes may lead to perceptions of a *false-consensus* for one's attitudes (e.g., Pyszczynski et al., 1996) or at the very least not lead to perceptions of a dissensus. As consensus for one's beliefs and attitudes is important in validating the appropriateness of them (Solomon et al., 1991; *see* also Jonas, Greenberg, & Frey, 2003; Lavine, Lodge, & Freitas, 2005 on MS-induced preferences for congruent information), this may provide those who hold negative attitudes towards Muslims with a sense of a normative basis for their behaviour. This is important because perceiving a normative basis for behaviour has been highlighted as important in expressing prejudicial attitudes (e.g., Meertens & Pettigrew, 1997).

Stereotyping

Other research using the MS paradigm has also demonstrated that aside from being more likely to derogate others after being reminded of death, there is also an increased tendency to cling onto prevailing group stereotypes. This is not just because stereotypes can serve self-enhancement purposes by making favourable comparisons that increase self-esteem (see Renkema, Stapel, Maringer, & van Yperen, 2008), but because stereotypes serve to assist in the perception of the social reality in a meaningful way, and thus represent an important component of worldviews (Schimel et al., 1999). Across a series of studies, Schimel and colleagues (1999) demonstrated

that participants exposed to MS were more likely to stereotype others; explain away stereotype inconsistent behaviour; as well as show increased preferences for stereotype-consistent individuals and decreased preferences for stereotype-inconsistent individuals. Similarly, Fritsche, Koranyi, Beyer, Jonas, and Fleischmann (2009) explored this idea of MS and stereotyping in relation to Muslims. Given that Muslims are often stereotyped as violent and associated with terrorism, they hypothesised that MS should decrease preferences for a Muslim who opposed terrorism of the stereotypical inconsistency. Their findings supported this paradoxical notion of a decreased preference for a Muslim who opposed terrorism. However, they did not replicate the same increase in preference for a stereotypical member as found by Schimel and colleagues (1999), presumably as the authors note, due to the universal rejection of terrorist behaviour. Given this need to cling onto stereotypes, to such an extent as to reject or decrease liking towards Muslims who oppose terrorism, this poses a worrying concern for how researchers might consider combating Islamophobic prejudice.

Annihilation and support for war

Finally, whilst derogation, such as prejudice and discrimination, may be one way to respond to worldview threatening others, derogation rarely leads to others reducing the conviction with which they hold their own beliefs. Thus, derogation may only act as a brief panacea to existential anxiety. Instead, ironically the most effective form of defence may be just to eradicate the other belief system altogether (Solomon et al., 1991). This is not just because it effectively removes the threat entirely, but also because it can imply that the worldview that "survives and thrives can be viewed as

the right one" (Greenberg & Kosloff, 2008, p. 1885). Therefore, TMT would predict that MS should engender increased support for extreme measures and warfare.

Supporting these ideas, Pyszczynski, Abdollahi, Solomon, Greenberg, Cohen, and Weise (2006) demonstrate how MS may increase support for extreme measures to conflict resolution concerning the West and the Middle East. For Iranian participants, MS led to increased support and willingness to join pro-martyrdom causes against the West, whilst this finding was reversed when mortality was not salient. For American participants, MS led to increased support for extreme (e.g., use of biological and chemical weapons), pre-emptive, military force in the Middle East despite knowledge that thousands of innocent civilians would die in the process. Similarly, reminders of 9/11 have been shown to increase support for George Bush and his counter-terrorism policies (Landau et al., 2004). Indeed, this finding has been replicated showing that MS increases support for Donald Trump (Cohen & Solomon, 2016), perhaps unsurprisingly, given his worldview espousing themes to "make America great again" and promises to be aggressive against worldview violators (e.g., Muslims).

This willingness to support extreme measures to conflict resolution is troubling given that hostile responses will likely increase the accessibility of death-related thoughts to those on the other side of the conflict, engendering the same need to defend one's worldview. For example, a common response to terrorist atrocities committed on Western soil has been to engage in conflict in the Middle East, which would in turn engender the possibility for retaliation and more terrorist acts being committed. Therefore, TMT would predict that responses to MS could potentially lead to an

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escalating cycle of violence that may have deleterious effects on prejudice towards Muslims (Jonas & Fritsche, 2013; Niesta, Fritsche, & Jonas, 2008).

In sum, TMT has accumulated a strong range of evidence supporting the MS hypothesis and its role in producing hostile, derogatory and prejudicial responses to those who are perceived to threaten one's worldview, as well as a tendency to be more sympathetic to ingroup members who espouse ingroup pride, even if this is at the expense of an outgroup. Those who are likely to display these reactions to MS are those who derive a strong sense of self-esteem from their ingroup (such as those who highly identify to the ingroup). Additionally, MS also appears to motivate a need to stereotype, whether this is to achieve a stable and orderly worldview, or for self-enhancement purposes. Finally, MS also increases support for extreme measures to conflict resolution that may escalate conflict between Islam and the West that in turn may lead to a cycle of conflict that serves to intensify negative attitudes towards Muslims. Taken together, TMT research using the MS paradigm shows a rather bleak picture for relationships between Islam and the West going forward, and some of the potential difficulties that may be faced in considering how to reduce prejudice.

Death-Thought Accessibility concept and hypothesis

Some research has started to examine the mechanisms by which MS effects operate. Early TMT research using the MS paradigm found that distal defences were greater when exposed to a subtle rather than an overt death reminder (Greenberg et al., 1994). This led TMT researchers to consider whether conscious thoughts of death may lead to initial efforts to banish these thoughts from conscious awareness, for example by actively suppressing them or minimising the current threat of death (*proximal defences,* see Pyszczynski, Greenberg, & Solomon, 1999). Therefore, it is presumed

that MS distal effects occur when death-related thoughts are removed from conscious awareness, but remain highly accessible. As such, much of the research reviewed above includes a delay between the manipulation and dependent variable; although studies that include a subtle or subliminal presentation of death do not require such a delay because thoughts of death do not reach conscious awareness (e.g., Arndt et al., 1997a; Osborn et al., 2006; Pyszczynski et al., 1996).

This line of enquiry led to the development of arguably the most important component of TM theorising, the *Death-Thought Accessibility* (DTA) concept. If MS effects occur after a delay because thoughts of death have receded from consciousness but remain hyper-accessible in the unconscious; then presumably accessibility to death-related thoughts (whilst consciously unaware to the individual) should be increased. Although not the only way, typically DTA is measured using a word-stem task whereby some of the words can be completed in either a neutral or death-related manner (e.g., KI _ _ ED can be either *kissed* or *killed*). Supporting this reasoning, Greenberg et al. (1994) confirmed the role of DTA by demonstrating that when death has been made salient, accessibility of death-related thoughts is low, but increases after a delay. Moreover, Arndt, Greenberg, Solomon, Pyszczynski, and Simon (1997) found support for suppression effects after MS by manipulating cognitive load. When participants were prevented from engaging in active suppression, the accessibility of death-related thoughts was immediate rather than after a traditional delay.

DTA Hypothesis

The development of a DTA measure led to the eventual development of a new hypothesis derived from TM theorising known as the DTA hypothesis. This essentially proposes the inverse of the MS hypothesis. It suggests that if worldviews and self-

esteem serve to protect against the awareness of death, then threatening these structures should temporarily increase the accessibility of death-related constructs (Schimel, Hayes, Williams & Jahrig, 2007). Presumably, the threatening of these psychological structures weakens them as anxiety buffers temporarily increasing the accessibility of death-related thoughts even if the individual has no conscious awareness of this accessibility (Hayes et al., 2010). In comparison to most MS studies, because threats to these structures do not make death salient, proximal defences are not required making DTA immediate after exposure to threat and fade over time (Schimel et al., 2007, Study 1).

The DTA hypothesis has been tested in relation to several aspects of TM theorising (for a review of DTA studies, *see* Hayes et al., 2010). Most relevant to the present thesis, these studies demonstrate that threats to worldviews such as one's nation, religious or evolutionary beliefs (e.g., Hayes, Schimel, & Williams, 2008; Hayes, Schimel, Williams, Howard, Webber, & Faucher, 2015; Schimel et al., 2007) increase DTA. Similarly, threatening self-esteem (Hayes, Schimel, Faucher, & Williams, 2008) and meaning (Webber, Zhang, Schimel, & Blatter, 2015) produce similar increases in DTA. Importantly, like with the MS hypothesis, research tends to suggest that this increase in DTA is exclusive to death-related thoughts, and not the result of increased accessibility of negative thoughts (e.g., Schimel et al., 2007).

Whilst TMT research is beginning to accumulate a strong range of evidence to suggest that DTA is elevated after worldview threat, as well as after threats to self-esteem and meaning, little research has considered whether there may be individual differences in DTA when exposed to threat. Prior TMT research has typically selected participants based on whether they are a member of the threatened group in question

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(e.g., Cohen, Soenke, Solomon, & Greenberg, 2013) or participants that score highly on pre-measures of group identification (e.g., Hayes et al., 2008a; Hayes et al., 2015; Schimel et al., 2007). Despite this, other perspectives explored within this thesis would propose that there are individual differences associated with threat perception (e.g., Branscombe et al., 1999; Riek et al., 2006), something that remains underappreciated by TMT research in relation to worldview threat. As such, levels to which individuals subscribe or identify with a worldview, should be associated with levels of DTA when that worldview is threatened.

To our knowledge, only one study has explored whether there are individual differences underpinning levels of DTA when exposed to worldview threat. Roylance, Abeyta, Routledge, and Juhl (2014) explored whether individual differences in beliefs of a just world were related to DTA levels when that belief system is challenged. After being first asked to report about their own beliefs in a just world, participants were asked to write about a memory that led to either a just or an unjust consequence and then complete a measure of DTA. Their findings suggested that when reminded of an unjust outcome, those higher in just world beliefs were associated with higher levels of DTA. In replicating this finding, they also demonstrated the same relationship in those who supported a losing presidential candidate at an election, presumably a violation to one's just world belief.

DTA in worldview defence

The introduction of the DTA concept has also been important in elucidating on TMT processes, specifically relating to MS effects and worldview defence. In the studies reviewed so far, it is apparent that both worldview defence and DTA appear to occur after a delay, when thoughts of death have been removed from conscious awareness,

but remain highly accessible. As TMT proposes that worldview defence occurs as a secondary line of defence against the awareness of death, and both DTA and worldview defence share a similar time-course trajectory, it implies that worldview defence may occur as result of an increase in non-conscious DTA (Hayes et al., 2010).

Supporting this idea, studies have demonstrated that when given the opportunity to defend one's worldview after MS, DTA is low, but when this opportunity is denied, levels of DTA are increased (Arndt et al., 1997b; see also Cohen et al. 2013). Similarly, when exposed to worldview threat, being offered additional information that affirms one's worldview produces similar effects as being offered the opportunity to defend one's worldview. For example, Hayes et al. (2008a) found that when Christian participants were exposed to the possibility of the *Islamisation of Nazareth* (e.g., worldview threat) they found the expected increase in DTA, but if they were additionally informed that a hundred Muslims were killed in a plane crash, then DTA was low. Presumably, knowledge that members of the worldview violating group died implied the appropriateness of one's worldview (or incorrectness of the opposing worldview), and ironically reduced DTA.

Moreover, as already reviewed above, fortifying self-esteem can insulate an individual from existential anxiety and thus mitigate defensive reactions that are commonly associated with MS. This effect of fortifying self-esteem after MS also appears to lower levels of DTA (e.g., Harmon-Jones et al., 1997). Similarly, findings also demonstrate that when an aspect of one's worldview is first affirmed, the effect of MS on DTA is eliminated (Jonas & Fischer, 2006; Schmeichel & Martens, 2005).

It is important to note that these DTA effects in relation to MS and worldview defence appear not to be the result of re-engagement of proximal defences such as

renewed suppression. Using a similar exploration to Arndt and colleagues (1997b), Greenberg, Arndt, Schimel, Pyszczynski and Solomon (2001) reasoned that if this reduction of DTA is the result of renewed proximal defences, then under high levels of cognitive load, DTA should be elevated because taxing cognitive load should prevent the possibility of suppressive tendencies. Their findings demonstrated that under both high and low levels of cognitive load; DTA was at baseline after defending one's worldview.

Alongside research that has explored the effect of worldview defence on DTA levels, some research has explored whether DTA is statistically correlated with worldview defence (or other distal measures) to assess the relationship between the two constructs. However, little research has attempted to explore this connection, and to some extent, the current literature seems to throw up some conflicting results regarding their relationship.

In some cases, DTA has mediated the relationship between the manipulation (whether MS or worldview threat) and defence (e.g., Fransen, Fennis, Pruyn, & Das, 2008; Vail, Arndt, Motyl, & Pyszczynski, 2012), whilst other studies demonstrate a more interactional mediation or moderation whereby DTA mediates the relationship to defence, but only in the MS/threat group. For example, Das and colleagues (2009) demonstrate that exposure to terrorism news increased DTA, and this was related to prejudice towards Muslims but only in the group that were exposed to the terrorism news article. Similarly, Hayes et al (2015) demonstrate that the effect of DTA on modifying beliefs or derogation was specific to those who were exposed to worldview threat. Whilst it is unclear why these differences in the literature exist, it seems at least that DTA should be related to prejudicial attitudes.

Does it matter in which way DTA is elevated?

Given the large array of evidence supporting the role of DTA, and its importance in explaining both MS and worldview threat, it has been suggested that the situations (e.g., MS, death-associated stimuli or worldview threat) under which DTA is aroused may be "largely irrelevant" (Hayes et al., 2010, p.710). On face value, this would seem like a sensible suggestion given the current evidence reviewed appears to suggest that DTA operates similarly regardless of the way in which it is aroused. However, we believe this suggestion to underappreciate the broader array of literature that is outlined in this thesis. Namely that: (i) specific types of perceived threats may arouse specific types of coping responses designed to alleviate those threats (e.g., Breakwell, 1986); (ii) prejudice towards a certain group appears to be the result of perceiving a threat from that group (e.g., Stephan & Stephan, 2000).

Additionally, research in the TMT tradition would appear to possibly conflict with this proposition. TMT research demonstrates that the effects of MS are dependent on "what aspect of the self or one's worldview is currently most salient, accessible or psychologically pressing" (e.g., Dechesne et al., 2003, p.733). For example, priming individuals with the value of tolerance appears to mitigate defensive reactions after MS (e.g., Greenberg et al., 1992). Similarly, Rothschild, Abdollahi and Pyszczynski (2009) found that Christians exposed to compassionate Biblical texts were less likely to support extreme military interventions after MS; and Muslims exposed to compassionate verses from the Qu'ran after MS demonstrated lower anti-Western attitudes.

Moreover, Dechesne and colleagues (2003) suggest that reactions after MS depend not just on the salient or accessible information at one time, but also its

relationship to the subsequently measured behaviour. When there is no relationship between the information and behaviour, the information is likely to reduce MS engendered defensiveness (substitution effect); whilst when a relationship exists between the two, the information is likely to enhance MS engendered defensiveness (contingency effect). For example, as we reviewed earlier, Arndt and Greenberg (1999) found that elevating self-esteem mitigates defensiveness after MS because self-esteem can insulate from death-related concerns (substitution effect), but only if the domain in which self-esteem is bolstered is not subsequently called into question (contingency effect).

Taken together, the way in which MS influences attitudes is therefore (at least) somewhat dependent on situationally accessible norms, and the extent to which that norm is related to the behaviour under examination. Given that mortality reminders rarely (if ever) occur in a vacuum, instead presenting themselves in a variety of contexts and situations that vary considerably in the extent to which they make certain norms, or worldview beliefs, accessible, then it should follow that different mortality reminders should produce differential effects.

For example, walking through Central Park, one might stop by the John Lennon memorial and be reminded of his life's work and dedication to the values of peace and tolerance. In this situation, it might be expected that one may behave in a way that adheres to the tolerant and peaceful norms of their worldview. In comparison, only a few miles further south in Lower Manhattan, one might stop by the 9/11 memorial and be reminded of the perceived safety threat associated with terrorism, and the perceived differences between Muslims and one's own group. In this situation,

one might behave in a way that seeks to protect and defend one's worldview from perceived threats.

Moreover, it has been a common occurrence for world leaders to remind the public of the value of tolerance in the aftermath of a terrorist event, whether suggesting the need for the public to be tolerant towards others or suggesting Muslim extremists are attempting to destroy the value of tolerance[2]. Whilst in some cases we might expect that reminders of this value might mitigate negative reactions towards perceived existentially threatening others (see Greenberg et al., 1992); the same reminder might intensify reactions when one is explicitly or implicitly reminded of the perceived intolerance of the other group such as is the case with acts of terrorism (a contingency effect).

In summary, then, the current TMT literature on DTA appears to support its importance as a psychological construct. The reviewed research above implies that worldviews operate to prevent thoughts of death from reaching conscious awareness, and that worldview defence may act to dissipate the accessibility of non-conscious DTA. These findings therefore point towards the role of DTA in producing prejudice. However, more research is required to further understand whether there are individual differences in DTA after experiencing threat; if the extent to which the conditions under which DTA is elevated impacts upon choice of response (e.g., derogation, affirmation of the self); and the precise relationship DTA has with prejudicial attitudes.

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[2] See: Ex-Prime Minister, David Cameron: http://www.independent.co.uk/news/uk/politics/paris-attack-david-cameron-warns-a-terrorist-attack-on-uk-is-highly-likely-a6734931.html; Prime Minister, Theresa May: https://www.theguardian.com/uk-news/2017/jun/04/london-attack-theresa-may-says-enough-is-enough-after-seven-killed to name a few examples.

It is our belief that clarifying these relationships can help further understand the conditions under which prejudicial attitudes may be reduced.

Putting it all together: The Identity-Representations Model of Prejudice

Recently, Cinnirella (2014) has proposed an integrative framework, dubbed the Identity-Representations Model (IRM), that incorporates aspects of theorising from IPT, ITT, SIT and TMT to elucidate the antecedents, as well as the motivational underpinnings, of threat and prejudice at multiple levels of analysis: from the intra-psychic, interpersonal, intergroup up to societal levels. The proposal for doing so is the belief that a framework that bridges the connection between these perspectives can generate a stronger, generic theoretical model to understanding prejudice, and overcome the deficiencies in any single one of these approaches (Cinnirella, 2014).

The main contribution of the IRM is to understand how threats outlined by ITT, SIT, TMT may threaten identity motives as suggested by IPT. That is, the IRM attempts to explain how fear of death, worldview threat, and realistic and symbolic threats to social identity undermine identity motives outlined in IPT. Therefore, the IRM would propose that perceived symbolic and realistic threats, for example, are more distal predictors of prejudice; whilst the perceived threatening of these motives constitute proximal predictors of prejudice. In other words, these identity motives should mediate the link between prejudice and the threats outlined in ITT, SIT, and TMT.

Moreover, it is believed that the number of identity motives compromised by these perceived threats outlined in TMT, ITT and SIT, reduces the number of available coping mechanisms to the individual to alleviate the threat. As a result, an individual may display prejudicial attitudes as a coping response to the threatened identity

(Cinnirella, 2014). Whilst the precise relationships between these threat types and identity motives are believed to be specific to the intergroup context, in part due to prevailing social media representations, the approach itself is argued to be generalizable to a range of prejudices and intergroup contexts outside of the British-Islamic relations it was primarily derived to explain (Cinnirella, 2014).

The IRM therefore places IPT at the heart of its approach. Mainly this is due to its presumed distinct advantage over the other approaches, as it arguably elucidates more closely on the motivational underpinnings of the threat-prejudice link. In addition, IPT is argued to be well equipped to take on this task of explaining several types of perceived threats highlighted by other approaches, due not only to its multi-layered approach to motivational identity construction and maintenance; but also, its ability to explain a range of perceived threats and responses to threat from multiple levels - individual, relational or intergroup.

Whilst the IRM should be admired for its attempt at epistemological pluralism, and that Psychology should advocate an approach that seeks to reconcile disparate theories to understanding prejudice is a useful one, the current thesis would like to address some concerns with the original outlining of the IRM. In doing so, it is contention of this thesis to propose a conceptually refined and expanded version of the model that would offer greater clarity, coherence, and simplicity, but also increased understanding into prejudice. In broad terms, the thesis will address two problems believed to be present with the current IRM: (1) the conceptual clarity and distinction of the threat types that the IRM deploys; (2) a lack of consideration concerning antecedents of perceiving threat.

Given that the main aim of the IRM is to offer increased understanding of threat perception, some of the distinctions given between the threat types appear unconvincing and confusing. The IRM appears to suggest that fear of death, worldview threat, as well as realistic and symbolic threats are separate types of perceived threat that all contribute towards Islamophobic prejudice via the undermining of identity motives (Cinnirella, 2014).

Firstly, it is unclear to me why worldview threat and symbolic threat are considered separate types of threat. From a TMT perspective, worldviews are symbolic meaning systems that offer a way for an individual to understand the world, as well as provide the individual with a clear set of values, norms, traditions, and morals. Thus, from the language of TMT, a worldview threat is to perceive that this symbolic meaning system is called into question by another person or group. This seems almost entirely analogous with what ITT outlines to be a symbolic threat. In fact, in outlining what constitutes a symbolic threat, ITT explicitly refers to the idea of symbolic threats being a perceived "threat to worldview of the ingroup" (Stephan & Stephan, 2000, p.26), and is consistently used by these researchers when describing this threat (e.g., Stephan, Diaz-Loving, & Duran, 2000; Stephan & Renfro, 2002; Stephan et al., 2002). It is hard to see therefore what distinction is being made between these threat types, or what benefit is served from keeping these as distinct types of threat.

Second, Cinnirella (2014) refers to the idea that the fear of death, given that Muslims are particularly noticeable in the media for terrorism and violence, can add additional nuance in understanding Islamophobic reactions over and above what

ITT/SIT can offer in terms of terrorism as a perceived realistic threat. This use of TM theorising, particularly in relation to terrorism, makes a lot of sense given the long and reliable history of MS in producing worldview defence and prejudice. However, TMT's notion of death-related concerns is deployed exclusively in terms of understanding the impact of terrorism and terrorism-related news on prejudice. This deployment arguably misses the point about TMT, and essentially waters down the theory to the MS hypothesis. What makes TMT such a valuable contribution is its ability to understand how the role of these motives, and worldviews, serve more basic and vital functions of *managing* the awareness about the inevitability of death.

If the use of TMT is to provide the added understanding of how death-related concerns impact upon prejudicial attitudes, then it makes sense to embrace and utilise TMT's full arsenal of hypotheses to understand this problem. To that end, the present thesis would like to offer a reconceptualization of perceived threat that more adequately incorporates a hybrid of TMT, IPT, and ITT that utilises their best assets, but also offers a clearer understanding of the interface between the threat types in question.

The proposal is a relatively simple one: ITT, IPT and TMT all concern and discuss the same type of threat(s), but explore them from different levels of analysis, with each perspective offering a valued contribution in providing a full definition of perceived threat. In relation to ITT, its proposal of a typology of threats offers the useful insight into how different prejudices may be the outcome of different perceived threats, and how these threats may be perceived at a personal or group level. However, from a TMT perspective, both perceived realistic and symbolic threats could be characterised as existential threats that disrupt worldviews as an effective anxiety-

buffer. Both symbolic and realistic threats are existentially threatening because at the heart they call into question or challenge our self-worth, albeit in slightly different ways.

For symbolic threats, exposure to groups that are perceived to be different from one's own, calls into question the 'correctness' of the ingroup's values, beliefs, traditions and morals. This not only challenges one's worldview, but also the extent to which these can be used for self-esteem purposes. Similarly, realistic threats (at least in the case of economic realistic threats) also challenge one's degree of self-worth. For example, money, houses, jobs and other tangible resources can often be useful barometers to assessing one's self-worth to society (Arndt, Solomon, Kasser, & Sheldon, 2004). Therefore, believing that one faces competition for these resources impinges on the extent to which one can feel they are a valuable contributor. In either case, perceiving a realistic or symbolic threat to identity should be associated with an increase in DTA that in turn leads to the need to affirm, and if necessary defend, one's worldview.

IPT offers the novel contribution of understanding that these issues go beyond just the need for self-esteem, but also concern the motives of continuity, distinctiveness, meaning, belonging, and efficacy (we explore the interface between IPT and ITT in Studies 1 and 2; and IPT and TMT in Studies 3 and 4 of the thesis). In line with the original IRM, this thesis would agree that IPT offers a useful theoretical tool to understanding how perceived realistic and symbolic threats impact upon prejudice via their undermining of identity motives. However, by applying the contribution of TMT in its notion that the sense of these motives may buffer from more death-related concerns, we can begin to elucidate the nature of why perceiving

symbolic and realistic threats are so potent in producing prejudice. Indeed, it should be noted that identity motives are outlined in IPT as "pressures towards certain identity states and away from others" (Vignoles et al., 2006, p.309), so it would make sense from an IPT perspective that one of these undesired states would be the existential anxiety that TMT outlines.

In short then, in line with the original IRM, it is proposed that perceived realistic and symbolic threats compromise multiple identity motives, and the extent to which these threats coalesce with perceived threats to identity motives depends on the intergroup context as well as social media representations of the threat posed. However, in contrast, this reconceptualization of threat would suggest that this compromising of identity motives in turn opens the individual up to the potential for experiencing anxiety that these motives are intended to buffer against. As such, perceiving threat should activate increases in nonconscious DTA that lead to a need to affirm, and defend one's worldview in the form of prejudice and discrimination. In our view, this provides an elegant and coherent definition of threat perception that incorporates multiple levels of analysis, but also fully encapsulates the power of all three approaches (see figure 1).
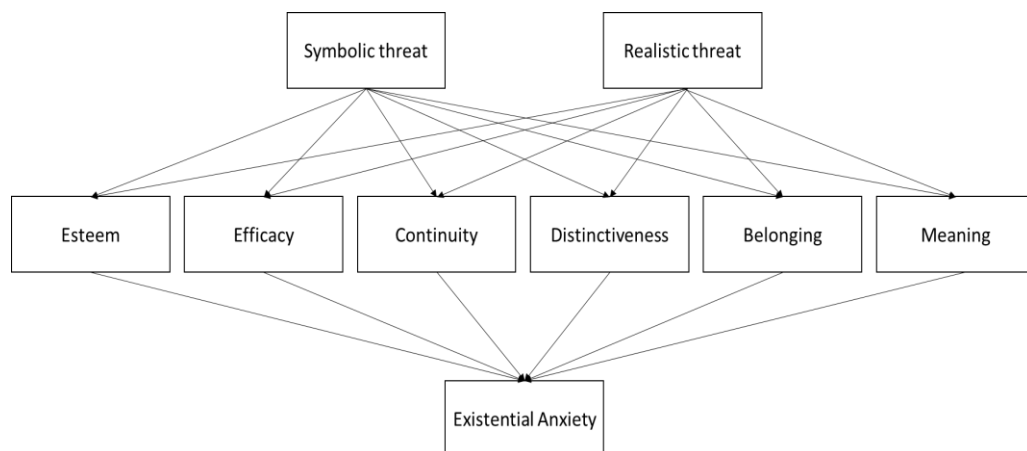
Figure 1: A hybrid ITT, IPT and TMT definition of threat perception

Antecedents of threat perception

In addition, the IRM does very little to clarify what it considers to be antecedents of threat perception[3], only specifically outlining the idea that strength of social identification moderates the perception of threat in accordance with SIT (Tajfel & Turner, 1986). Whilst research has typically supported this assertion, the overall effect tends to demonstrate a weak relationship (for meta-analysis, see Riek et al., 2006). This is likely because strength of identification only measures one component of identity, and overlooks the importance that types of attachment (e.g., nationalism and patriotism; Li & Brewer, 2004), beliefs (e.g., Pehrson, Brown & Zagefka, 2009; Zagefka, Nigbur, Gonzalez, & Tip, 2012) and contents (e.g., Smeekes et al., 2012) associated with specific identities may have in understanding threat perception.

The current thesis therefore aims to expand on this by exploring the beliefs component of identity (Oyserman, 2009); as well as how beliefs about the outgroup may affect prejudice. Specifically, the present thesis focuses on *natural kind* and *entitativity* beliefs, two types of essentialist beliefs (Haslam et al., 2000; Haslam, Rothshild, & Ernst, 2002). This is because prior research has suggested they are related to prejudice (e.g., Andreychik & Gill, 2015; Haslam et al., 2002; Pehrson et al., 2009; Effron & Knowles, 2015), but when related to one's own group, may constitute a valuable source of the motives in question, making them susceptible to perceiving intergroup threats. We first outline a definition of the terms essentialism, entitativity,

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[3] Hereafter, any mention of threat perception in the thesis where intergroup or motive is not explicitly mentioned in the text should be considered to refer to both. As the contention of this thesis is that intergroup and motive threats are synonymous with each other (at least in the context of Islamophobic prejudice in the UK), the general use of threat perception should be considered to refer to both, and in situations where this is not the case, the thesis will explicitly mention which motive(s) or intergroup threat(s) are implicated.

and natural kinds before considering: (1) a motivational basis to these beliefs; (2) literature that has explored these beliefs in relation to threat perception and prejudice.

Essentialism

In Allport's (1954) seminal work on prejudice, he outlined that what differentiated prejudiced from non-prejudiced individuals was a tendency to perceive groups as unchanging, clear-cut, and unambiguous with an *essence* that permeates group members making the group homogenous. This essentialist way of thinking about social groups was suggested to mirror a general cognitive style reflecting one's own understanding about the nature of reality, rather than beliefs that were category-specific.

More contemporary research has proposed that essentialist beliefs play an important role in lay perception and understanding of social categories (Yzerbyt, Judd, & Corneille, 2004), but has not always corroborated definitions consistent with Allport's original notion of essentialism, demonstrating that these beliefs tend to vary across social categories (Haslam et al., 2000; 2002). Nevertheless, findings are broadly consistent with Allport's notion that such beliefs are important in prejudice formation (Haslam et al., 2002; Pehrson et al., 2009; although *see* Haslam & Levy, 2006 for some important qualifications), and that highly essentialised groups tend to be the most maligned in the social arena (Haslam et al., 2000).

In exploring the structure of essentialism, Haslam and colleagues (2000; see also Haslam et al., 2002) assessed nine separate beliefs, that have been associated with essentialist thinking, across 40 different social categories. Specifically, these concerned whether the group was viewed as: natural or artificial (*naturalness*); having clear-cut boundaries (*discreteness*); historically invariant (*stability*); having an

underlying reality (*inherence*); necessary features for membership (*necessity*); membership that is difficult to change (*immutability*); members that are similar to each other (*uniformity*); allowing inferences over member behaviour (*informativeness*) and membership to the group excludes membership to other groups (*exclusivity*).

Conducting a factor analysis on these beliefs, their findings suggested that essentialism could be comprised of two separate constructs. The first factor included the beliefs of naturalness, discreteness, stability, necessity, and immutability which they termed *natural kind* beliefs. This type of belief can imply a sense that a group is naturally occurring and inalterable, with membership being genetically determined or "in the blood" (e.g., Hamilton, 2007; Haslam et al., 2000; Pehrson et al., 2009; although see Rangel & Keller, 2011 for ideas of socially influenced natural kind beliefs). The second factor included the beliefs of inherence, uniformity, informativeness and exclusivity which was defined as *entitativity*. These beliefs provide a sense that a group constitutes a *real* and meaningful entity that is a rich source of inductive potential (e.g., Campbell, 1958; Rothbart & Taylor, 1992; Hamilton, 2007; Haslam et al., 2000). As such, entitativity beliefs may concern perceptions that are relevant to the psychological or behavioural properties of the group (Andreychik & Gill, 2015).

It should be noted that some researchers have contested the idea that entitativity is a component of essentialism, and have cogently advocated that it should be considered a separate construct (*see* Hamilton, 2007). We have no qualms with this view, and whilst we agree it is important to seek further clarity on the relationship and distinctions between these conceptual constructs, it goes beyond the scope of the current thesis to explore this. Instead, our analysis only extends to the assumption that

natural kind and entitative beliefs are conceptually different constructs, something that seems borne out by data and is generally uncontested by scholars (e.g., Andreychik & Gill, 2015; Hamilton, 2007; Haslam et al., 2000, 2002).

A motivational perspective on essentialism

Although researchers have put forward cognitive explanations for essentialism (e.g., Hirschfield, 1996), essentialist beliefs, at least when concerning one's own group, may particularly satisfy the motives outlined in IPT. For example, both natural kind and entitativity beliefs constitute ways for the perceiver to understand oneself in a meaningful way. Natural kinds provide explanations for one's connection to social groups (e.g., natural, potentially biological basis), whilst entitativity suggests that the group itself is a meaningful "real" entity. In that sense, both these beliefs can offer a sense of being a part of a group that is meaningful. Additionally, entitativity beliefs have been argued to provide clear prototypes of a group that help to reduce uncertainty (cf. meaning, Hogg, 2009).

Essentialist thinking can further satisfy the *continuity* motive, because it views groups as static and historically invariant. Perceptions of national group membership, for example, can often be built upon a common and shared history that makes members feel they are ancestrally related (Connor, 1994; Smith, 2001). This could involve the group developing shared 'possible social identities' (Cinnirella, 1998) that tie temporal elements of group identity together with myths of common ancestry, in turn facilitating strong identification (e.g., Sani et al., 2007; Sani, Bowe, & Herrera, 2008; Smeekes & Verkuyten, 2014b). Moreover, entitativity beliefs also imply that groups are *real* entities thus will not "cease" to exist. Castano (2004) has suggested that entitativity beliefs afford groups "celestial" value that may be useful in managing

existential concerns. Indeed, Herrera and Sani (2013) found that MS increases perceptions of collective continuity that in turn predict perceptions of entitativity, which in turn positively predicted identification.

Additionally, these beliefs when related to one's own group may also afford a sense of belonging and distinctiveness. Natural kind beliefs that suggest some potential criteria for group membership (e.g., "in the blood") can affirm one's sense of belongingness to the group (cf. Smeekes & Verkuyten, 2014b), whilst at the same time suggesting there is something distinctive about the group. Similarly, entitativity which is associated with perceptions of group cohesion and unity (Brewer, Hong, & Li, 2004; Sacchi, Castano, & Brauer, 2009), may allow the individual the sense they "belong" to something meaningful. At the same time, entitativity beliefs can offer clear group prototypes that provide a distinctive identity (Hogg, 2009). In other words, entitative and natural kind beliefs can provide a sense of "who we are" that may affirm a sense of belongingness, but also "who we are not" that makes clear the difference between one's own group and other groups that can imply a sense of distinctiveness to one's social group.

Moreover, these distinctiveness and belonging concerns may feed into satisfying esteem concerns as they may help individuals to understand more clearly "who they are" (Yzerbyt, Castano, Leyens, & Paladino, 2000). Essentialist beliefs can often imply a strong sense of group temporality that may be important in satisfying immortality striving, as well as glorifying the group with a long, proud history, thus satisfying self-esteem needs (e.g., Sani et al., 2007, 2008). Finally, entitativity beliefs may also satisfy efficacy concerns, because they suggest that groups have agency, with a common purpose, intentions, and goals (Brewer et al., 2004; Yzerbyt et al., 2000).

In short then, both natural kind and entitative beliefs may provide important bases for the motives under examination in the current thesis, and thus may facilitate identification to social groups as suggested by research (e.g., Castano, Yzerbyt, & Bourguignon, 2003; Herrera & Sani, 2013; Sani et al., 2007)

Essentialism, threat, and prejudice

Research has considered the role of essentialist beliefs in prejudice formation. Most of this research has focused on essentialist beliefs about the target group (e.g., Andreychik & Gill, 2015; Haslam et al., 2002), although some research has also considered how essentialist beliefs about the ingroup can affect attitudes towards others (e.g., Pehrson et al., 2009; Zagefka et al., 2012). However, to our knowledge, no research exists that has examined both beliefs concerning the ingroup and target group in prejudicial attitudes. Additionally, research has tended to focus on either natural kind (e.g., Pehrson et al., 2009; Zagefka et al., 2012) or entitativity beliefs (e.g., Effron & Knowles, 2015) and their relationship to prejudice, but little research has considered the potential interface between these beliefs in prejudice formation. We will briefly review the research concerning ingroup and target group essentialist beliefs in turn, and how these may apply to the current focus of Islamophobia in the UK.

Ingroup essentialism

As we have mentioned earlier, because essentialist beliefs about social categories may constitute an important source of identity motives, they may facilitate identification to social groups (e.g., Castano et al., 2003a; Herrera & Sani, 2013; Sani et al., 2007). At the same time, essentialist thinking about one's own group may increase susceptibility to perceiving threats to identity because both natural kind and entitative beliefs

facilitate relatively unambiguous descriptions over "who we are" and "who we are not" that may increase concerns over group contamination, trespassing and change (e.g., Hogg, 2009; Zagefka, Pehrson, Mole, & Chan, 2010; Zagefka et al., 2012).

For example, perceptions of national group membership can often be built upon a common and shared history that makes members feel that they are ancestrally related (Connor, 1994; Smith, 2001). This is a type of natural kind belief that implies that membership to the group may be determined by quasi-biological features that are demarcated "in the blood" (cf. ethnic nationalism; Pehrson et al., 2009; Zagefka et al., 2012). As such, these beliefs suggest that the ingroup is impermeable, historically stable, with clear-cut and rigidly defined boundaries. Consequently, these beliefs may imply that certain individuals (such as British-Muslims) cannot be a member, and their presence may be considered as trespassing, contaminating "real Britishness" and/or threatening to group continuity (Pehrson et al., 2009; Smeekes & Verkuyten, 2014a; Zagefka et al., 2012).

Research conducted on UK nationals has found that beliefs that national group membership is "in the blood" are negatively related to the possibility of immigrants being able to adopt British culture, but also increased perception of immigrants posing a threat to British identity (Zagefka et al., 2012). Similarly, Pehrson and colleagues (2009) found that national identification was positively related towards prejudice against asylum seekers, but only amongst those that endorsed 'ethnic' conceptions of British identity. In the Netherlands, Smeekes and Verkuyten (2014b) explored a slightly different type of natural kind belief, namely perceived cultural continuity. They found that those who had high perceptions of cultural continuity demonstrated

increased opposition to Muslim rights (for similar findings see also Smeekes et al., 2011; Smeekes, Verkuyten, & Martinovic, 2014).

Like natural kind beliefs, entitative ingroup beliefs, may also increase perceptions of threat because of the clear descriptions they provide over what makes a group member. As we have mentioned, entitativity beliefs may concern perceptions that are relevant to the psychological or behavioural properties of the group (Andreychik & Gill, 2015). Consequently, groups that are perceived to be highly entitative may provide stronger group prototypes (e.g., Hogg, 2009), which may lead to increased sensitivity to those who deviate from this prototype, such as is the case with media reporting of British-Muslims (Jaspal & Cinnirella, 2010; Poole, 2002).

Consequently, one result of perceiving the ingroup as highly entitative may be to exhibit stronger desires to exclude certain members from the ingroup who deviate from the group prototype (cf. black-sheep effect; Marques & Paez, 1994). Supporting this idea, Lewis and Sherman (2010) find that black sheep effects are strongest when the group is perceived to be highly entitative. Moreover, Castano (2004b) found that after MS, participants were more likely to *over-exclude* members from the ingroup as a strategy to maintain high perceptions of ingroup entitativity. Therefore, it is likely that perceiving Britain to be high in entitativity provides a distinct and unambiguous group prototype that may lead to increasing perceptions of Muslims as threatening to this prototype due to prevailing social media representations. In other words, British entitative beliefs should be related to perceiving Muslims as a realistic and symbolic threat.

In contrast, Effron and Knowles (2015) propose an alternative reason why perceptions of ingroup entitativity might be associated with prejudice. They suggest

that because entitativity enhances the perception that group members are in pursuit of collective interests, that it increases the legitimacy of displaying prejudice as an acceptable outcome of protecting the collective group's interest from those that challenge its' symbolic and/or realistic well-being. As such, Effron and Knowles (2015) argue that entitativity rationalises the exhibition of prejudice, causing a 'licensing effect' that legitimises the overt expression of implicitly held biases. Over the course of eight studies, their findings supported their hypotheses, suggesting that prejudice was viewed as more rational when the ingroup was perceived as highly entitative, and that perceiving the ingroup as highly entitative increased the expression of prejudice amongst those who strongly identify with the group.

Outgroup essentialism

Concerning beliefs about the outgroup; essentialist beliefs have commonly been associated with a range of negative intergroup outcomes (e.g., Andreychik & Gill, 2015; Haslam et al., 2002; Bastian & Haslam, 2006). Most prominently, this may be because essentialist beliefs, particularly concerning entitativity beliefs, can imply that a group is homogenous and with an underlying reality. Therefore, essentialist orientations about the other are often considered to be related to stereotyping (Spencer-Rodgers, Hamilton, & Sherman, 2007; but see Bastian & Haslam, 2006 for immutability beliefs predicting stereotyping), but also preferences for stereotypic consistent behaviour (Bastian & Haslam, 2007).

As such, one view of essentialism is that it can be a breeding ground for stereotyping, which as we have previously mentioned can often be a precursor to threat perception, particularly if these stereotypes are negative (e.g., Riek et al., 2006; Stephan et al., 2002). Similarly, perceptions of entitativity can increase a sense of

group intentionality and cohesion, thus in turn making the target group seem more overtly threatening (Abelson, Dasgupta, Park, & Banaji, 1998; Castano, Sacchi, & Gries, 2003). For example, Castano and colleagues (2003b) explored how perceptions of entitativity may affect attitudes towards the European Union (EU) amongst American participants. They found that after manipulating entitativity, increases in entitativity perceptions led to more perceived harmfulness of the EU, particularly amongst those who initially perceived the EU as an enemy (the opposite effect was found amongst those who perceived the EU as an ally). As such, the researchers suggested that entitativity might produce a polarising effect on group attitudes.

Given that media representations of Muslims in the UK are overwhelmingly negative and often noticeable for themes of threat, terrorism and deviance (e.g., Moore et al., 2008; Poole, 2002; Richardson, 2004), it might be expected that these sorts of representations might become a strong basis for stereotypes concerning Muslims amongst those who perceive the group as highly entitative. This stereotype endorsement may in turn lead to an increase in the perception of Muslims posing a symbolic and/or realistic threat.

Another view of why essentialist beliefs may affect prejudice is because they can affect the extent to which other members of a group are viewed as collectively responsible for the individual actions of certain group members. Lickel, Schmader and Hamilton (2003) argue that because entitativity beliefs imply a sense that a group is a coherent, unified entity, it increases the sense that a group is collectively responsible, as the perceived association between the perpetrator and other group members is increased. Moreover, they argue that that entitativity impacts upon collective responsibility by either increasing perceptions that group members are either directly

encouraging or benefitting from the actions of other group members (inference of commission) or by not preventing the actions of other group members (inference of omission).

From this perspective, entitative beliefs are likely to increase the extent to which the wider Muslim community is held accountable for the actions of others, such as is the case with terrorist atrocities. This is because entitative beliefs may increase the sense that Muslims are supportive of terrorism and extremist groups like ISIS (see Pew, 2016 for British views on Muslims support of terrorism), or should be at the forefront of preventing terrorism. Indeed, Doosje, Zebel, Scheermeijer and Mathyi (2007) demonstrate that the degree to which terrorists are perceived as prototypical Muslims, a type of entitative belief, affects the degree to which the wider Islamic community is perceived to share responsibility for terrorist atrocities. Moreover, because entitativity increases collective responsibility, it also affects the extent to which individuals may seek vicarious retribution against other group members for these attacks (Stenstrom, Lickel, Denson, & Miller, 2008). As such, these inferences can make other Muslims appear to be *guilty-by-association*, and therefore make them suitable candidates for hostility and prejudice.

Some other research has also suggested that essentialist natural kind beliefs may be related to negative intergroup relations, although the evidence is less clear. Haslam and colleagues (2002) explored both entitativity and natural kind beliefs in relation to prejudice towards various social groups. They found that whilst entitativity beliefs were related to prejudice, natural kind beliefs were unrelated to these measures. In contrast, some research that has explored beliefs in biological determinants of group

behaviour, a type of natural kind belief, has suggested they are associated towards prejudice (Andreychik & Gill, 2015; Jayaratne et al., 2006).

What might be relevant here is the difference between the measures used to explore natural kind beliefs. Both studies that support the role of natural kind beliefs explored a specific type of belief, namely concerning biological explanations of behaviour, whilst Haslam's research looked at a range of natural kind beliefs as an aggregate. Therefore, it might be that there exist specific relationships between beliefs that make up these factors and prejudice. Indeed, Haslam and colleagues (2002) seem to support this assertion as whilst they found that the natural kinds factor was unrelated to prejudice, they did find components of natural kind beliefs as being related to prejudice, suggesting that the nature of the relationship between essentialist beliefs and prejudice may be specific to the essence-belief in question.

Particularly, Haslam et al. (2002) found that the beliefs of discreteness, immutability, and naturalness were related to attitudes towards homosexuals, although the latter two were particularly associated with decreasing levels of prejudice. Whilst the direction of the relationship likely represents the category-specific nature of essentialist beliefs relating to prejudice (e.g., 'race' versus 'sexuality' *see* Haslam et al., 2002; see also Haslam & Levy, 2006), it might be then that the extent to which these beliefs are related to prejudice, is to the extent that they imply ideas that certain group behaviour is biologically and/or genetically determined. Indeed, this would be consistent with the research that links bio-essentialist beliefs and prejudice (Andreychik & Gill, 2015; Jayaratne et al., 2006). Moreover, Bastian and Haslam (2006) found that stereotyping was associated with immutability beliefs, because

immutability (like genetic determinism) implies people cannot change certain characteristics (*see also* implicit person theories, Levy, Stroessner, & Dweck, 1998)

As such, what these natural kind beliefs may have in common with bio-essentialist beliefs is the idea that certain behaviours are "lurking beneath the surface" of all group members (Andreychik & Gill, 2015; Denson, Lickel, Curtis, Stenstrom, & Ames, 2006), that in the case of Muslims may make the group seem more overtly symbolically or realistically threatening. For example, perceiving the category Muslims to be immutable might imply that whilst not all Muslims are terrorists, all Muslims have the *potential* to be terrorists. Indeed, news reporting of Islamic-related terrorism often decontextualizes the behaviour such that it emphasises Muslim identity as the sole reason for the said behaviour (Poole, 2011).

Moreover, it is possible that when a group is essentialised on both dimensions that this exacerbates the perceived threatening nature of the group. This is because entitativity beliefs are the perception of group unity and homogeneity, whilst essences (cf. natural kind beliefs) are the explanations of this unity and homogeneity (Lee, McCauley, & Jussim, 2013). Therefore, entitativity beliefs are particularly informative about the psychological and/or behavioural properties of the group (Andreychik & Gill, 2015), that may lead to increased stereotype endorsement, that when negative (such as the case with Muslims) may increase threat perception. From this perspective, when perceiving Muslims to be highly entitative, individuals may be more willing to endorse social media representations of Muslims as holding regressive, deviant values from the ingroup, as well as a violent disposition (e.g., Moore et al., 2008; Poole, 2002). However, when these representations can be attributed to something immutable, or potentially biological, it may increase the perceived threatening nature

of the group because it not only adds increased legitimacy to these stereotypes, but also further suggests that these behaviours are immutable. Whilst little research has explored the potential interface between natural kind and entitativity beliefs, there is some suggestion that essentialising groups on both dimensions might be associated with deleterious intergroup outcomes. For example, Denson et al. (2006) found that essentiality (cf. natural kinds) increased the effect of entitativity on perceptions of collective responsibility, and Andreychik and Gill (2015) demonstrate that prejudice was highest amongst those who viewed the group as both highly entitative and high in bio-essentialism. Moreover, Haslam et al's (2000) seminal work on essentialist belief types and social categories, reported that groups that are traditionally considered the most maligned in the social arena, tended to be the ones that were essentialised across both dimensions.

It is worthwhile returning to the point that research has identified that essentialised beliefs can be associated with *decreasing* levels of prejudice (e.g., Haslam et al., 2002; Haslam & Levy, 2006). Whilst we have already mentioned that this underscores the category-specific nature of essentialist beliefs relating to prejudice (e.g., 'race' versus 'sexuality'), more broadly it hints toward the idea that essentialism should not necessarily be viewed as inherently oppressive, nor de-essentialism viewed as inherently progressive, with this instead depending on the context in which they are used (Verkuyten, 2003). For example, the Castano et al. (2003b) study demonstrated that perceptions of entitativity may polarise attitudes towards the group in question, but that the valence of this attitude depends on the way in which the group is framed. Therefore, whilst one possibility for reducing prejudice may be to attempt to break down essentialist beliefs about the nature of social categories, thus in turn reducing stereotyping; we suspect that potentially a more profitable way might be to consider

how the specific group can be framed in positive terms. Indeed, given we have outlined that these types of beliefs might hold specific anxiety-buffering properties against the awareness of death (e.g., Castano & Dechesne, 2005; Castano, Yzerbyt, Paladino, & Sacchi, 2002; Herrera & Sani, 2013; Keller, 2005), then it is possible that prejudice reduction strategies that attempt to maintain these anxiety-buffers may be most effective.

Overview of the key aims of the thesis

In sum, the current thesis is focused on exploring the interface between social identity, essentialist beliefs, intergroup threat, identity motive threat, and existential anxiety as proposed by the expanded and reconceptualised IRM. Specifically, the current thesis focuses on the arguments of the IRM to explore the specific case of Islamophobia in the UK.

Given the theoretical multiplicity of the IRM, and its attempt to explain prejudice from multiple levels of analysis (Cinnirella, 2014), it will be impossible to cover all the tenets and arguments of the IRM in this thesis alone. However, we will set out to explore some of the key arguments that are posited by the IRM. We will address each one of these in turn.

Firstly, the IRM stresses the importance of identity motives in understanding the potency of perceived realistic and symbolic threats in Islamophobic responses. Cinnirella (2014) proposes that Muslims may be perceived to pose several motive threats to British Identity, that are distilled into realistic (e.g., physical and economical) and symbolic concerns. As such, the IRM argues that perceived realistic and symbolic threats could be broken down into constituent elements that pose threats to the motives under examination of the current thesis. We seek to address this claim

(Studies 1 and 2), and whether these perceived motive threats mediate the relationship between perceived realistic/symbolic threats and prejudice.

Second, the current thesis has outlined a re-defined conceptualisation of threat perception that places TMT's notion of existential anxiety as of paramount importance. Using IPT, it is argued that the *sense* of self-esteem, continuity, efficacy, distinctiveness, belonging, and meaning act as important anxiety buffers in overcoming the terror that is associated with the awareness of the inevitability of death. Using two distinct hypotheses from TMT, we seek to assess the interface between these lenses. Firstly, if these motives (and more broadly identity) are important in buffering from death-related concerns then: (1) reminders of death should engender a need to affirm oneself as a source of these motives (Study 3); (2) threatening these motives should increase DTA and a need to re-affirm the motive that was threatened (Study 4).

Third, the current thesis seeks to place more emphasis on antecedents of threat perception, particularly concerning those that may be an important source of identity motives. Thus, we expect that social identity and ingroup essentialism (e.g., entitativity and natural kind beliefs) are predictors of perceiving symbolic and realistic threats to identity (Study 1 and 2), as well as increases in DTA when exposed to symbolic threats (Study 5). Additionally, given that the IRM places emphasis on social media representations in threat perception, and that essentialist beliefs are related to stereotyping which can be an antecedent of threat perception, we also explore the relationship between Muslim essentialism and threat perception (Study 2).

Finally, we seek to conclude the thesis by assessing the efficacy of current prejudice reduction strategies, taking into consideration the present findings of the

thesis, and the multiplicity approach of the IRM (Study 6 and 7). Specifically, we seek to explore two strategies: the first concerns how perceptions of the target group might be changed to reduce prejudice, whilst the second concerns how perceptions of the ingroup might be changed to reduce prejudice. In both cases, we investigate the extent to which these approaches can produce more positive attitudes and intentions towards Muslims; and we particularly consider these strategies in relation to TMT, which the thesis places centrally to understanding prejudice.

Chapter III:

A motivational perspective on realistic and symbolic threats to identity

Abstract

The first two studies of this thesis seek to explore the interface between intergroup threat and motive-based approaches to threat as outlined by the IRM. Utilising a framework of IPT and ITT these studies investigate how perceived realistic and symbolic threats may relate to a range of motives (esteem, efficacy, distinctiveness, belonging, continuity, and meaning) related to identity processes. In addition, the present two studies additionally explore how Social Identity (Study 1 & 2), as well as ingroup and outgroup essentialist beliefs (Study 2) are related to perceiving realistic and symbolic threats. Online surveys were conducted with 197 (Study 1) and 368 (Study 2) Non-Muslim, British nationals. The findings demonstrate that perceived symbolic and realistic threats are related to a gamut of motive threats related to British identity, and that these perceived motive threats mediated the relationship between realistic and symbolic threats to prejudice. In addition, strength of social identification (Study 1 & 2), and essentialist beliefs (Study 2) were positively related to perceiving realistic and symbolic threats. These findings support the idea that an integrated approach that utilises IPT, bolstered with contributions of SIT, ITT and Essentialism may offer a useful approach to understanding prejudices.

Introduction

Social Psychologists have considered threat perception as an essential concept in promoting negative intergroup relations and prejudicial attitudes (e.g., Tajfel & Turner, 1986; Stephan & Stephan, 2000; Greenberg et al., 1986). However, despite the ubiquitous agreement about the importance of threat perception in generating prejudice, threat has been deployed and conceptualised in various ways by researchers. For example, threat has been deployed as a perceived threat to the ingroup social identity (Tajfel & Turner, 1986), or as being perceived at a personal or collective level in the form of *realistic* and *symbolic* threats (Stephan & Stephan, 2000), or as an existential threat to worldviews (e.g., Greenberg et al., 1986). Other approaches have operationalised threat perception to specific motives such as one's sense of optimal distinctiveness (Brewer, 1991); belonging (Baumeister & Leary, 1995); continuity (Smeekes & Verkuyten, 2013, 2014a); self-esteem (e.g., Leary & Baumeister, 2000); meaning (e.g., Heine, Proulx, & Vohs, 2006; Hogg, 2000); or feelings of control and competency (e.g., Bandura, 1982; Kay, Whitson, Gaucher, & Vohs, 2009). The diverse and disparate approaches concerning threat perception in the literature leaves the concept lacking a unified definition and clear understanding of its impact upon identity.

It is the focus of this research to consider the extent to which all these approaches to threat perception may complement each other and be deployed within a singular framework (the IRM). By doing so, it is believed that this can overcome the shortcomings of any single one of these approaches, culminating in a parsimonious, yet elegant, definition of threatened identity that can explain fluctuations in prejudice (Cinnirella, 2014). The IRM borrows a lot of theorising from IPT (Breakwell, 1986;

Vignoles et al., 2006), which we believe provides a flexible and parsimonious framework to help elucidate the motivational interface between identity, threat, and coping. Specifically, the IRM suggests that perceiving intergroup threats (as outlined by ITT; Stephan & Stephan, 2000) can be considered to threaten a range of identity motives (as suggested by IPT; Cinnirella, 2014). As such, the IRM posits that perceived symbolic and realistic threats are distal predictors of prejudice, with perceived identity motive threats as proximal predictors. These studies provide the first empirical assessments of this claim. We briefly review both theories before exploring how these two approaches can be combined as suggested by the IRM.

Identity Process Theory

IPT (Breakwell, 1986; Vignoles et al., 2006) proposes that people identify with aspects of themselves to the degree that these aspects satisfy *identity motives* that permit identities to be adaptive and useful. Specifically, IPT posits that people are motivated to construct identities that allow them to feel positive about themselves (self-esteem); make them feel competent and have a sense of control (efficacy); offer them a sense of continuity across time and situation (continuity); have a sense of uniqueness (distinctiveness); as well as feelings of closeness to others (belonging); and finally, a sense of meaning to their life (meaning). The more that an identity element *satisfies* (and does not frustrate) these motives, the more *central* to identity (e.g, the self) it will be construed (Vignoles et al., 2006). In line with this theorising, cross-sectional and cross-lagged research exploring identity structures has supported that these motives make an independent contribution to identity construction at personal, relational and group levels of identity (Vignoles et al., 2002; Vignoles et al., 2006). Moreover, these motives are emphasised varyingly across individual identity structures (Vignoles et

al., 2002); and influence the assimilation of new identities into the self-concept (Easterbrook & Vignoles, 2012).

Interpreting a SIT (Tajfel & Turner, 1986) perspective through the lens of IPT, would suggest therefore that strength of ingroup identification would be the result of social identities better satisfying a wider range of identity motives than typically examined by SIT. Any valued social identity would therefore require continual maintenance and defence from perceived threat(s) due to its subjective importance to the individual self-concept, with threat potentially being responded to at multiple levels – individual, relational, or intergroup. This approach, like SIT, assumes that strong identifiers will be highly sensitive to perceived threats to the identity in question. Indeed, a common finding in the intergroup literature is that strength of in-group identification is an antecedent of threat perception and response (e.g., Branscombe et al., 1999; Riek et al., 2006). Moreover, low and high identifiers respond to perceived threats to social identity differently because of the relevance of said group to the self-concept (e.g., Branscombe & Wann, 1994; Wann & Branscombe, 1990). In the language of IPT, coping strategies in response to threat perception reflect the need to maintain an identity (and by extension the self) as a strong source of these identity motives.

Intergroup Threat Theory

The IRM also deploys aspects of ITT (Stephan & Stephan, 2000) to explain a typology of threats to identity. ITT outlines two basic types of threat: *symbolic* threats that are threats stemming from perceived differences in the meaning systems of groups and *realistic* threats, which concern perceived threats to the welfare of the ingroup, such as economic or safety-based threats. However, despite offering understanding into

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types of perceived threat, ITT does not provide insight into their impact on identity processes (Cinnirella, 2014). In contrast, IPT offers greater insight into how perceived threats (whether realistic or symbolic) may threaten identity by suggesting that they frustrate a range of identity motives, as well as outlining the ways in which people may seek to cope with threatened identity. Moreover, IPT elucidates individual differences in both threat perception and threat response depending on the extent to which each motive is emphasised in defining individual identity structures (e.g., Vignoles & Moncaster, 2007).

As such, a central claim to the IRM is that ITT and IPT can be combined in such a way that a better understanding of how and why perceived threats to identity lead to prejudice can be offered. The current thesis looks to investigate this claim by exploring the case of Islamophobia. This is because Islamophobia may be one of the most prevalent prejudices in Britain (e.g., Abrams & Houston, 2006; Pew, 2016, 2017). Moreover, non-Muslims may perceive Muslims as posing as both a symbolic and realistic threat to identity (Hitlan et al., 2007; Velasco-González et al., 2008; van der Noll et al., 2010), a so-called *hybridised* threat (Jaspal & Cinnirella, 2010). This therefore offers an opportunity to test our theorising about combining ITT and IPT while exploring a particularly timely prejudice, which appears to be prevalent across varied national contexts. Particularly, we aim to explore how different ITT threat types might relate to threatened identity motives, and therefore how identity motives may mediate the link between perceived realistic/symbolic threats and prejudice.

It should be noted that whilst the IRM attempts to offer a general model of threat perception and prejudice by deploying ITT and IPT, the actual relationships between intergroup threats and identity motives are likely to be highly context-specific

because they reflect the societal, temporal, contextual and cross-cultural variations that influence how intergroup threats impact upon identity processes. Indeed, IPT was specifically intended to address the dynamics between the social and individual (Breakwell, 1986). For example, previous IPT research has acknowledged the importance of considering the specific discourse and rhetoric used by both the media and individual when considering the construction of threat perception (Jaspal & Cinnirella, 2010; Jaspal, Nerlich, & Koteyko, 2012). Thus, the precise relationships between ITT and IPT elements we outline here should be considered specific to the intergroup context of Islamic-British relations. The broader approach being proposed, however, should generalise to any intergroup context – that is, the notion of exploring how specific perceived intergroup threats might threaten specific identity motives.

A motivational perspective on symbolic and realistic threats

Symbolic threats may be best characterised by a clash or conflict of group *meaning* systems. Exposure to conflicting worldviews (cf. meaning systems) can limit the extent to which they can be construed as meaningful (e.g., Greenberg, Solomon, & Pyszczynski, 1997). This might particularly be the case in Britain where the media have often implicitly, or sometimes explicitly, suggested that Islamic values are in direct conflict with notional 'traditional' or historic British values (e.g., Poole, 2011). The mass media in the UK also tend to position Muslims and Islam as challenging majority values and norms, implying that Muslims wish to challenge, revise and/or usurp these values (Cinnirella, 2014; for similar ideas *see* Smeekes et al., 2011; Verkuyten, 2013). In the language of IPT, this represents a perceived *continuity* threat due to concerns over the loss of ingroup traditions, norms, and values that are perceived to have important historical connotations for the group (Jaspal &

Yampolsky, 2011). Perceived threats to continuity may be particularly prominent when concerning groups such as the nation, as national culture is believed to be generationally inherited (Reicher & Hopkins, 2001; Smeekes & Verkuyten, 2013), but also may offer group members a sense of symbolic continuity beyond personal death (Lifton, 1973). Consequently, perceived loss of one's national identity may enhance a desire to maintain this motive, and subsequently derogate or discriminate against the perceived source of the threat to social identity (Smeekes & Verkuyten, 2013; see *also* Smeekes et al., 2014).

Perceived loss of ingroup norms and values may further threaten the *distinctiveness* motive, as these values are important defining elements of a group, which equip identifiers with a means of constructing a sense of distinctiveness in intergroup settings (Jaspal & Cinnirella, 2010). In turn, this may also limit the extent to which they can be used for *self-esteem* purposes in accordance with SIT (Tajfel & Turner, 1986). Moreover, the perceived challenge to British values also questions the validity of them, thus compromising the esteem motive further (Cinnirella, 2014). Indeed, research on esteem threats has typically defined perceived threats to group-esteem as a threat to the ingroup's inherent value (Branscombe et al., 1999), suggesting that perceived symbolic threats and threatened self-esteem are somewhat synonymous, at least in certain contexts.

An ingroup's system of values also likely affords a sense of efficacy in that it can break down perceived barriers to goal attainment thus offering an empowering function to its members (cf. Kelman, 1997). Indeed, social systems and norms can be important sources for feelings of personal control (e.g., Shephard, Kay, Landau, & Keefer, 2011). For example, some perceive British values to espouse a strong sense

of equal opportunities to all citizens (e.g., the right to vote) or freedom of speech offering a sense of efficacy to its members. However, the UK mass media often present Muslims and Islam as being in direct opposition to these values, by focusing on such issues as the veil, conversion, or Sharia law (Poole, 2011). Thus, social media representations of Muslims emphasising *constraint* vis-à-vis *freedom* (Jaspal & Cinnirella, 2010) can constitute a perceived threat to efficacy.

Media discourse has also focused on this perceived threat being posed both externally and from within the group (e.g., Poole, 2011). British-Muslims may therefore reduce feelings of group cohesiveness and lead to perceptions of group schisms (e.g., Sani, 2005) that may destabilise a sense of belongingness. The belonging motive may also be perceived to be threatened for majority members who derive a sense of belongingness from their perceived group prototypicality (Wenzel, Mummendey, & Waldzus, 2007). Minority groups within the overall ingroup (in this case British citizens) who constitute a perceived symbolic threat by deviating from the group prototype may destabilise the belonging motive, as this may suggest that prototypicality is not a requirement for member status or that the group prototype is changing (van Veelen, Otten, & Hansen, 2014). Indeed, majority members, particularly those who strongly identify with their group, tend to prefer assimilation strategies to acculturation as this allows them to retain a sense of their perceived prototypicality within the superordinate identity (Verkuyten & Brug, 2004), thus in turn, preserving and not impairing, the belonging motive.

In relation to realistic physical threats, British media reporting has placed considerable attention and emphasis on the perceived threat of terrorism since 9/11 that has shaped public discourse surrounding Muslims (e.g., Moore et al., 2008; Poole,

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2011). This perceived physical threat posed from terrorism may further crystallise threats to all these motives as terrorism similarly constitutes a perceived threat to worldview (Cinnirella, 2014), thus not only posing similar challenges to the validity of British values as outlined above, but also by seeking to annihilate the ingroup and its associated values. However, terrorism also promotes further concerns about the safety of British citizens and the impact it can have upon their activities (representing both a perceived realistic threat, in the language of ITT, and a perceived threat to the efficacy motive elucidated in IPT; Cinnirella, 2014). For example, terrorism has led to the introduction of increased security at airports and large sporting events, but can also influence people's decisions to use public transportation (*see* Rubin, Brewin, Greenberg, Simpson, & Wessely, 2005 for reactions after 7/7 London Underground bombings). The concern for personal or group safety can thus further exacerbate perceived threats to the *continuity* and *efficacy* motives (Cinnirella, 2014; Jaspal & Yampolsky, 2011).

Similarly, realistic economic threats may pose similar threats to these motives as access to material resources, and their relationship to power status, may contribute towards a meaningful identity (Arndt et al., 2004; Bebbington, 1999). Perceived realistic threats to these resources can be considered as one group blocking the goals of another group, thus limiting potential ingroup success (Riek et al., 2006; *see also* Brown, Maras, Masser, Vivian & Hewstone, 2001). In that sense, realistic economic threats can be perceived as threatening to group *meaning* and group *efficacy*; but they may also further undermine well-being and self-worth, implicating the *self-esteem* motive (Arndt et al., 2004; Riek et al., 2006). Additionally, members of high-status groups (such as Britain) tend to demonstrate increased bias on relevant dimensions that favour the group (such as economic and political power), as well as when that

relevant dimension is perceived to be threatened (Hewstone, Rubin, & Willis, 2002). This may be because in high-status groups, competition for resources may also be perceived to threaten the *distinctiveness* and *continuity* motives due to the current status quo benefitting the ingroup (Scheepers & Ellemers, 2005). Finally, the *belonging* motive may again be affected by the perception of group schisms and reduced cohesiveness (Sani, 2005), due to both the perceived minority group size (Quillan, 1995) and how certain minority members may be considered to have not contributed towards the British economy, and thus should not be befitting of member status (e.g., Pearce & Stockdale, 2009).

As such, we posit that perceived intergroup threats serve to threaten identity by frustrating a gamut of identity motives. Perceived threats to these motives will activate coping strategies that attempt to restore the social identity as a source of these motives. One way in which perceived threats posed by Muslims and Islam may be responded to, is via the endorsement of social representations that promote Islamophobic sentiment, leading to an increase in prejudice and hostility towards the targeted outgroup (Jaspal & Cinnirella, 2010). As such, prejudice may be viewed as a coping response to perceived identity threat that seeks to restore motives through intergroup discrimination and hostility (for similar perspectives *see* Fein & Spencer, 1997; Greenaway, Louis, Hornsey, & Jones, 2014; Smeekes & Verkuyten, 2013). Moreover, the number of motives under attack may particularly crystallise the psychological damage, proliferating prejudice as a response to the threat perception (Cinnirella, 2014).

Study one aims and hypotheses

The first study of this thesis attempts to offer an integrated perspective on threat perception and Islamophobic prejudice, with the central aim to explore the extent to which realistic and symbolic threats may be considered to threaten identity motives related to British identity processes. In addition, it also seeks to explore how strength of national identification and media news consumption may be antecedents of threat perception. An online survey was conducted with non-Muslim British nationals that took measures of British identification, television news consumption, symbolic and realistic threat of Muslims, as well as the six British identity motive threats (esteem, efficacy, continuity, distinctiveness, belonging and meaning). It also asked participants to rate their attitudes towards Muslims using a feeling-thermometer. The relationships between these constructs were tested using path analysis. It was expected that British identification and television news consumption would be positively related to perceiving Muslims as a realistic and symbolic threat. It was also expected that realistic and symbolic threats would be positively related to all British identity motive threats. In addition, it was hypothesised that the British identity motive threats would be positively related to prejudice. Finally, it was expected that the relationship between British identification and British identity motive threat should be mediated by perceived realistic and symbolic threats. Moreover, the relationship between perceived realistic and symbolic threats to prejudice should be mediated by the British identity motive threats. Figure 2 summarises the hypothesised relationship between these constructs.
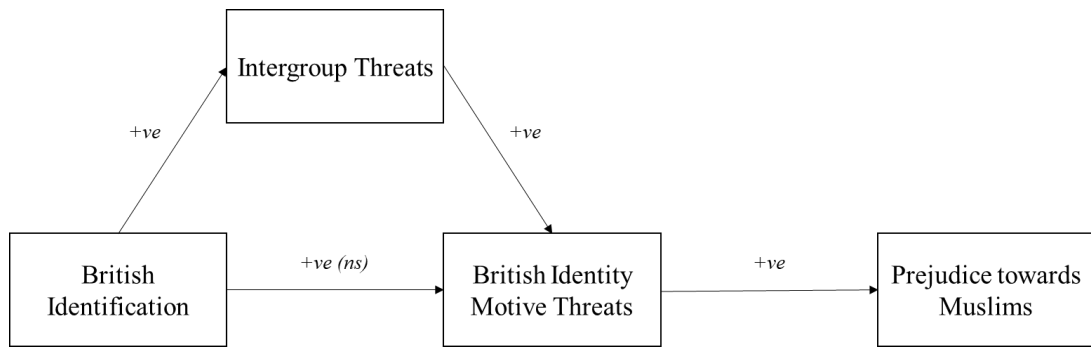
Figure 2: a graphical representation of the relationship between strength of British national identification (SIT) and threats to British identity motives (IPT) mediated by symbolic and realistic intergroup threats (ITT); and their relationship to prejudice towards Muslims. The expected relationship between British identification and threats to motivational principles after controlling for the intergroup threats is expressed in parentheses.

Method

Participants

Participants (N = 250) were recruited via social media and a range of British-based internet forums[4] to take part in a study on the perception of various minority groups in Britain. The sample size was decided by the number participants that could be recruited by end date. All participants were required to be British (defined as possessing, or qualifying to possess, a UK passport). There were 139 males, 109 females and 2 participants identified themselves as transsexual/intersex. The mean age of participants was 28.42 (SD = 11.22). Two participants identified themselves as Muslim and were filtered away from the key dependent measures and their data removed from the final sample. Additionally, 46 participants were judged to have insufficient data points (missing data >25%) to be included in the final analysis, and five participants were removed as their data indicated that they had not participated

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[4] We carefully selected where we advertised the study on social media and internet forums to ensure high exposure to British nationals, but in places that were not specifically related to British-related issues (e.g., political party groups) as these might have higher levels of nationalistic and possible anti-Islamic sentiment.

seriously[5]. The final sample therefore consisted of 197 British non-Muslim participants (*M* age = 29.38, *SD* = 11.90), with 109 males, 87 females and 1 transsexual/intersex. Participants were predominantly White British (83.8%), and of an atheist (73.6%) or Christian (23.9%) background, with an education level of Degree (71.1%) or A-Levels (20.8%). Additionally, participants indicated they resided in various regions of the UK: London (24.4%); South of England (29.7%); The Midlands and North of England (31%); Wales (5.1%) and Scotland (9.1%). Of this final sample, the expectation maximisation (EM) algorithm was used for any remaining missing data. EM is a method of handling missing data (rather than excluding the entire response) that can statistically input an estimated value based on a covariance matrix of all the variables in a dataset. However, it carries the assumption that the data be missing at random (Allison, 2002; Osborne, 2013). Little's MCAR test indicated that the data were missing at random (χ^2 (2971) = 2857.04, *p* =.188), thus there was no systematic pattern to the missing data, permitting the EM algorithm to be utilised to provide all participants with a full data set[6]. Ethical approval for this study was obtained from the Psychology Department Ethics Committee at Royal Holloway, University of London.

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[5] We computed a SD score for responses across all the variables in the dataset. This indicated that these participants had either clicked the same response all the way through, or showed very little deviation in their responses.

[6] Although techniques such as multiple imputation are often preferred for missing data handling, the analyses of the present study (e.g., bootstrapping) do not allow for multiple imputation procedures. In these situations, EM is the preferred method of missing data handling as it is a single imputation strategy (Bentler, 2006).

Measures and procedure

The survey was pitched as an exploration of an individual's perceptions of minority groups in Britain, to mask the true aim of the study and minimise socially desirable responding. The questionnaire included demographics and measures of television news consumption, British identification, intergroup threats, prejudice and threatened identity motives. For some of these measures, these items were repeated with decoy groups (Chinese and EU Migrants) but these responses were discarded for the final analysis. This was to ensure that participants would not suspect the real aim of the study as concerning Islamophobic prejudice, and therefore might minimise social desirable responding towards this group. Halfway through the survey, participants were informed that an on-screen 'click-to-spin' animated wheel would randomly allocate them one of these groups to answer further questions about. Unknown to participants, the wheel was rigged to always fall on Muslims as a group to answer questions about (the other labels included were the decoy groups). All measures utilised a seven-point Likert scale ranging from (1) strongly disagree to (7) strongly agree unless otherwise stated.

Television news consumption was measured using a single-item 'On average how often do you watch the news on TV?' on a five-point Likert scale ranging from (1) hardly ever to (5) every day.

British Identification was measured using a four-item scale (adapted from Vignoles et al., 2006): *'I feel that being British is "central" to my identity'*; *'I feel that being British is not important in defining who I am'* (reversed); *'I feel pleased about being British'* and *'I feel unhappy about being British'* (reversed). These items

provided an acceptable level of reliability (α = .75) with a higher score on this scale reflecting stronger identification with being British.

The *Intergroup threats* of economic and symbolic threat were measured using items adapted from Velasco-González et al. (2008), worded here to specifically measure perceived threats to Britain from Muslims. Symbolic threat measure included three items: *'British identity is threatened because there are too many Muslims'*; *'British norms and values are being threatened because of the presence of Muslims'* and *'Muslims are a threat to British culture'*. These items provided an excellent level of reliability (α = .95)**.** Our economic threat measure also had three items: *'Because of the presence of Muslims, British people have more difficulties in finding a job'*; *'Because of the presence of Muslims, British people have more difficulties in finding a house'* and *'Because of the presence of Muslims, unemployment in Britain will increase'*. These items provided a good level of reliability (α = .90). Physical threat was measured using three-items developed in-house that aimed to assess the perceived threat of terrorism perpetrated by Muslims. We chose to operationalise physical threat relating to Muslims by referencing the threat of terrorism because of the convincing body of evidence cited earlier which demonstrates that the British mass media have focused on *Islamic* terrorism consistently when terrorism is reported (e.g., Moore et al., 2008). These terrorist threat items were: '*Because of terrorism, Muslims pose a real threat to British society'*; '*Because of terrorism, Muslims threaten the safety of British people'* and '*Because of terrorism, Muslims are a threat to British infrastructure (e.g., airports, transportation services, energy, and water supplies)'*. These items provided an excellent level of reliability (α = .98). Higher scores on these scales reflect stronger feelings of threat.

Prejudice towards Muslims was measured using a feeling-thermometer (Velasco-González et al., 2008). Responses were provided on an 11 point-Likert scale ranging from 'Intensely cold or unfavourable feeling' (1) to 'Intensely warm or favourable feeling' (11). This scale was reversed, so that a higher score reflects higher negative feelings towards Muslims.

Threatened identity motives as suggested by IPT were measured using six single-item scales developed in-house that aimed to assess an individual's perception that British identity was threatened by Muslims. These items were (with the specific IPT threat in brackets) : *'I feel that Muslims in Britain are causing people to feel less positive about being British'* (esteem); *'I feel that Muslims in Britain are causing Britain to change as a nation in a negative way'* (continuity); *'I feel that Muslims in Britain are changing what it means to be British in a negative way'* (meaning); *'I feel that Muslims in Britain hinder Britain and British people from achieving its/their goals'* (efficacy); *'I feel that Muslims in Britain are diluting the unique aspects associated with being British'* (distinctiveness) and *'I feel that Muslims in Britain are weakening the sense of connection that people have with Britain and other British people'* (belonging). Higher scores on these items reflected stronger feelings of identity motive threat.

Results

Means, standard deviations, and bivariate correlations of all the measured variables are displayed in table 1 below. Path analysis was conducted using Amos (version 21) using bootstrapping of 1000 samples to test for mediation effects (Preacher & Hayes, 2008). Bootstrapping analyses are a random resampling of a subsample of the data numerous times (typically at least 1000) to produce more reliable estimates of effects (e.g., Singh & Xie, 2010). Goodness-of-fit was assessed using chi-square tests, root mean square of approximation (RMSEA) and the comparative fit index (CFI), whereby a good fitting model would be indicated by a non-significant chi-square test, a value of RMSEA less than .06 and a CFI value greater than 0.95 (Hu & Bentler, 1999).

We first tested a full mediation model (model 1a) where British identity and TV news consumption had pathways to intergroup threats (e.g., symbolic and realistic threat), which in turn had pathways to the six motive threats which finally had pathways to our prejudice dependent measure. The residual variances of the predictor variables were also allowed to correlate with each other (Cole, Ciesla, & Stieger, 2007).

Table 1: Means, standard deviations and correlations among the measured variables

	1	2	3	4	5	6	7	8	9	10	11	12
1. British identity												
2. TV consumption	.16*											
3. Economic threat	.29***	.05										
4. Physical Threat	.33***	.18**	.59***									
5. Symbolic threat	.35***	.12+	.64***	.81***								
6. Esteem	.29***	.11	.51***	.51***	.58***							
7. Efficacy	.21**	.12	.68***	.69***	.77***	.58***						
8. Continuity	.31***	.10	.57***	.72***	.79***	.62***	.75***					
9. Distinctiveness	.29***	.15*	.60***	.75***	.84***	.59***	.78***	.78***				
10. Belonging	.34***	.15*	.60***	.73***	.76***	.61***	.80***	.78***	.86***			
11. Meaning	.30***	.15*	.64***	.69***	.77***	.65***	.72***	.84***	.80***	.75***		
12. Prejudice	.31***	.09	.53***	.65***	.71***	.49***	.68***	.68***	.68***	.69***	.66***	
Mean	4.16	3.16	2.14	2.78	3.07	3.19	2.28	3.10	2.78	2.63	2.77	5.27
SD	1.22	1.56	1.22	1.72	1.74	1.82	1.53	1.84	1.84	1.67	1.72	2.30

***$p < .001$; **$p < .01$; *$p < .05$; +$p < .10$

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This model proved to be a reasonably good fit for the data (χ^2 (17) = 32.22, p = .014; CFI = .992; RMSEA = .068). However, modification indices suggested that the model could be improved by placing a direct path from British identity to perceived efficacy threat. This model (1b) proved to be an even better fit (χ^2 (16) = 22.01, p = .143; CFI = .997; RMSEA = .044) and was a significant improvement over the first model ($\Delta\chi^2$ (1) = 10.21; $p < .001$). Modifications also suggested that placing a direct effect of perceived symbolic threat on prejudice towards Muslims would also improve model fit. This model (1c) proved to be an excellent fit for the data on all fit indexes (χ^2 (15) = 11.40, p = .724; CFI = 1.000; RMSEA = .000) and was a significant improvement over model 1b ($\Delta\chi^2$ (1) = 10.61; $p < .001$).

Table 2 presents the regression coefficients for the direct effects. The findings appear to confirm our hypotheses concerning intergroup and motive threats. Perceived symbolic threat was positively related to all six perceived motive threats, whilst the perceived physical threat of terrorism positively predicted all identity motive threats except group esteem ($p > .500$), and perceived realistic economic threat positively predicted all identity motives except group continuity (although was trending towards significance $p < .150$). However, when it came to the perceived motive threats predicting prejudice, only the perceived threats to efficacy and belonging, as well as perceived symbolic threat predicted prejudice towards Muslims. However, it should be noted that the high correlations shared between the motive threats might suggest that they were all competing to explain the same variance in prejudice.

Table 2: Standardised regression coefficients of direct effects on intergroup threats

Dependent variable	Predictors	β
Economic threat (R^2=.09)	British Identity	.29***
	TV news consumption	.00
Physical threat (R^2=.13)	British Identity	.31***
	TV news consumption	.14*
Symbolic threat (R^2=.13)	British Identity	.34***
	TV news consumption	.07
Esteem threat (R^2=.38)	Economic threat	.22**
	Physical threat	.05
	Symbolic threat	.38***
Efficacy threat (R^2=.67)	Economic threat	.31***
	Physical threat	.14*
	Symbolic threat	.50***
	British Identity	-.11*
Continuity threat (R^2=.65)	Economic threat	.08
	Physical threat	.21**
	Symbolic threat	.56***
Distinctiveness threat (R^2=.73)	Economic threat	.09[+]
	Physical threat	.19**
	Symbolic threat	.63***
Belonging threat (R^2=.64)	Economic threat	.16**
	Physical threat	.29***
	Symbolic threat	.40***
Meaning threat (R^2=.64)	Economic threat	.24***
	Physical threat	.12[+]
	Symbolic threat	.51***
Prejudice towards Muslims (R^2=.58)	Esteem threat	-.02
	Efficacy threat	.15[+]
	Continuity threat	.07
	Distinctiveness threat	-.05
	Belonging threat	.23*
	Meaning threat	.12
	Symbolic threat	.32***

*** p<.001; ** p<.01; * p<.05; [+] p<.10

Finally, bootstrapping analyses using 1000 bootstrapped samples and a 95%

confidence level were conducted to assess the indirect effects of: (1) British identity

and television news consumption (predictors) on perceived motive threat and

prejudice (outcomes) through the intergroup threats (mediators), and (2) perceived

intergroup threats (predictors) on prejudice (outcome) through the motive threats (mediators). Whilst indirect effects of the intergroup threats onto prejudice could be tested via each motive threat separately (e.g., 18 indirect effects in total), it goes beyond the scope of the analysis to explore this. Instead, our analysis concerns how well all six motive threats mediate the link between intergroup threats and prejudice, rather than *which* motive threat(s) are mediating the link. When the confidence level does not include zero, bootstrapping indicates that significant mediation has occurred. All effect sizes (ES) are given as standardised.

For British identity, bootstrapping analyses revealed that perceived intergroup threats significantly mediated the relationship to perceived threatened esteem (*ES* = .22, 95% Cl .13-.32), efficacy (*ES* = .30, 95% Cl .17-.44), continuity (*ES* = .28, 95% Cl .16-.41), distinctiveness (*ES* = .30, 95% Cl .17-.43), belonging (*ES* = .28, 95% Cl .16-.40), meaning (*ES* = .28, 95% Cl .17-.40) and prejudice towards Muslims (*ES* = .24, 95% Cl .12-.36). In contrast, bootstrapping indicated that no mediation had occurred to any of these perceived motive threats when considering television news consumption, as all confidence levels included zero.

Bootstrapping analyses also indicated that perceived motive threats had significantly mediated the relationship between symbolic threat (*ES* = .24, 95%Cl .09-.41), economic threat (*ES* = .11, 95%Cl .05-23) and the physical threat of terrorism (*ES* = .11, 95%Cl .03-.24) to prejudice towards Muslims.

Discussion

The first study provides support for the claim that a hybrid approach of ITT and IPT, as outlined by the IRM, may be useful in understanding prejudice. Using the case of Islamophobia in the UK, the current findings support the hypothesis that perceived

intergroup threats, outlined by ITT, may be related to perceived identity motive threat, as suggested by IPT, that are important in identity formation and maintenance. The findings also suggest that the link between perceived intergroup threats and prejudice was mediated by perceived identity motive threats. Additionally, our findings demonstrated that British identity is an antecedent of all perceived intergroup threats, whilst media news consumption is an antecedent of perceiving a realistic terrorist threat. This latter finding converges with sociological media analyses that highlight the prevalence of terrorism reporting in the British media (e.g., Moore et al., 2008), and ideas that increased exposure to this reporting might lead to agenda-setting effects (e.g., McCombs & Shaw, 1972).

However, the current findings present a few notable exceptions to the above notion that intergroup threats predict identity motive threats. Firstly, perceived economic threat did not predict perceived continuity threat (although was not far off statistical significance), and perceived terrorism threat did not predict perceived group esteem-based threats. However, that is not to say that the perceived threat of terrorism is unrelated to esteem threat, but that esteem-based threats here were better predicted by symbolic and realistic economic threats. Terrorism might only be linked to threatened group esteem when terrorism serves as a perceived worldview threat that emphasises the perceived symbolic differences between Islam and Britain. As such, the relationship(s) between intergroup- and motive-based approaches may be denoted by how individuals construct the threat, utilising a backdrop of media and social representations in concretising the threat.

Our findings also supported the idea that strength of social identification is an antecedent of perceiving a threat (e.g., Branscombe et al., 1999; Riek et al., 2006),

although also demonstrated the unexpected occurrence of a negative relationship between British identity and perceived efficacy threat after having statistically controlled for perceived intergroup threats. This finding should be approached with caution due to its exploratory nature. However, we would tentatively suggest that this finding, emerging in the absence of intergroup threat, might reflect that it is important to not just examine the membership component of social identities, but also the beliefs and contents associated with them (for similar ideas *see* Oyserman, 2009; Reicher & Hopkins, 2001). For example, as we previously stated, British identity may serve the efficacy motive by empowering its members through certain values (cf. Kelman, 1997), that may be threatened by the perceived cultural differences between Britain and Islam. However, it may also be that the presence of British-Muslims could affirm British values such as diversity and multiculturalism, hence producing a negative relationship after the perception of threat is statistically removed. Thus, the precise relationship of identity to perceived motive threat may be dependent upon beliefs associated with specific social identities.

Study two

The aims of the next study were two-fold: we sought to replicate the present findings of the compatibility of ITT and IPT using a new and larger sample. In addition, we also looked to investigate other potential antecedents of threat perception, particularly the beliefs component of identity (Oyserman, 2009), as well as beliefs about Muslims. Specifically, the present study focuses on *natural kind* and *entitativity* beliefs, two types of essentialist beliefs (Haslam et al., 2000, 2002). This is because prior research has suggested they are related to prejudice (e.g., Andreychik & Gill, 2015; Haslam et al., 2002; Pehrson et al., 2009; Effron & Knowles, 2015). Moreover, because as

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discussed in the literature review chapter, they may be beneficial in satisfying the motives under current examination (e.g., Hogg, 2009; Castano, 2004a; Sani et al., 2007; Yzerbyt et al., 2000).

Essentialism

Haslam and colleagues (2000, 2002) research has suggested that essentialist beliefs may be defined by two distinct components. Their research assessed nine separate essentialist beliefs across a variety of social categories and suggested that these fell on two distinct factors. The first they termed *natural kinds*, that includes the belief that categories are natural (and not artificial), historically stable, with fixed boundaries, and membership that is immutable and determined by necessary features. The second factor labelled *entitativity* included the beliefs that groups have an underlying essence and homogeneity, which makes knowledge of membership as a rich source of inferences, and excludes members from belonging to other groups.

In that sense, natural kind beliefs often imply a sense that a group is naturally occurring, with membership being genetically determined or "in the blood" (e.g., Hamilton, 2007; Haslam et al., 2000; Pehrson et al., 2009; although see Rangel & Keller, 2011 for ideas of socially influenced natural kind beliefs). Entitativity beliefs are the view that groups constitute a *real* and meaningful entity that is a rich source of inductive potential (e.g., Campbell, 1958; Rothbart & Taylor, 1992; Hamilton, 2007; Haslam et al., 2000). As such, entitativity beliefs may concern perceptions that are relevant to the psychological or behavioural properties of the group (Andreychik & Gill, 2015).

Whilst research has considered these beliefs in prejudice formation (e.g., Andreychik & Gill, 2015: Pehrson et al., 2009; Zagefka et al., 2012), no research has

considered whether ingroup *and* outgroup essentialist beliefs concurrently predict prejudice, and moreover, that the way in which these beliefs relate to prejudice may depend on whether they concern beliefs about *us* or beliefs about *them.* In addition, whilst some studies have explored the interface between entitativity and natural kind beliefs in prejudice (e.g., Andreychik & Gill, 2015), most literature has explored these beliefs separately, thus potentially ignoring the interplay that these beliefs may have in prejudice formation. The current study therefore seeks to address this gap in the literature.

Ingroup essentialism

Concerning ingroup essentialist beliefs, prior research has found that essentialist beliefs satisfy a range of identity motives and existential concerns, thus facilitating identification to groups (e.g., Castano et al., 2003a; Herrera & Sani, 2013; Sani et al., 2007). However, they also may make individuals more susceptible to perceiving threats because they provide clearer distinctions of "who we are" and "who we are not" that may increase concerns over group contamination, trespassing and change (Zagefka et al., 2010, 2012).

For example, natural kind beliefs imply that certain individuals (e.g., British-Muslims) cannot be a member because they do not have it "in their blood", and as such their presence is perceived to be threatening to group continuity and "real Britishness" (Pehrson et al., 2009; Smeekes & Verkuyten, 2014a; Zagefka et al., 2012). As such, natural kind beliefs that imply the group is historically invariant, with clear-cut boundaries that are impermeable, may particularly be related to perceiving Muslims as threatening to the group because they imply that the group should not be

prone to socio-cultural shaping (e.g., Smeekes & Verkuyten, 2014a; Zagefka et al., 2012).

Similarly, as entitativity provides clear group prototypes (e.g., Hogg, 2009), it may be associated with increased sensitivity to those who deviate from this prototype. This is often reported to be the case with British-Muslims who are deemed to be in direct conflict with British values (Jaspal & Cinnirella, 2010; Cinnirella, 2014; Poole, 2002). As such, a common response may be to derogate those members (black-sheep effects; Marques & Paez, 1994), which prior research indicates is most prominent when the group is perceived as highly entitative (Lewis & Sherman, 2010). Additionally, individuals may choose to exclude these members as a strategy to maintaining ingroup entitativity (Castano, 2004b).

Alternatively, another reason why ingroup entitativity beliefs may be related to prejudice is that they not only increase the perception of threat, but may also legitimise the display of prejudice. This is because entitativity leads to a perception that group members are in pursuit of collective interests, and that prejudice is more acceptable when protecting the groups' collective interest from those that challenges its' symbolic or realistic well-being (Effron & Knowles, 2015). As such, it is argued that entitativity produces a 'licensing effect' that legitimises the expression of implicitly held biases. Supporting this notion, Effron and Knowles (2015) find that when the ingroup is highly entitative, individuals are more likely to view prejudice as socially acceptable, and it increases the effect of social identification on prejudicial attitudes.

In sum, whether concerning ingroup natural kind or entitativity beliefs, it is believed these beliefs should be related to Islamophobic prejudice via increasing the

perception of threat. However, research has also identified that this should particularly be the case for those who strongly identify with the ingroup (Effron & Knowles, 2015; Pehrson et al., 2009), thus suggesting that these beliefs may produce a moderating effect on the link between social identity and threat perception.

Outgroup essentialism

A lot of what makes essentialist beliefs so appealing to see in one's own group, may conversely be the reason that essentialist beliefs about outgroups are commonly associated with negative intergroup outcomes such as stereotyping (Bastian & Haslam, 2006, 2007; Spencer-Rodgers et al., 2007), threat perception (Abelson et al., 1998; Castano et al., 2003b) and prejudice (Haslam et al., 2002).

Whilst ingroup entitativity may lead to perceptions of group homogeneity and a clear group prototype, these same beliefs when concerning the outgroup may make the category richly informative. As such, perceptions of entitativity have been found to be associated with stereotype endorsement (Spencer-Rodgers et al., 2007; although see also Bastian & Haslam, 2006 for immutability beliefs predicting stereotyping) and preferences for stereotype-consistent behaviour (Bastian & Haslam, 2007). When these stereotypes are negative, as such is the case with Muslims in many Western nations (Richardson, 2004), these stereotypes can be considered antecedents of threat perception (Riek et al., 2006).

Similarly, whilst ingroup entitativity can facilitate perceptions of collective cohesion, unity and action, this sense of cohesion and intentionality in relation to an outgroup can make them seem more threatening (Castano et al., 2003b). Moreover, this sense of intentionality and cohesion that is associated with entitativity beliefs may also increase perceptions of collective responsibility (Lickel et al., 2003) and vicarious

retribution against group members (Stenstrom et al., 2008). For example, Doosje and colleagues (2007) demonstrate that the degree to which terrorists are perceived as prototypical Muslims predicts perceptions that the wider Islamic community shares responsibility for attacks they carried out. This is because outgroup entitativity can imply other members are indirectly encouraging said behaviour or failing to prevent said behaviour (Lickel et al., 2003). Consequently, these inferences may make other Muslims *guilty-by-association*, and make them suitable candidates for hostility and prejudice even if they did not directly commit these attacks.

In relation to natural kind beliefs, the evidence for their association to negative intergroup relations is less clear. Findings have demonstrated that beliefs in biological explanations of group behaviour, a type of natural kind belief, are associated with prejudice towards Blacks (Andreychik & Gill, 2015; Jayaratne et al. 2006). In contrast, Haslam et al. (2002) found that only entitativity beliefs, not natural kind beliefs, were associated with prejudice. However, they did find relationships between specific types of natural kind beliefs and prejudice towards homosexuals, although not always in the expected direction. Similarly, Haslam and Levy (2006) found that immutability beliefs (an aspect of natural kind beliefs) are associated with *decreasing* levels of prejudice towards homosexuals.

There are a few possible reasons for the discrepant findings. Firstly, the findings here might represent the category specific nature of essentialist beliefs and their relationship to prejudice (e.g., 'race' versus 'sexuality'; see Haslam et al., 2002). Secondly, is the way in which these studies have operationalised natural kind beliefs. For example, both studies that support the role of perceived biological explanations of behaviour as increasing prejudice, operationalise this as the differences of Blacks vis-

à-vis Whites (Andreychik & Gill, 2015; Jayaratne et al., 2006). This use makes it unclear to us which group is being essentialised; the ingroup, outgroup or both? In addition, the emphasis on this being an explanation for differences between these groups, in our view, incorporates considerable overlap with ideas of perceived symbolic threat, therefore further research is needed to understand the relationship these beliefs may have towards prejudice.

Moreover, both these studies focus on a type of natural kind belief; namely the belief in biological determinants of group behaviour. It might therefore be that the extent to which natural kind beliefs are associated with prejudice, might be to the extent that these beliefs coalesce with ideas that group behaviour might be biologically and/or genetically determined. For example, immutability beliefs imply that membership to a group is fixed, and this might possibly be due to a belief in some sort of biological determinant to groups. We believe this explanation would therefore reconcile why Haslam's research (Haslam et al., 2002; Haslam & Levy, 2006) finds that specific natural kind beliefs are related to prejudice, but not the entire natural kinds factor.

Moreover, we propose that the relationship between target group natural kind beliefs and prejudice may also depend on the extent to which the group is also seen as highly entitative. This is because entitativity is the perception of group unity, whilst natural kind beliefs are an explanation of this unity (Lee et al., 2013). As we have previously outlined, outgroup entitativity beliefs can be richly informative about behaviour. When these behaviours can be further attributed to something immutable, potentially biological, it should increase the perceived threatening nature of the group because it implies that the group cannot "change", or that the potential for these

behaviours are "lurking beneath the surface" of all group members (Andreychik & Gill, 2015; Denson et al., 2006). Indeed, news reporting of terrorism often decontextualizes behaviour, and emphasises the Muslim identity as the sole reason for behaviour (Poole, 2011). In short then, we expect that Muslim natural kind beliefs should enhance the relationship between entitativity and threat perception. Supporting this reasoning, Denson et al. (2006) found that essentiality (cf. natural kind beliefs) increased the effect of entitativity on collective responsibility, and Andreychik and Gill (2015) demonstrate that prejudice was highest when the group was viewed as both highly entitative and high in bio-essentialism. Moreover, Haslam et al's (2000) findings demonstrate that groups that were essentialised on both dimensions tended to be ones that are most maligned in the social arena.

Study two aims and hypotheses

The present study has two aims. Firstly, we aim to replicate the findings of Study one concerning the relationship between perceived intergroup and motive threats. In addition, we aim to explore the role of types of essentialist beliefs in prejudice, and expand upon previous research in notable ways. Firstly, no research to our knowledge has explored whether ingroup and outgroup essentialism are independently related to prejudice, examining either beliefs about *us* (e.g., Effron & Knowles, 2015; Pehrson et al., 2009; Zagefka et al., 2012) or about *them* (e.g., Andreychik & Gill, 2015; Haslam et al., 2002; Jayaratne et al., 2006). Second, a large majority of this research reviewed above has often considered either the impact of entitativity *or* natural kinds on intergroup relations, with only one study to our knowledge explicitly exploring these components together in relation to prejudice (Andreychik & Gill, 2015). Moreover, Haslam et al's (2002) research has suggested that there may exist complex

relationships between specific beliefs and prejudice, but little research has explored this. Therefore, the aims of this research are: (i) whether ingroup and outgroup beliefs are independently related to prejudice; (ii) the nature of the relationship between these beliefs and prejudice depend on whether they are about *us* or *them*; and (iii) add to the scarcity of literature concerning the interplay between entitativity and natural kind beliefs on prejudicial attitudes.

An online survey was conducted with non-Muslim British nationals that took measures of: national identification, essentialist beliefs about the categories Britain and Muslims, the perception of symbolic and realistic threats of Muslims, British identity motive threats, and finally a feeling-thermometer assessing levels of prejudice towards Muslims. Factor analysis was conducted to assess the possibility of a two-factor structure of essentialism (e.g., natural kinds, and entitativity) for the categories Britain and Muslim, and path analysis was used to explore the relationships between the measured variables.

Regarding British essentialist beliefs, it is expected that both natural kind and entitativity will be positively related to perceiving symbolic and realistic threats, but this will be most apparent for those high in British identification. In respect to Muslim essentialist beliefs, it is believed that only entitativity will be related to perceiving symbolic and realistic threats. However, it is expected that this will be strongest amongst those who not *only* view the group as high in entitativity, but also perceive the category Muslims as a natural kind.

Moreover, given that the previous findings concerning natural kind beliefs have suggested that they are related because they imply differences between groups may be attributable to something biological (e.g., Andreychik & Gill, 2015; Pehrson

et al., 2009; Zagefka et al., 2012), we will also explore whether there are specific relationships between natural kind beliefs and perceived symbolic and realistic threat. Finally, we also expect to replicate the findings of Study one concerning the relationships between perceived realistic and symbolic threats and British identity motive threat.

Method

Participants

Participants (N=592) were recruited to take part in an online survey. Participants were recruited via social media, British-based internet forums, as well as a local high school. Again, the sample size was determined by the number of participants that could be recruited by a certain end date. Of these, 159 participants were judged to have insufficient data points (missing data >25%) to be included in the final analysis, and 50 participants did not meet the sample criteria (29= not British; 21= Muslim). The expectation maximisation (EM) algorithm was used for any remaining missing data to retain power. Little's MCAR test indicated that the data were missing at random (χ^2 (1972) = 1976.31, p=.468), thus there was no systematic pattern to the missing data, and allowing the EM algorithm to be utilised to provide all participants with a full data set. Finally, Median Absolute Deviation was calculated and outliers assessed by 3 SD from the median (Leys, Ley, Klein, Bernard & Licata, 2013). 15 participants were excluded on this basis. The final convenience sample therefore consisted of 368 non-Muslim British participants (M_{age} = 24.35, SD_{age} = 11.79), with 117 males, 246 females and 2 transsexual/intersex (three participants did not provide this information). Again, participants were predominantly White British (83.1%), and mostly identified as an atheist (68.1%) or a Christian (26.4%).

Measures and procedure

The survey was pitched as an exploration of an individual's beliefs about various social groups in Britain in attempt to mask the true aim of the study and minimise socially desirable responding. After first answering questions concerning British identity and beliefs, participants were again presented with the 'click-to-spin' wheel used in the first study that they were informed would randomly determine them another social group to answer further questions about. Like with Study one, this wheel always landed on Muslims so all participants answered questions concerning Muslims.

British Identification was measured using a seven-item scale taken from Cinnirella (1997). We chose to change to a more validated measure of British identification to ensure that our findings were reproducible with other measures of identification. Sample items include: *'To what extent do you feel British?'*; and *'How important to you is being British?'*. These items provided a good level of reliability (α = .87) with a higher score on this scale reflecting stronger identification. Responses were provided on a seven-point Likert scale with extremely (7) and not at all (1) as the scale anchors.

Essentialism scales were taken from Haslam et al. (2000, 2002) and were repeated twice in response to both participants' beliefs about the social categories 'British' and 'Muslim'. These nine items aimed to tap into a range of elements associated with essentialist beliefs including discreteness, uniformity, informativeness, naturalness, immutability, stability, inherence, necessity, and exclusivity. These items were rated on seven-point Likert scales and had personalised scale anchors (Haslam et al., 2000). The scales for necessity, uniformity,

informativeness, inherence, and exclusivity were reverse scored. A Principal Component Analysis will be used to explore the structure of these beliefs.

The measures for *intergroup threats* and *threatened identity motives* were the same as used in the first study[7]. The symbolic threat (α = .93), economic threat (α = .91) and physical threat of terrorism (α = .95) all provided an excellent level of reliability. In addition, *prejudice towards Muslims* was measured using the feeling-thermometer that was deployed in Study one.

Results

A principal components analysis using varimax rotation was first conducted on the nine essentialist items to assess the structure of essentialist beliefs for the social categories Muslims and Britain. A two-factor structure was confirmed for Britain, whilst a three-factor structure was extracted for Muslims. For both categories, the beliefs of inherence, informativeness, exclusivity, uniformity, and necessity[8] resembled one factor that closely matches the *entitativity* dimension found by Haslam et al. (2000, 2002). The second factor for both categories included the beliefs of discreteness, immutability, and stability, whilst naturalness was included in this factor when concerning beliefs about Britain, but was a distinct factor when concerning essentialist beliefs about Muslims[9]. This second factor resembles the *natural kinds* dimension also found by Haslam et al. (2000, 2002). All items had factor loadings of

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[7] The item for meaning was changed to '*I feel that Muslims in Britain are devaluing the meaning of being British*' due our belief that the previous wording has too much overlap with continuity threat.

[8] It should be noted that in Haslam et al's (2000, 2002) research, necessity was found to be part of the natural kinds factor. However, Keller's (2005) research also found necessity beliefs to belong to the entitativity factor, so our findings are not entirely inconsistent with prior research.

[9] Exploratory multiple regression analyses of the expected variables and the Muslim naturalness belief as a separate predictor yielded no significant results, thus we dropped this belief from the final analysis and it will be discussed no further.

>.50 (for precise loadings and variances of each factor, *see* Appendix table 1). Subsequently, composite scores of each latent factor were computed to use in the analysis. In line with Aiken & West (1991), all predictor variables were standardised before interaction terms were computed[10].

Means, standard deviations, and bivariate correlations of all the measured variables are displayed in table 3 below. As with Study one, path analysis was conducted with Amos (version 21), using bootstrapping of 1000 samples to test for mediation effects (Preacher & Hayes, 2008). Any significant interactions were probed using simple slopes analyses with values computed at one standard deviation above and below the mean (Aiken & West, 1991). Goodness-of-fit was assessed using the same criteria as applied in Study one.

We first tested a full mediation model (1a) where British identity and the essentialism factors predicted perceived intergroup threats, which then predicted perceived motive threat, which then in turn predicted prejudice towards Muslims. The residual variances of the predictors and mediating variables were permitted to correlate with each other. This model proved to be a reasonably good fit for the data (χ^2 (73) = 97.04, p =.032; CFI = .993; RMSEA = .030).

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[10] Despite having only specific hypotheses for interactions, we nonetheless probed the data for any possible interactions that we did not anticipate. Only one was identified between Muslim *natural kinds* and British *entitativity* (all other p's>.10); all other non-predicted interactions were disregarded from any model testing.

Table 3: Bivariate correlations, means and standard deviations of all the measured variaes

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.
1. British identity															
2. British natural kinds	.36***														
3. British entitativity	.19***	.33***													
4. Muslim natural kinds	.16**	.09+	.20**												
5. Muslim entitativity	.32***	.29***	.36***	.20**											
6. Symbolic threat	.39***	.26***	.29***	.36***	.44***										
7. Physical threat	.32***	.27***	.25***	.22***	.25***	.40***									
8. Economic threat	.34***	.25***	.29***	.29***	.33***	.39***	.70***								
9. Esteem	.29***	.20***	.13*	.15**	.22***	.33***	.69***	.59***							
10. Efficacy	.23***	.22***	.19***	.17**	.33***	.55***	.46***	.46***	.54***						
11. Continuity	.28***	.19***	.17**	.19***	.35***	.74***	.66***	.53***	.46***	.69***					
12. Distinctiveness	.33***	.28***	.19***	.24***	.34***	.72***	.58***	.59***	.51***	.65***	.73***				
13. Belonging	.34***	.26***	.19***	.26***	.34***	.73***	.60***	.55***	.72***	.62***	.69***	.76***			
14. Meaning	.33***	.19***	.24***	.28***	.33***	.75***	.58***	.56***	.75***	.74***	.74***	.76***	.76***		
15. Prejudice	.22***	.14**	.14**	.16**	.28***	.57***	.56***	.51***	.52***	.54***	.54***	.51***	.56***	.54***	
Mean	4.71	3.87	3.77	4.77	4.67	2.91	2.61	2.47	2.95	2.17	2.84	2.73	2.63	2.51	5.10
SD	1.09	1.00	1.04	1.15	1.04	1.54	1.58	1.36	1.61	1.37	1.63	1.66	1.64	1.57	1.99

***$p<.001$; **$p<.01$; *$p<.05$; +$p<.10$

Exploring modification indices however suggested that the model could be improved by inputting a direct path from the interaction of British identity and British entitativity to prejudice. This model (1b) proved to be a better fit for the data (χ^2 (72) = 87.66, p = .101; CFI = .995; RMSEA = .024) and was a significant improvement over the first model ($\Delta\chi^2$ (1) = 9.38; p = .002). However, further modifications suggested the model could be improved by inputting a direct effect of the perceived physical threat of terrorism on prejudice. Inputting this pathway (model 1c) led to an excellent model fit (χ^2 (71) = 73.19, p = .499 CFI = .999; RMSEA = .009) and again proved to be a significant improvement over model 1b ($\Delta\chi^2$ (1) = 14.47; $p < .001$). Table 4 presents the regression coefficients for the significant direct effects in model 1c.

The findings largely confirmed our predictions. British identity, as well as both British essentialist belief types positively predicted perceived intergroup threats (although the relationship between British natural kind beliefs and perceived symbolic threat was not statistically significant). These were qualified by an interaction between British identity and entitativity beliefs; however, there was no presence of an interaction concerning British natural kind beliefs and identification in predicting intergroup threats. For Muslim essentialist beliefs, entitativity positively predicted perceived intergroup threats, whilst there was an unexpected finding of Muslim natural kinds positively predicting perceived economic threat. These effects were qualified by the expected interaction between the Muslim natural kind and entitativity factors in predicting perceived symbolic threat and the physical threat of terrorism (the interaction did not reach significance for economic threat). Additionally, there was an unexpected interaction between British entitativity and Muslim natural kinds in predicting perceived symbolic threat and the physical threat of terrorism.

Table 4: Standardised coefficients of the significant direct effects of model 1c

Dependent variable	Predictors	β
Economic threat (R^2=.22)	British Identity (BI)	.16**
	British Natural Kind (BNK)	.11*
	British Entitativity (BE)	.14**
	Muslim Natural Kind (MNK)	.16**
	Muslim Entitativity (ME)	.13*
	BI x BE	.16**
Symbolic threat (R^2=.29)	BI	.26***
	BE	.14**
	ME	.22***
	BI x BE	.10+
	MNK x ME	.12*
	MNK x BE	-.17**
Physical threat (R^2=.26)	BI	.19***
	BNK	.14**
	BE	.13**
	ME	.23***
	BI x BE	.11*
	MNK x ME	.17**
	MNK x BE	-.12+
Esteem (R^2=.32)	Economic threat	.13*
	Symbolic threat	.38***
	Physical threat	.12+
Efficacy (R^2=.63)	Economic threat	.29***
	Symbolic threat	.39***
	Physical threat	.23***
Continuity (R^2=.58)	Economic threat	.10*
	Symbolic threat	.45***
	Physical threat	.29***
Distinctiveness (R^2=.56)	Economic threat	.13**
	Symbolic threat	.54***
	Physical threat	.16**
Belonging (R^2=.53)	Economic threat	.15**
	Symbolic threat	.40***
	Physical threat	.27***
Meaning (R^2=.63)	Economic threat	.24***
	Symbolic threat	.44***
	Physical threat	.22***
Prejudice towards Muslims (R^2=.42)	Continuity	.14*
	Belonging	.18*
	Physical threat	.23***
	BI x BE	.12**

***p<.001; **p<.01; *p<.05; +p<.10

Our findings were also mostly consistent with the findings of Study one, although all three intergroup threat types were now significantly related to all six motive threats as originally predicted. Finally, the perceived physical threat of terrorism, continuity threat and belonging threat, as well as the British identity and entitativity interaction, predicted prejudice towards Muslims.

To assess these interactions, simple slopes analyses were conducted with the values computed at one standard deviation above and below the mean (Aiken & West, 1991). These analyses revealed that identification had a stronger effect on perceiving intergroup threat under high (ST: $\beta = .53$, $p<.001$; ET: $\beta = .42$, $p<.001$; PT: $\beta = .46$, $p =.001$) than low (ST: $\beta = .39$, $p<.001$; ET: $\beta = .22$, $p =.002$; PT: $\beta = .30$, $p =.001$) entitativity beliefs. It also demonstrated a trending towards significant effect of identity on prejudice at high ($\beta = .16$, $p =.140$), but not low ($\beta = -.04$, $p =.642$) entitativity.

Simple slopes also revealed that the effect of Muslim entitativity on intergroup threat perception was stronger at high (ST: $\beta = .51$, $p<.001$; PT: $\beta = .59$, $p<.001$) than low levels (ST: $\beta = .34$, $p<.001$; PT: $\beta = .36$, $p<.001$) of Muslim natural kind beliefs. Finally, the interaction between Muslim natural kind beliefs and British entitativity revealed that the effect of British entitativity was significant on intergroup threat perception at low levels (ST: $\beta = .21$, $p =.006$; PT: $\beta = .20$, $p =.009$), but surprisingly not at high levels of Muslim natural kind beliefs (ST: $\beta = -.03$, $p =.800$; PT: $\beta = .04$, $p =.748$). Thus, it appeared that when out-group beliefs were high, in-group beliefs played less of a role in threat perception, rather than both ingroup and outgroup beliefs interacting together to amplify the perception of intergroup threat.

Subcomponents of natural kind beliefs

Because our prediction of the interaction between Muslim natural kind and entitativity beliefs particularly concerned the natural kind belief of immutability, and prior essentialism research has suggested that subcomponents of natural kind beliefs may have differences in their relationship to prejudice, we conducted follow-up analyses exploring these interactions with the natural kind belief types separately. We also explored this possibility in relation to the subcomponents of British natural kind beliefs as well. This was done for two reasons: (i) our findings had not detected an interaction between national identity and natural kind beliefs as highlighted by prior research; (ii) this prior research also concerned specific natural kind beliefs that imply the category is discrete and invariant to socio-cultural shaping.

We first conducted analyses that removed the natural kind variables, as well as their interactions from the model, and in place input all natural kind beliefs separately. We also computed interactions for each Muslim natural kind belief and entitativity, and computed interactions for each British national kind belief and identity. Firstly, considering British natural kind beliefs, the findings suggested that discreteness (ST: $\beta = .14$, $t=2.79$, $p=.006$; PT: $\beta =.21$, $t=4.25$, $p<.001$; ET: $\beta =.16$, $t=3.12$, $p=.002$) and naturalness (ST: $\beta =.16$, $t= 3.09$, $p=.002$; PT: $\beta =.13$, $t=2.40$, $p=.017$; ET: $\beta =.11$, $t=2.05$, $p=.041$), were predictors of intergroup threat perception, but stability and immutability were unrelated to intergroup threat perception. However, despite the role of natural kind beliefs appearing to be specific to certain subcomponents, there was still no evidence of an interaction between these beliefs and identity ($p's>.10$).

For Muslim natural kind beliefs, the findings demonstrated that immutability beliefs predicted perceived symbolic ($\beta =.15$, $t=2.83$, $p=.005$) and economic threat (β

=.16, t=2.92, p=.004), but not the physical threat of terrorism (p>.10). However, there was also a critical interaction between Muslim immutability beliefs and Muslim entitativity in predicting the physical threat of terrorism (β =.12, t=2.47, p=.014). The findings also revealed a marginal interaction between Muslim stability beliefs and Muslim entitativity in predicting perceived symbolic threat (β =.10, t=1.83, p=.068). The pattern of these interactions mirrored the previous analyses. That is, the effect of entitativity was stronger on perceived intergroup threats under higher levels of immutability/stability.

Mediation analyses

Finally, bootstrapping analyses using 1000 bootstrapped samples and a 95% confidence level were conducted to assess the indirect effects of: (1) British identity, essentialism, and the interactions (predictors) on perceived motive threat and prejudice (outcomes) through intergroup threats (mediators); (2) perceived intergroup threats (predictors) on prejudice (outcome) through motive threats (mediators). When a confidence level does not include zero, bootstrapping indicates that significant mediation has occurred.

The analyses revealed that perceived intergroup threats had generally mediated the relationship between identity and the essentialism factors to all six perceived motive threats, excluding a few exceptions. For British natural kind beliefs, intergroup threats had only significantly mediated the relationship to perceived efficacy and belonging threat; whilst for Muslim natural kind beliefs; perceived intergroup threats had only significantly mediated the relationship to perceived efficacy and meaning threat. In addition, the mediation analyses indicated that the six motive threats had significantly mediated the relationship between prejudice and identification and

essentialism factors. Importantly, they also demonstrated significant mediation of the link between perceived intergroup threat and prejudice. All other mediations were non-significant because the confidence level included zero (for precise effect sizes and confidence levels of all mediation analyses, *see* Appendix table 2).

Discussion

The findings of Study two offer increased support for the findings of the first study that perceived intergroup threats may compromise several identity motives, and that these motives mediate the link between perceived realistic and symbolic threats to prejudice. We do so by using a new and larger sample.

In addition, Study two also explored whether essentialist beliefs concerning Britain and Muslims are additional antecedents of intergroup threat perception beyond strength of British identification. The findings demonstrate that both British and Muslim essentialist belief types are related to threat perception and prejudice, but the precise relationships may be dependent on whether they concern *us* or *them*.

For British essentialist beliefs, natural kind and entitativity were both related to perceiving a symbolic and realistic threat to identity, demonstrating that both types of beliefs are related to prejudice. These findings are mostly compatible with previous research on these beliefs concerning ingroup essentialism and prejudice (Effron & Knowles, 2015; Pehrson et al., 2009; Zagefka et al., 2012), but add to this by demonstrating the unique relationships of each belief type. Our findings also suggested that ingroup entitativity may strengthen the relationship of social identification on intergroup threat perception as highlighted by prior research (Effron & Knowles, 2015), but did not support an interaction between natural kind beliefs and identification found by Pehrson et al. (2009). This difference might reflect that their

study focused on a specific type of natural kind belief akin to ethnic nationalism defined as "in the blood", where the present study explored a range of natural kind beliefs.

For Muslim essentialist beliefs, the findings demonstrated that entitativity was related to perceiving an intergroup threat from Muslims, and that this was particularly strongest when the group was not only seen as entitative, but also as a natural kind. We believe this finding is consistent with previous research demonstrating that groups that are highly essentialised on both dimensions tend to be the most socially stigmatised (Haslam et al., 2000), but also demonstrates in a novel way that individual differences in these beliefs predict the level of intergroup threat perception and prejudice towards that group.

Additionally, our findings suggested that different subcomponents of natural kind beliefs were associated with prejudice depending on whether it was related to the ingroup or the outgroup. Beliefs that Britain is a discrete and natural category were related to perceiving an intergroup threat from Muslims. This might suggest that viewing the group as impermeable and natural leads to concerns of trespassing and feasibility of culture adoption (Pehrson et al., 2009; Zagefka et al., 2012). In contrast, beliefs that the category Muslims was immutable and stable were related to perceiving an intergroup threat, particularly when the group was also viewed as entitative. This implies that when behaviours of the group are attributed to something that is fixed and inalterable (e.g., genetic or biological) it makes groups seem more threatening.

Additionally, whilst we did not predict any relationship between ingroup and target group essentialist beliefs, it is interesting to note that the one interaction between ingroup and target beliefs that was found did not seem to suggest that prejudice is

related to essentialising both the germane groups in question. This contrasts with notions of prejudice resulting from a generalised cognitive style (e.g., Allport, 1954). Instead, the current study points to the idea that prejudice can be the result of when the ingroup *or* outgroup is defined in essentialist terms.

General Discussion

The main aim of this research was to establish a connection between intergroup threat types and motive-based threats as suggested by the IRM (Cinnirella, 2014). Across two online studies that explored the case of Islamophobic prejudice in the UK, the findings support the idea that perceiving realistic and symbolic threats may threaten several identity motives, and that these motives mediate the relationship between perceived intergroup threat and prejudice. In addition, we also identified that national identification (Study 1 and 2), and essentialist beliefs (Study 2) were predictors of threat perception.

We believe these findings represent an important step in the right direction of clarifying the motivational underpinnings of the threat-prejudice link. By exploring intergroup threats from a motivational perspective, not only can we understand more clearly their potential impact upon identity processes as we have examined in the present research, but also the possibility of how individual differences in motive strengths may impact upon threat construction and response. For example, prior research has suggested that the relative motive strengths of distinctiveness and belonging are differentially associated with ingroup and outgroup evaluations for those high in national identification (Vignoles & Moncaster, 2007). We would suggest that the way in which symbolic or realistic threats may be perceived (and in turn responded to) might depend on how each motive is emphasised within one's own

identity structure. Future research should explore this possibility, as it may suggest that interventions designed to reduce prejudice may be more effective if they are individually tailored to individual identity structures.

Our research also supported the role of essentialist beliefs in predicting threat perception and prejudice. To our knowledge, this study is the first to demonstrate that both beliefs about *us* and beliefs about *them* may uniquely contribute towards prejudice formation. However, whilst both ingroup and outgroup entitativity were important predictors of threat perception, our findings suggested that different natural kind essentialist beliefs may contribute towards prejudice dependent on whether it concerned the ingroup or the outgroup. This might suggest that prejudice reduction strategies might be most effective targeting specific beliefs about the ingroup or the outgroup. Namely, that is the belief that Britain is a natural group that is not prone to socio-cultural shaping, with clear-cut boundaries over membership; or the beliefs that the Muslim identity is immutable and stable, particularly when it also coupled with a perception that the group is highly entitative.

Like with all research, the current study has some limitations that should be acknowledged. Firstly, the correlational nature of the data leads to issues of implying causality of the observed effects. For example, it should be noted that there is some suggestion that the relationship between essentialism and prejudice may be bidirectional (Rangel & Keller, 2011; Newheiser, Tausch, Dovidio, & Hewstone, 2009). Indeed, we would agree with the possibility of a cyclical relationship between beliefs and threat, whereby essentialism can lead to increased perception of threat, but also may be used to cope with this perceived threat (Rangel & Keller, 2011). Future research could explore experimental manipulations to unpick the causal connection

between the measured variables in the present study. Secondly, the present research focuses on the special case of Islamophobia in the UK, thus cannot speak to the generalisability of the IRM approach. However, as we have outlined previously, we have no reason to believe that other prejudices would not benefit from a similar approach as deployed here in the present study, but researchers should consider the variety of societal, temporal, contextual and cross-cultural variations that may influence how intergroup threats impact upon identity processes. Likewise, the specific relationships of ingroup and outgroup essentialism to prejudice outlined in the present study may be context- and content-specific to the current focus of Islamophobia in the UK. Indeed, existing research suggests that essentialist beliefs can predict both increasing and decreasing levels of prejudice dependent on the group that is essentialised (e.g., Haslam et al., 2002). Moreover, essentialism should not be considered inherently oppressive, nor de-essentialism inherently progressive, but this instead depends on the context of how they are used (Verkuyten, 2003), and whether the other group is viewed as an enemy or an ally (Castano et al., 2003b). Further research exploring the specific contents associated with groups that are essentialised is warranted as it may help explain not only the conditions upon which prejudice may thrive, but can also be reduced.

Finally, some researchers may be sceptical about the need to consider intergroup threat as threatening six distinct motives, particularly as not all six motives independently predicted prejudice in the current studies. However, it should be noted that prior research has identified that each motive makes an independent contribution to identity formation (e.g., Vignoles et al., 2002, 2006), and that our suggestion that perceiving intergroup threats can be broken down into constituent elements of different perceived motive threats, would imply that they should have considerable

shared variance. However, future research is required to further validate a six-factor approach to threat perception, perhaps by using multi-item scales to more accurately determine the unique role of each motive in threat perception and response.

In sum, this research points to a motivational underpinning of prejudice, demonstrating that perceiving realistic and symbolic threats can be considered to be related to perceiving identity motive threats outlined in IPT that in turn provoke prejudicial responses. Additionally, the findings also illustrate that identity, and essentialist beliefs about *us* and *them*, are potential antecedents of threat perception and prejudice. We feel that these findings are an important step in the right direction towards exploring the threat-prejudice link. Through further testing and elaboration of the IRM as a lens for understanding the motivational antecedents of prejudice, our hope is that this perspective may offer new ways to better understand and design prejudice reduction interventions.

Chapter IV:

The role of death awareness in motivational identity

Abstract

The first two studies of the thesis have suggested that the motives of self-esteem, efficacy, continuity, meaning, belonging, and distinctiveness may be compromised when experiencing realistic or symbolic threats to identity. Utilising a TMT framework, this chapter focuses on whether these motives serve more basic and vital functions of managing existential concerns. Study 1 demonstrates that reminders of death (v control) promote the accessibility of central aspects of oneself that are strong source of these motives. In addition, participants who were reminded of death tended to list special social identities that were considered to have immortality properties. Study 2 demonstrates that threats to these motives increase death-thought accessibility, and that immortality striving may be particularly important when experiencing threats to continuity. These findings demonstrate that individuals may be driven to construct identities that satisfy these motives because of their importance in managing death awareness. The discussion briefly considers these findings in relation to the current focus of the thesis on Islamophobia in the UK.

Introduction

TMT (Greenberg et al.,1986) is inspired by the works of Ernest Becker (1971, 1973), and suggests that the presumably universal striving for self-esteem and meaning derives from the need to buffer from deep-rooted anxieties concerning our transient existence that arise from the unique human awareness of the inevitability of death.

Various research converges to support the *sense* of these motives as useful in alleviating existential concerns. Firstly, the anxiety-buffering hypothesis proposes that if these motives serve to function against the awareness of death, then fortifying these psychological structures should minimise reactions to reminders of death. Findings show that experimentally elevating self-esteem reduces anxious responses to death-related stimuli (Greenberg et al., 1992), and reduces derogation of others when reminded of death (Harmon-Jones et al., 1997; although *see* Juhl & Routledge, 2014 for distinctions between state v trait self-esteem in MS effects). Second, the MS hypothesis states that reminders of death should increase striving for self-esteem and meaning. Supporting this, studies demonstrate that MS increases behaviours that are relevant to one's self-esteem (Ben-Ari et al., 1999; Ferraro et al., 2005; Goldenberg et al., 2000; Hansen et al., 2010). Additionally, several studies suggest that MS increases the need to affirm a sense of meaning (Landau, Kosloff, & Schmeichel, 2011) or meaning-related structures, particularly for those that are high in personal need for structure (Landau, Greenberg, Solomon, Pyszczynski, & Martens, 2006; Vess, Routledge, Landau, & Arndt, 2009). Thirdly, the DTA hypothesis proposes that threats to these psychological structures should temporarily increase the accessibility of death-related thoughts. Supporting this assertion, Hayes et al. (2008b) found that threatening self-esteem via an intelligence test or negative personality feedback

increased DTA. Similarly, Webber et al. (2015) found that various meaning-related threats increased DTA.

Despite research supporting the role of meaning and self-esteem in TMT, there is a scarcity of research which has explored what other motives may be important in managing concerns about death. It is our belief that TMT can speak to a broader array of human motives beyond self-esteem and meaning. The present research focuses on the extent to which the motives of continuity, efficacy, distinctiveness, and belonging (as outlined in IPT) derive, at least in part, in managing existential concerns. We briefly outline each motive, how they may be viewed through a TMT lens, and evidence supporting their role in managing death awareness.

Continuity

The desire to preserve the perception of "continuity across time and situation" has been emphasised as a core motive in identity construction and maintenance (Breakwell, 1986, p.24). This need for self-continuity has been identified not just as important at a personal-level but also at a group-level (e.g., Vignoles et al., 2006; Jaspal & Cinnirella, 2010) with perceived threats to group continuity linked to increased opposition to the source of the threat (e.g., Smeekes & Verkuyten, 2014a). However, whilst perceived threats to continuity can lead to resistance to change, continuity itself does not necessarily preclude change, as individuals may construct narratives that help maintain a sense of continuity between their past, present and future selves (Chandler, Lalonde, Sokol, & Hallet, 2003; McAdams, 2001). Experiencing a loss of subjective continuity has been associated with various negative outcomes including negative affect and suicide (Breakwell, 1986; Chandler & Lalonde, 1995).

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Whilst the desire to feel that one's past, present and future are interconnected speak to the continuity of one's 'life story', this desire to feel continuous is not limited to just one's lifespan, but also includes a sense that some symbolic or literal aspect of the self will continue after death (Becker, 1973; Lifton, 1973). Lifton (1973) particularly argues that feeling that some aspect of oneself would continue is important in accepting one's own personal mortality. This aspect of continuity speaks directly to TMT, which suggests that individuals strive to transcend death literally or symbolically (Greenberg et al., 1986). However, maintaining a general sense of continuity throughout life is likely important in managing existential concerns as it may distance oneself from the knowledge that death is inevitable. Moreover, integrating the self into a temporally structured narrative may manage death awareness by transforming isolated, disconnected events into an orderly and significant manner (*see* Becker, 1973; Lifton, 1973; Landau, Greenberg, & Solomon, 2008)

Research from a TMT perspective supports the idea that continuity may be important in managing existential concerns. Firstly, MS increases the preference to recall events in a coherent, interconnected and temporally structured manner (Landau, Greenberg, & Sullivan, 2009; Landau, Greenberg, Sullivan, Routledge & Arndt, 2009). In addition, nostalgia which has been identified as facilitating a sense of continuity, and a coping response to a subjective loss of continuity (e.g., Sedikides, Wildschut, Routledge, & Arndt, 2015), buffers the effect of MS on the accessibility of death-related constructs and worldview defence (Juhl, Routledge, Arndt, Sedikides, & Wildschut, 2010; Routledge, Arndt, Sedikides, & Wildschut, 2008). In addition, Sani and colleagues (2008) demonstrate that MS effects of increased group identification are mediated by increased perceptions of collective continuity.

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Efficacy is defined as the desire to feel "competent and in control" of one's life (Breakwell, 1988, p.194), and has been considered fundamental in human motivation and identity (Codol, 1981; Deci & Ryan, 2000). In absentia of feelings of efficacy, individuals may experience futility and depression (Bandura, 1997; Breakwell, 1993).

Why does the awareness of death motivate individuals to strive for competency and control? Recognition of one's own mortality, and by extension the uncontrollable and inevitable nature of it, is to recognise one's own deepest vulnerabilities (Becker, 1973; Greenberg et al., 1997). As such, individuals may seek to create perceptions of efficacy by overestimating their own control or competency (e.g., Alicke & Govorun, 2005; Langer, 1975), and viewing the world as less chaotic and more orderly (Becker, 1973; Pyszczynski, Greenberg, & Solomon, 1998). Moreover, Becker (1973, p.145) notes that individuals seek to distil the overwhelming chaos of the universe and bestow objects/persons with the "transcendent powers of the universe" that in turn affords the individual the power of control and fate. Supporting this idea, when confronted with this chaos through randomness primes, individuals increase the belief of the universe being governed by supernatural control (Kay, Moscovitch, & Laurin, 2010). Similarly, when personal control is threatened individuals compensate for this by increasing investment in social systems or religious beliefs (Kay et al., 2009; Shepherd et al., 2011).

Supporting the role of efficacy in TMT processes, findings demonstrate that MS has no effect on desire for personal control and worldview defence when asked to write about a death that one had control over such as euthanasia (Fritsche, Jonas, & Fankhänel, 2008). Moreover, MS effects are reduced in those who have a high internal

locus of control (Talati, Fritsche, Du, Jonas, & Castano, 2013). Similarly, exposure to terrorism news report increases prejudice, but only amongst those who lack a sense of control (Greenaway et al., 2014). Taken together, it seems that a sense of self-efficacy may constitute an important existential anxiety buffer; not just because the awareness of death itself per se that is frightening, but also the fact that we lack control over it.

Distinctiveness and Belonging

The needs to belong and to see oneself as unique have been suggested to be powerful motivations shaping identity and behaviour (Brewer, 1991; Snyder & Fromkin, 1980). Whilst seemingly contradictory motivational states, it has been suggested that individuals seek to maintain an optimal balance between these opposing needs (e.g., *Optimal Distinctiveness Theory*; Brewer, 1991). For example, individuals desire to affiliate to groups to satisfy their need for affiliation (e.g., Psychologist), but at the same time desire to view their group as distinctive from others (e.g., Social Psychologist). Similarly, individuals like to feel that their behaviour and attitudes are consensually validated (e.g., Festinger, 1954), and often demonstrate biases to validate their behaviours (*see* Marks & Miller, 1987 for a review on false-consensus effects); but can also demonstrate biases that inflate distinctiveness (false-uniqueness effects; e.g., Perloff & Brickman, 1982).

In his analysis of the human condition, Becker (1973) draws heavily upon the ideas of Otto Rank (1932), suggesting that these needs serve to protect against deep-rooted anxieties about death. Human beings need to pursue a unique identity and a sense of distinctiveness to feel that they make their own valid worthwhile contribution, but at the same time need to identify with groups and belong to something beyond their own corporeal, physical existence. By straying too far one way or the other

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humans open themselves up to fear of loneliness or to being no one. He refers to these opposing needs as the "absolute tension of dualism" (Becker, 1973, p.153).

The need to belong and feel distinctive might operate in accordance with the dual-components of worldviews (Pyszczynski, Greenberg, & Solomon, 1997). First, TMT proposes that humans need to identify with worldviews, and feel that they are *consensually validated*, thus affirming the conceptions of oneself and reality. Pyzsczynski and colleagues (1996) demonstrate that when exposed to subtle death reminders, individuals exaggerate social consensus estimates for their attitudes that may implying a sense of belonging. Moreover, when existentially threatened, individuals may feel the need to affirm their common bonds with others by increasing their sense of belongingness (Smeekes & Verkuyten, 2013). However, when one's sense of a common bond is reduced (such as being separated from a loved one), this increases the accessibility of death-related constructs (Florian, Mikulincer, & Hirschberger, 2002; Mikulincer, Florian, Birnbaum, & Malishkevich, 2002); therefore, implying that when one's sense of belonging is threatened, death-related thoughts become closer to conscious awareness.

The second component of worldviews is to promote a sense of value and self-worth to the individual. Whilst traditionally considered as the self-esteem component of worldviews by TMT researchers, distinctiveness may also be an important motivational construct in satisfying this component. SIT suggests that achieving a sense of positive distinctiveness operates as a source of attaining self-esteem (Abrams & Hogg, 1988). Whilst this might suggest that distinctiveness only serves to achieve self-esteem, other researchers have suggested this need is separate from self-esteem maintenance, and findings appear to support its own unique contribution to identity

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(e.g., Brewer, 1991; Vignoles et al., 2000, 2006). Therefore, the need to feel different from others may be an important motive; in feeling that one is unique with their own unique value, one may be attempting to buffer from death-related concerns.

Two studies have explicitly explored the role of distinctiveness and belonging in TMT processes. Firstly, Walsh and Smith (2007) explored how priming of the self or gender after MS may change desires for affiliation and uniqueness. Exploring behavioural choices to picking a colour pen (Study 1) or magazine (Study 2) where one choice represented uniqueness and the other inclusiveness, they found that participants in the MS condition who were primed with the self opted for the unique choice, whilst those primed with gender opted for the inclusive choice. Similarly, Simon, Greenberg, Arndt, Pyszczynski, Clement and Solomon (1997) demonstrate how threatening one's sense of distinctiveness or belonging via false feedback on a personality test led to changes in social consensus estimates under MS. That is, when participants were informed that they were a social outsider, they inflated social consensus estimates to re-affirm their sense of belonging; whilst those that were informed they were a social conformer, underestimated social consensus estimates to re-affirm their sense of distinctiveness. As such, these studies demonstrate that when reminded of death, the need to satisfy inclusionary or uniqueness needs are an important component to worldviews. Additionally, Simon et al. (1997) also demonstrate that when one's sense of belonging or distinctiveness is threatened, MS may motivate a need to re-affirm ones sense of the threatened motive. However, neither of these studies, in our view, necessarily demonstrates the need to balance these opposing needs ("tension of dualism"; Becker, 1973).

If reminders of death engender a need to *balance* these opposing motives, then MS may increase the accessibility of identities that satisfy both uniqueness and inclusionary desires. In other words, when reminded of death, there should exist a positive relationship between one's sense of belonging and one's sense of distinctiveness. This is because as one's sense of belonging (or distinctiveness) increases, then so should the sense of the other motive to ensure these needs are harmonised. Otherwise, an individual may open themselves up to feelings of isolation or insignificance (depending upon which motive is not satisfied), that in either case would be existentially threatening. However, this relationship should be strongest (or only present) when reminded of death, as MS according to TMT heightens the need to affirm one's worldview/sense of self. In line with Becker's (1972) analysis, this should include the need to balance these opposing motives.

Study 3 aims and hypotheses

Study 1 and 2 of this thesis have so far demonstrated that the identity motives of meaning, self-esteem, continuity, efficacy, distinctiveness and belonging may be compromised when experiencing threat. Utilising a framework of TMT, we have outlined the possibility that these identity motives may serve more basic and vital functions of managing existential concerns. The present study attempts to explore this possibility.

Arndt and colleagues (2002) using spreading activation models have put forward a suggestion to the cognitive architecture underlying TMT. They suggest that if identifying with a worldview serves self-protective needs against the awareness of death, then when death becomes accessible, so should the most central elements of one's worldview that an individual identifies with. Compatible with this analysis, IPT

(Breakwell, 1986; Vignoles et al., 2006) suggests that the subjective importance of each aspect or *element* of one's self-definition, depends on the extent to which each identity element satisfies (or frustrates) these motives. In other words, those elements of oneself that confer a sense of self-esteem, efficacy, meaning, distinctiveness, belonging, and/or continuity should be construed more central to one's identity. In testing this, Vignoles and colleagues (2002, 2006) have designed a method that attempts to capture a holistic snapshot of an individual's identity structure, as well as measuring each identity element's satisfaction (or frustration) of individual motives. We chose to deploy this method of assessing identity in our present study for a few reasons.

First, research exploring the role of identity in TMT has tended to focus on specific identities, preselected by researchers, and this reduces the generalisability of TMT processes on identity. Second, by allowing participants to freely recall aspects of themselves, we believe we can more accurately assess spreading activation claims made by Arndt et al. (2002). Third, TMT stresses the importance of immortality striving, and some research has suggested that social identities may be a particularly useful strategy to managing existential concerns (Castano & Dechesne, 2005). Again, by utilising an unconstrained method to explore identity, we believe we can more accurately assess whether these represent useful strategies in defending against death.

The first study of this chapter assesses whether MS increases the tendency to affirm one sense of self as a source of these motives when asked to describe oneself. In addition, we also assessed whether MS affects attitudes towards Britain and Muslims, in line with TMT research on worldview defence (e.g., Greenberg et al., 1992), as well as our interest in the current thesis in examining anti-Muslim attitudes.

To this end, we exposed participants to either a death reminder or aversive topic. Then after a delay, participants were asked to generate aspects (identity elements) about themselves and subsequently rate each aspect in terms of its relevance to the self-concept, and how much it satisfies the motives of esteem, efficacy, continuity, distinctiveness, belonging, and meaning. Aggregate scores of the motives were taken which would compare whether participants exposed to a death reminder wrote about themselves in ways that emphasised a sense of continuity, meaning, esteem, and efficacy.

To explore whether distinctiveness and belonging needs required to be harmonised after a reminder of death, we assessed this in two ways. Firstly, plausibly an increased sense of belonging (or vice versa) would heighten the need to see oneself as distinctive at the same time to ensure a balance between the motives. Therefore, one might expect reminders of death to strengthen the relationship between the motives of distinctiveness and belonging. Alternatively, harmonising these motives could also result from having similar levels of each motive. Therefore, it is possible that reminders of death would decrease the discrepancy between one's sense of belonging and one's sense of distinctiveness.

Additionally, raters coded for whether these identity elements were either social identities or personal characteristics, as well as if they could be considered to have death transcendent properties. This could assess whether reminders of death emphasise defining oneself at a higher level of abstraction because of the transcendental properties of social groups (Castano & Dechesne, 2005). Finally, participants also rated an ostensibly random profile, that identified the individual as

either British or a Muslim. This could assess whether reminders of death engendered heightened anti-Muslim sentiment.

H1: The MS group will demonstrate higher levels of DTA relative to the control after a brief delay.

H2: The MS group will generate identity elements that are rated more central to their identity than the control group.

H3: The MS group will rate their identity elements as higher in satisfaction of the motives of meaning, self-esteem, efficacy, and continuity.

H4: Identity element ratings for the motives of belonging and distinctiveness will be more strongly associated in the MS condition.

H5: The MS group will generate more identity elements that permit a sense of literal or symbolic immortality.

H6: The MS group will generate more social identity elements than the control group.

H7: The MS group will rate a British profile more favourably, but a Muslim profile less favourably relative to the control.

Method

Participants

Eighty-three sixth form (high school[11]) students from schools in London and the South-East of England were recruited for the study. This sample size was determined

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[11] A problem with conducting TMT research is the need to ensure participants have not taken part in any prior TM research. This is because TM research attempts to either make death-related thoughts salient or measure the accessibility of death-related thoughts in a manner that does not arouse suspicion. As the current thesis has conducted multiple studies using TMT paradigms, these would all

by the number of participants that could be collected at the participating schools. Three participants' data was removed from the study: 1 was removed because they did not complete the delay measures, and 2 were removed because their answers on the 'Who Are You' task indicated they did not take the task seriously. Therefore, the final sample consistent of 80 participants (39= Dental Pain; 41= Mortality Salience), with 15 participants identifying as male, and 65 female ($M_{age} = 16.70\ SD_{age} = .58$). Of these, 26 participants indicated that they were either not British or were a Muslim. These participants were therefore excluded from the analysis for profile ratings[12]. Ethical approval was given by the Psychology Departmental Ethics Committee at Royal Holloway, University of London.

Materials and procedure

Participants were fed a cover story that informed them that the study was investigating the relationship between personality and identity. Participants were tested in batches of 10-20 at a time, and were randomly allocated to either the dental pain (DP) or mortality salient (MS) condition.

Participants first completed a filler personality measure, and then ostensibly answered a second personality measure that asked them two open-ended questions about their own death (Rosenblatt et al., 1989) or parallel questions about dental pain, a topic that is commonly used as a comparison in the TMT literature. This acted as the MS manipulation.

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need to use unique samples that would be difficult to collect only using university students. Therefore, for practical reasons, some of the data in this thesis was collected from local high schools.

[12] An additional 3 participants did not provide answers to this task.

After completing the personality section, participants next completed the 20-item short-form Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988) and a filler word search. This is because existing TMT research suggests that distal defences are only activated after a brief delay when thoughts of death are outside of conscious awareness (e.g., Arndt et al., 1997b). The PANAS is commonly used as a delay task by TMT researchers because it can assess whether the effects of MS are the result of changes in affect. As expected, no differences were found on positive or negative affect because of the manipulation (p's>.50). Finally, participants then completed a word-fragment task consisting of 20 words (e.g., Schimel et al., 2007). This is a traditional measure of DTA and was used here as check that the manipulation was successful. 6 of the 20 words could be completed in a death-related manner. These were *buried, dead, grave, killed, skull* and *coffin.*

Who Are You

After completing these tasks, participants were then presented with the Who Are You task (Vignoles et al., 2002, 2006). Participants were asked to freely recall 10 aspects or *identity elements* about themselves without worrying about order or importance, but to answer quickly. The subsequent pages of the booklet then asked participants to rate each of their identity elements that they generated on eight questions. Two questions measured the perceived centrality of each identity element ($\alpha = .58$)[13]. The other six questions all tapped into the relationship each element had with the six motives of self-esteem, efficacy, continuity, distinctiveness, belonging and meaning. Scores within

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[13] A low reliability here might reflect that the analysis was conducted on the mean centrality scores, which might have increased the variability between the two measures.

each motive were averaged to produce an overall score for each motive or importance to identity. Higher scores reflect stronger satisfaction in the motive or centrality.

Participants' answers to the generation of identity elements were further coded for whether they were either a personal characteristic or a social identity and whether their answers indicated evidence of literal or symbolic immortality. Although researchers have argued cogently for a relational-level of self-representation (e.g., Sedikides & Brewer, 2001), social identities were determined as any element that indicated a group of two (or more) individuals (Turner, 1982). Evidence of immortality here was limited to a religious, ideological or spiritual belief; family or significant other; or an attachment to an eternal group (e.g., human, gender, ethnicity, nationality, sports teams). Sports teams are included here because prior research has suggested they may serve an immortality function, as sports teams may often memorialise deceased ex-players and fans (Dechesne, Greenberg, & Schimel, 2000)[14]. Multiple elements that indicated the same immortality strategy were only coded once (e.g., multiple family members listed was only counted as one immortality element). A random sub-set of 24 participants' responses was also coded by a second rater who was blind to the experimental condition and hypotheses. There was general agreement between ratings for number of immortality elements (r=.77, $p<.001$), and the number of elements that were a personal characteristic or social identity (r=.97, $p<.001$). Additionally, both raters had strong agreement in whether answers included the presence of an immortality element (cohen's kappa = .83, $p <.001$).

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[14] Whilst simply living up to the values promoted in one's cultural worldview may offer an immortality function (e.g., Dechesne et al., 2003), practically this would be impossible to code for. As such for practical reasons, immortality in the present study was limited to only particular social identities with immortality attributes.

Profile rating

Finally, participants were presented with a profile that they were informed had been randomly selected from a previous study where the *Who Are You* task had been used. This page looked the same as the page participants were presented with for this task, but already had 10 characteristics filled out. Participants saw a profile where the individual had written their answer to element 2 as identifying them as either *British* or a *Muslim*. The placing of this item was both to ensure it was seen by the participant, but also that it inferred a sense of importance to the person's identity without arousing suspicion about the aims of this task. The other 9 answers were kept consistent between the profiles and indicated neutral and generic characteristics (*happy*, *clever, kind, my family, my best friend, artistic, shy, quiet* and *messy*). Participants were asked to rate this individual on Likert scales from strongly disagree (1) to strongly agree (7) on two items that asked them how much they thought they were similar to this person and how much they think they would like this person. Pretesting the nine generic characteristics on the same scale suggested the ratings for these characteristics varied just above the theoretical mid-point of the scale ($M = 4.80$, $SD = .92$).

At the end of the questionnaire, participants were asked to provide some short demographic information. This was purposefully placed at the end of the questionnaire packet to avoid any inadvertent order effects on the Who Are You task. Finally, participants were probed for suspicion about the study and debriefed.

Results

Death Thought Accessibility

An independent-samples t-test was conducted to assess *H1*, where it was expected that the MS group would show higher levels of DTA. The findings indicated a significant

effect of MS (t (70.37) = 2.37, p=.021, d = .57), with those in the MS group completing more word-fragments in a death-related manner (M = 2.27, SD = .84) than those in the DP group (M = 1.74, SD = 1.12). Therefore, the manipulation was successful.

Identity responses

We first assessed the effect of MS on responses to the Who Are You task. Firstly, we checked to see whether MS had any unexpected effects on task engagement. There was no evidence that number of responses generated was affected by MS (t (78) = 1.06, p>.250). We next tested the hypothesis (*H6*) that there would be evidence of changes in self-categorisation as a coping mechanism to MS. Scores for this were generated by obtaining a percentage of elements listed by participants that were coded as either personal characteristic or social identity. This hypothesis was not supported as there were no differences in the number of personal characteristics (t (78) = 0.45, p>.500) or social identities listed (t (78) = 0.39, p>.500).

Next, we assessed *H5* as to whether reminders of death would increase the number of identity elements that contained themes of symbolic or literal immortality. To assess this, we conducted both an independent t-test and chi-square on the effect of MS on both number of immortality elements listed, as well as presence of immortality (yes/no). Firstly, the t-test revealed a significant effect of MS on number of immortality elements listed (t (73.85) = 2.21, p =.030, d = .49), with the MS group (M = .85, SD = .96) offering more immortality elements than the DP group (M = .46, SD = .72). This became highly significant even after controlling for the possibility that the number of social identities listed (expressed as a percentage of total identity elements) as a potential confound (F (1, 77) = 8.79, p=.004, η^2=.102). However, the chi-square was not significant, although was trending in the expected pattern (χ^2 (1) =

2.61, p = .106, Phi = .18), with 51.2% of the MS group offering an immortality attachment, whilst 33.3% of the DP group offering an immortality attachment[15]. Taken together, it seemed that there was something special about the type of social identities listed by participants in the MS group, and that this was not the product of different engagement in the task or a general increase in the number of social identities being provided.

Identity ratings

A one-way MANOVA was conducted to assess the effect of MS on the rating of identity elements along the dimensions of centrality (*H2*) and the six motives (*H3*)[16] (see table 5 for descriptive statistics). The findings revealed that the MS group rated their identity elements as significantly more *central* to their identity ($F (1, 78) = 4.33$, $p=.041$, $\eta^2=.053$), and as more satisfying to the motives of *self-esteem* ($F (1, 78) = 6.18$, $p=.015$, $\eta^2=.073$), *meaning* ($F (1, 78) = 4.84$, $p=.031$, $\eta^2=.058$), *continuity* ($F (1, 78) = 5.13$, $p=.026$, $\eta^2=.062$) and *self-efficacy* ($F (1, 78) = 4.54$, $p=.036$, $\eta^2=.055$).

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[15] We speculated that family attachments might have masked this finding given that it would likely be a very prominent response irrespective of experimental condition. We therefore followed up this by removing family as a response for immortality. Our findings suggested this was the case: chi-square ($\chi^2 (1) = 3.75$, p = .053, Phi =.22; MS= 34.1% v DP = 15.4%). The same pattern as the main findings emerged when exploring number of immortality elements listed even after controlling for number of social identity elements.

[16] It should be noted that Vignoles et al. (2002, 2006) have advocated cogently the importance of exploring the relationship of centrality and identity motives using *within-person correlations*. However, given our focus here is not on the relationship between these constructs, but instead on how MS may increase the accessibility of one's most central identity elements, we deploy a different analysis that explores the mean ratings.

There were no effects found for the motives of *belonging* and *distinctiveness* (*p's* >.50)[17].

We also explored the effect of MS on identity ratings for social identities and personal characteristics separately. For personal characteristics, the findings demonstrated a near significant effect for identity elements being rated as more central to identity after MS ($F_{(1, 78)} = 3.62$, $p=.061$, $\eta^2=.044$). There was also a significant effect of MS leading to increased satisfaction of the esteem motive ($F_{(1, 78)} = 7.11$, $p=.009$, $\eta^2=.084$), and approaching significant effects for the efficacy motive ($F_{(1, 78)} = 3.17$, $p=.079$, $\eta^2=.039$) and meaning motive ($F_{(1, 78)} = 2.83$, $p=.096$, $\eta^2=.035$). The continuity, distinctiveness and belonging motives were however not significant (*p's*>.20). For social identities, the findings demonstrated only an approaching significant effect of MS on increased satisfaction in the continuity motive ($F_{(1, 78)} = 3.80$, $p=.057$, $\eta^2=.072$); all other findings were non-significant (*p's*>.10). However, the pattern of increased motive ratings was still present.[18]

Table 5: Means and standard deviations (in parentheses) for centrality and the six motives.

	Overall		Personal		Social Identity	
	MS	**DP**	**MS**	**DP**	**MS**	**DP**
Centrality	5.42 (.72)	5.06 (.81)	5.36 (.74)	5.01 (.93)	5.40 (1.18)	5.35 (1.00)
Self-Esteem	4.98 (.96)	4.39 (1.15)	4.89 (1.07)	4.19 (1.26)	5.44 (1.21)	4.86 (1.73)
Self-Efficacy	5.04 (.90)	4.61 (.89)	4.99 (1.00)	4.58 (1.05)	5.08 (1.10)	4.61 (1.42)
Continuity	5.29 (.92)	4.80 (1.02)	5.09 (1.08)	4.76 (1.25)	5.69 (1.40)	4.93 (1.38)
Distinctiveness	4.40 (1.16)	4.46 (1.06)	4.54 (1.09)	4.48 (1.09)	3.50 (1.60)	4.16 (1.74)
Belonging	4.55 (.96)	4.48 (1.01)	4.28 (1.04)	4.32 (1.15)	5.38 (1.32)	5.31 (1.52)
Meaning	5.00 (1.00)	4.48 (1.14)	4.80 (1.11)	4.35 (1.28)	5.62 (1.23)	5.24 (1.66)

[17] Despite the manipulation revealed no difference in positive or negative affect, we nonetheless conducted follow-up analyses on the identity ratings using affect as a covariate. Whilst positive affect was a marginally significant covariate in identity ratings ($p<.10$), the pattern of increased centrality and motive strengths was still present.

[18] It should be noted that as not all participants provided a social identity, that this may have reduced power in conducting this analysis leading to the pattern of the marginally non-significant effects.

We now tested whether MS would strengthen the relationship between distinctiveness and belonging motives (H4). To assess this, we first considered how the two motives were related in each condition separately. Bivariate correlations demonstrated that in the MS condition, belonging and distinctiveness were positively related (r=.30, *p*=.029), but were unrelated in the DP condition (*p*>.25). This pattern also remained consistent when exploring personal distinctiveness and belonging for MS participants (r=.40, *p*=.005), and again was not present in the DP condition (*p*>.20). However, this pattern was not statistically significant for considering social identity elements (*p*>.10). It seemed therefore that there was some support for the idea that MS distinctiveness and belonging are ontologically entwined.

An alternative possibility is that MS does not increase the association between the two motives, but reduces the discrepancy between them. Additional analyses were therefore conducted computing the difference between the motive strengths (e.g., distinctiveness scores minus belonging scores). Plausibly, if MS engenders a need to balance these two motives, then the discrepancy between motive strengths should be smaller after MS. However, this possibility was not supported (*p*>.50). We also explored the difference in motive strengths for both personal and social identity elements separately but again no support for this was found (*p*'s>.10).

Profile ratings

Finally, we sought to examine the hypothesis that MS would change ratings of a profile dependent upon whether that individual was identified as British or a Muslim (*H7*). To assess the effect of MS on responses to ratings of the Muslim and British profiles, only participants that identified themselves both as British and non-Muslim remained in the analysis. A preliminary analysis demonstrated that these two items loaded onto

one factor, so a composite score for profile rating was created ($\alpha = .71$). A 2 (MS v

DP) x 2 (British v Muslim) between-subjects' ANOVA was conducted on profile

rating. This revealed a main effect of MS on rating (F (1, 47) = 13.86, p=.001,

η^2=.228). MS participants (M= 3.76, SD= 1.43) generally rated the profiles less

favourably than DP participants (M= 4.88, SD= 1.24). There was also an approaching

significant effect of profile type (F (1, 47) = 3.01, p=.089, η^2=.060). The British profile

(M= 4.60, SD= 1.07) was rated marginally more favourable than the Muslim profile

(M= 4.05, SD= 1.60). These effects were qualified by the expected interaction (F (1,

47) = 5.57, p=.022, η^2=.106). Planned comparisons (adjusted alpha = .025) using t-

tests were conducted assessing the effect of MS on each profile separately. There was

a significant effect of MS on rating of the Muslim profile (t (19) = 3.61, p=.002, d=

1.58), MS participants rated the Muslim profile more negatively than DP participants

(see table 6). However, there was no effect of MS on the British profile (t (28) = 1.14,

p>.250).

Table 6: Means and standard deviations for ratings of the Muslim and British profiles.
Different subscripts between columns denote significant differences (p<.01).

	MS		DP	
	M	*SD*	*M*	*SD*
British	4.35$_a$	1.28	4.79$_a$	0.87
Muslim	3.00$_a$	1.29	5.00$_b$	1.24

Discussion

Our findings support the idea that all motives outlined in IPT may have existential

buffering properties. Those who were reminded of their own death tended to generate

aspects of themselves that were more central to identity, but importantly were

increased in their satisfaction of the motives of meaning, self-esteem, continuity, and

efficacy. Whilst reminders of death did not lead to increased satisfaction of the motives

distinctiveness and belonging, there was some mild support for a relationship between these motives in line with Becker's (1973) idea of these acting as twin ontological motives. There was also increased evidence of literal or symbolic immortality in the identity elements generated by participants who were reminded of their own death, suggesting the importance of death transcendence in alleviating existential concerns.

Importantly, our findings demonstrate that striving for equanimity in the face of death awareness is not simply driven by concerns over attaining meaning and self-esteem. Participants also listed aspects of themselves that conferred a strong sense of efficacy as well as continuity, and it is possible that these motives are emphasised at different levels of self-representation. Whilst it is possible that the reduced power in the social identity analysis led to the not statistically significant trends of increased self-esteem, efficacy and meaning after MS, perceptions of continuity were increased only for social identity elements. Moreover, whilst our findings did not demonstrate that participants were more likely to write about themselves at a higher level of abstraction, we did find that the social identities they did list tended to have specific immortal properties. Thus, our findings are somewhat consistent with the idea that social identities may be a useful resource for alleviating existential anxiety (Castano & Dechesne, 2005), but only to the extent that the group confers a sense of continuity and a possibility to either literally or symbolically transcend death (e.g., Lifton, 1973). The second study looks to explore further whether immortality striving is specifically associated with concerns over continuity.

The first study only weakly supported the role of distinctiveness and belonging. Whilst there appeared to be a positive relationship between these motives, we were unable to reliably confirm an association between the two motives that would

suggested MS activated a need to harmonise the need to belong and feel distinctive. This difficulty in finding this association might reflect the nature of the task in which we aggregated scores across identity elements to achieve a general motive strength thus masking a relationship between these two constructs.

In sum, the present study so far has suggested that these motives may constitute important buffers to the awareness of death. Whilst the first study attempted to demonstrate that this is the result of being reminded of death rather than the result of being exposed to a negative or aversive topic, critics of TMT have suggested MS effects are not reducible to death-related concerns. Instead, MS manipulations are argued to reflect a more general threat of uncertainty (van den Bos, Poortvliet, Maas, Miedema, & Van den Ham, 2005), inconsistency (cf. continuity; McGregor, Zanna, Holmes & Spencer, 2001), control (e.g., Fritsche, Jonas, & Kessler, 2011) or meaning (Heine et al., 2006; Proulx & Heine, 2008) for example. These researchers have managed to find some support for these arguments by finding that non-MS induced threats can also lead to increased worldview affirmation and defence (e.g., Proulx & Heine, 2008, 2009).

The problem with this line of questioning is that it erroneously posits the notion that TMT suggests that worldview defence is exclusive to reminders of death, and ignores the wider array of hypotheses that can be derived from TMT literature (Pyszczynski et al., 2015). The DTA hypothesis (Schimel et al., 2007) suggests that if a psychological structure buffers from existential concerns then threats to these motives (e.g., efficacy, continuity) should increase the accessibility of death-related constructs. In line with this theorising, research has demonstrated increased DTA after exposure to worldview threat (Hayes et al., 2015; Schimel et al., 2007), but also threats

to self-esteem (Hayes et al., 2008b) and meaning (Webber et al., 2015). We therefore set out to address in Study 2 whether threats to the motives of continuity, self-efficacy, distinctiveness, and belonging would increase DTA. In addition, we also sought to explore whether these different threats would produce different compensatory responses via generating aspects of oneself that are directed at restoring a sense of the threatened motive (cf. fluid compensation; Heine et al., 2006). We also explored the specific role that DTA may (if any) have in these responses.

Finally, our findings from the first study also demonstrate that MS decreased favourability towards a Muslim, although we found no evidence of a reverse effect with a British profile. The lack of an increased preference for an in-group member diverges with traditional MS effects of an increased polarisation of attitudes towards the ingroup and outgroups (e.g., Greenberg et al., 1990). As we did not include a manipulation check to confirm whether participants had noted the nationality of the profile, this could simply reflect the subtlety of the manipulation. However, we find this unlikely given the category status was placed purposefully high on the profile list, and that we found the expected finding with the Muslim profile. Another potential explanation is that there may have been potential downstream effects from participants having completed the task themselves. For example, participants may have explicitly been comparing aspects of the profile to what they had written. This might possibly explain the tendency for ratings under MS to generally become more unfavourable, although particularly when rating the Muslim profile. Another further explanation is that as participants were instructed to judge the profile it might be that participants felt that the British profile did not represent an ingroup exemplar. Previous findings have suggested that MS leads to a preference for stereotypic information (e.g., Schimel et al., 1999); it might be that the expected ingroup preference was not present because

the profile did not necessarily bolster one's worldview despite being an apparent ingroup member. This would also fit the large change in attitudes towards the Muslim profile given that the profile would not be a typical exemplar of a Muslim either, and that MS leads to increased derogation of inconsistent group stereotypes (e.g., Fritsche et al., 2009; Schimel et al., 1999). In either case, we chose to deploy a more traditional measure of prejudice in the next study.

Study 4 aims and hypotheses

The next study aimed to assess the inverse of the first study. If reminders of death increase the need to see oneself as a source of these motives; then does threatening one's sense of self as a source of these motives heighten DTA? To assess this, participants answered open-ended questions that were designed to threaten one's sense of continuity, efficacy, distinctiveness, or belonging. They then completed a word-stem task that acted as a measure of DTA. In line with the previous study, participants then generated aspects about themselves, rated these aspects for their importance to the self-concept and the extent to which they satisfied these motives. This could assess whether specific threats cause specific coping responses to alleviate the threat. Finally, participants were asked to rate their feelings towards Muslims and Britain to assess whether threats to these motives engendered increased anti-Muslim sentiment.

H1: Threatening the motives of continuity, efficacy, distinctiveness, or belonging will increase levels of DTA relative to the control.

H2: Threats to a specific motive will lead to a generation of identity elements that seek to re-establish the motive threatened.

H3: DTA will be significantly related to the motive ratings of the specific motive that was threatened.

H4: Threats to continuity (but not distinctiveness, efficacy and belonging) will increase the generation of identity elements that confer a sense of symbolic or literal immortality.

H5: Motive threats will lead to increased favourability towards Britain, but decreased favourability towards Muslims.

Method

Participants

One hundred-and-sixty-five participants from a (high-school) sixth-form college in the South-East of England, as well as university undergraduates took part[19]. This sample size was obtained by recruiting as many participants by a particular end date. Fourteen participants' data was excluded from the final analysis. Three participants were removed because they did not complete all the motive measures on the Who Are You task, whilst the other 11 participants were removed because their answers to the experimental manipulation included death or death-related themes (4- TV; 4- Efficacy; 3- Continuity). The final sample therefore consisted of 151 participants. 28 participants were male, and 123 were females (M_{age} = 17.17 SD_{age} = 1.02). Of these, 26 participants indicated that they were either not British or were a Muslim, and were

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[19] To test if there were any differences between the two samples, separate analyses were run using the samples as a between-subjects factor. Analyses revealed only one effect of sample type on the efficacy motive (F (1, 141) = 5.23, p=.023, η^2=.036). College students (M= 4.72, SD= 1.00) rated their identity elements as satisfying the motive of efficacy more strongly than university students (M=4.28, SD= 1.03). There was a marginal effect of sample type on feelings towards social groups (F (1, 115) = 2.91, p=.091, η^2=.025). University students were generally more favourable in their ratings (M= 63.67, SD = 12.73) than college students (M= 58.68, SD= 12.12). Importantly, there was no evidence of sample type interacting with experimental condition on any of the dependent measures in the current study (p's>.10).

excluded from the feeling thermometer analyses. Ethical approval was given by the Psychology Departmental Ethics Committee at Royal Holloway, University of London.

Materials and Procedure

A similar cover story and procedure was used to that in Study three. Participants were informed that the study was an investigation of one's personality and emotions and how they relate to how they perceive themselves and others. They were tested in batches of 5-20. Participants first answered the same filler personality measure as used in Study one, before being presented with the experimental manipulation.

The manipulation used a similar set-up as to the previous study, where participants were informed that answers to this question would be analysed to assess their personality (Rosenblatt et al. 1989). The manipulation consisted of an open-ended question aimed to tap into a specific motive. Participants either answered a question that asked them to recall memories that threatened their sense of belonging or distinctiveness (taken from Pickett, Silver, & Brewer 2002), sense of continuity (adapted from McGregor et al., 2001; Shepherd et al., 2011) or sense of efficacy (adapted from Whitson & Galinksy, 2008; Shepherd et al., 2011). To economize the design, we did not include parallel conditions that explored meaning and self-esteem due to existing evidence for these motives and DTA (e.g., Hayes et al., 2008b; Webber et al., 2015). Participants in the control condition answered a parallel question about their memories of watching television (see Appendix, Attachment A for precise wordings of the experimental conditions). This control topic has been used in prior TMT research (e.g., Greenberg et al., 1992), but was also selected as we believed it to be sufficiently neutral in valence that it would unlikely arouse any type of threat that

we did not anticipate. Participants in each condition were asked to think of two memories in response to the question.

After this, participants then completed the word-stem completion task as used in Study one. In line with research on the DTA hypothesis, this was presented immediately rather than after a brief delay (e.g., Schimel et al., 2007). Participants then completed the Who Are You task that included the same instructions as used in the previous study. Participants were asked to generate a list of identity elements then rate these elements along two items assessing centrality (α = .71), and six items that assessed each identity motive. As with the previous study, scores across each motive were averaged to produce an overall score for each motive or central-ness to identity. Higher scores reflect stronger satisfaction in the motive or centrality.

In line with Study three, we again coded responses on this task for whether they were a personal characteristic or social identity, as well as whether they demonstrated evidence of immortality. Three coders who were blind to the experimental conditions and hypotheses, each coded a third of the sample (e.g., 50 responses, one coder did 51) following the same coding instructions from the previous study. An additional coder rated a random 25% sub-sample of each of three coders (e.g., 13 responses from each coder) to examine reliability. There was a significant general agreement between the additional coder and the original coders for number of immortality elements (coder 1: r=.82, *p*=.001; coder 2: r=.94, *p*<.001; coder 3: r=.95, *p*<.001); as well as whether elements were personal characteristics or social identities (coder 1: r=.92, *p*<.001; coder 2: r =.98, *p*<.001; coder 3: r=.95, *p*<.001). Additionally, there was strong agreement between the additional coder and original coders in whether answers included the presence of an immortality element (coder 1: cohen's

kappa = .67, p =.014; coder 2: cohen's kappa = 1.00, p <.001; coder 3: cohen's kappa = 1.00, p <.001).

Finally, participants were then asked to rate their feelings towards a variety of social groups using an 11-point feeling-thermometer scale with 10 degree increments (e.g., Velasco-Gonzalez et al., 2008). These included both groups to whom they may belong to or not. These social groups were *Britain, England, Their Family, Friends, Muslims, Christians, Americans, Europeans* and *Immigrants*. The use of decoy groups was done to mask our real aim of assessing their attitudes towards Britain and Muslims. Higher scores on this scale reflected more positive feelings towards these groups.

As the same with Study three, demographic information was collected at the end of the questionnaire. Upon completion, participants were probed for suspicion about the study and then debriefed.

Results

Death Thought Accessibility

We first assessed *H1* where it was expected that exposure to a motive threat would increase levels of DTA. A one-way ANOVA was conducted to assess whether DTA was higher in the motive threat conditions (v control). The finding was significant (F (4, 146) = 3.81, p = .006, η^2=.095). Planned comparisons (adjusted alpha = .013) were run to investigate the effect of each motive threat condition to the control separately (for descriptive statistics, see table 7). DTA was significantly higher after belonging threat (p <.001, d = .96), with similar approaching significant effects after self-efficacy threat (p = .035, d = .56), continuity threat (p = .025, d = .61), and distinctiveness threat (p = .018, d = .68). No other comparisons were significant (p's>.10).

Table 7: Means and standard deviations of levels of DTA by each condition. Different subscripts denote significant differences ($p<.05$)

	Television		Efficacy		Continuity		Belonging		Distinctiveness	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
DTA	1.57$_a$	.90	2.10$_b$	.99	2.13$_b$	.96	2.53$_b$	1.11	2.17$_b$	.87

Identity responses

As with the first study, we first assessed whether the manipulation had any unexpected effects on task engagement. There was no evidence that the manipulation affected the number of responses generated (F (4, 146) = .74, p=.564, η^2=.020). We next explored whether the manipulation affected the types of elements listed. Scores for social identity and personal characteristic elements were again generated as a percentage of the total elements listed by the participant. There was no evidence that the manipulation affected the type of elements listed (F (4, 146) = 1.26, p=.287, η^2=.033)[20].

We next assessed *H4* that concerned whether threats to continuity increased the presence of writing about oneself in a way that conferred a sense of literal or symbolic immortality. A one-way ANOVA and chi-square test was conducted to assess whether the number of immortality elements listed; and the presence of immortality elements (Yes/No) respectively differed. The ANOVA demonstrated a marginal effect of the experimental condition on number of immortality elements (F (4, 146) = 2.13, p=.080, η^2=.055), and marginally improved when controlling for the

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[20] Although there was no main effect of element type, further comparisons (corrected alpha =.005) did reveal that there was an almost significant difference in element types for self-efficacy and continuity threat (t (53.88) = 2.58, p=.013, d= .67). The number of social identities listed in the continuity threat condition was higher (*M*= 30.52, *SD* =22.33) than in the efficacy threat condition (*M*= 17.80, *SD* =15.68). Looked at in another way, participants in the efficacy condition provided more personal characteristics than those in the continuity condition.

percentage of elements that were social identities (F (4, 145) = 2.38, p=.054, η^2=.062). Planned comparisons (adjusted alpha = .013) assessing the motive threats to the control revealed that there was only presence of a marginal effect of continuity threat (M=1.00, SD=.82) increasing the number of immortality elements over the control group (M=.57, SD=.73, p=.036).

The chi-square was also significant (χ^2 (4) = 12.14, p = .016, Phi = .28). Assessing each motive threat separately to the control (adjusted alpha = .013) revealed a similar pattern. A marginal effect was only present in the continuity v TV comparison (χ^2 (1) = 6.00, p = .014, Phi = .31). As expected, there was more presence of immortality in the continuity threat condition (74.2%) in comparison to the TV condition (43.3%).

Identity ratings

We next assessed whether specific motive threats would increase the need to affirm that specific motive when rating one's identity (*H2*). A one-way MANOVA was conducted to assess the effect of the experimental manipulation on the rating of identity elements along the dimensions of centrality and the six motives (see table 8 for descriptive statistics). There was only one significant main effect of the manipulation on distinctiveness ratings (F (4, 146) = 3.62, p=.008, η^2=.090). Comparisons (adjusted alpha = .013) comparing the control to the motive threats revealed that distinctiveness was marginally increased after distinctiveness threat (p=.063), efficacy threat (p=.043) and significantly increased after belonging threat (p=.003). All other main effects were not significant (*p's*>.10).

Table 8: Means and standard deviations for centrality and the six motives across all identity elements.

	Television		Efficacy		Continuity		Belonging		Distinctiveness	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Centrality	5.30	.61	5.29	.73	5.32	.66	5.37	.72	5.15	.71
Self-Esteem	4.50	1.04	4.50	.97	4.70	.97	5.07	.91	4.72	.97
Self-Efficacy	4.40	1.07	4.60	.98	4.51	.90	4.92	.98	4.64	1.22
Continuity	4.81	.92	4.84	1.26	5.10	.74	5.05	1.06	4.88	.99
Distinctiveness	3.83	1.01	4.44	1.12	3.83	1.09	4.73	1.22	4.39	1.34
Belonging	4.50	1.04	4.30	1.00	4.46	.85	4.70	1.01	4.61	1.13
Meaning	4.92	1.34	4.89	1.16	4.85	1.06	5.23	.93	4.99	1.06

Again, we also explored whether the manipulation affected ratings of personal characteristics and social identities separately. The findings for identity ratings of personal characteristics revealed a similar pattern to the global ratings with a marginally non-significant effect of distinctiveness ratings ($F (4, 146) = 1.97$, $p=.103$, $\eta^2=.051$). All other effects were still highly non-significant ($p's>.20$). For social identities, the findings revealed marginal effects of the manipulation on esteem ratings ($F (4, 101) = 2.36$, $p=.058$, $\eta^2=.085$), efficacy ratings ($F (4, 101) = 2.37$, $p=.057$, $\eta^2=.086$), distinctiveness ratings ($F (4, 101) = 2.34$, $p=.060$, $\eta^2=.085$) and a significant main effect on belonging ratings ($F (4, 101) = 2.59$, $p=.041$, $\eta^2=.093$). All other effects were non-significant ($p's>.15$).

Planned comparisons (adjusted alpha = .013) assessing the motive threats to the control revealed that social identity ratings of esteem were significantly higher after belonging threat ($p=.010$) and continuity threat ($p=.016$) although the latter was only approaching significant. Ratings of efficacy were also significantly higher after efficacy threat ($p=.007$), and belonging threat ($p=.019$), but again the latter was only approaching significant. Satisfaction of the distinctiveness motive was greater after belonging threat ($p=.005$), and marginally significant after efficacy threat ($p=.035$).

Finally, satisfaction of the belonging motive was increased after efficacy threat, but was only approach significant ($p=.033$). The descriptive statistics for ratings of social identity elements are presented in table 9.

Finally, to assess whether the manipulation may have caused differences between experimental conditions, we also explored the data with post-hoc tests. There were only two effects found. For ratings of identity elements in general, the belonging threat group rated their elements as satisfying the distinctiveness motive more than the continuity threat group ($p=.028$). For social identity ratings, the belonging threat group rated their identity elements as marginally satisfying the belonging motive more than the efficacy threat group ($p=.064$).

Table 9: Means and standard deviations for centrality and the six motives across social identity elements.

	Television (n=21)		Efficacy (n=20)		Continuity (n=24)		Belonging (n=20)		Distinctiveness (n=21)	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Centrality	5.29	1.04	5.52	1.14	5.51	1.02	5.48	1.11	4.79	1.28
Self-Esteem	4.06	2.00	4.80	1.56	5.19	1.37	5.32	1.15	4.50	1.48
Self-Efficacy	3.55	1.94	4.90	1.46	4.56	1.35	4.73	1.42	4.21	1.65
Continuity	5.40	1.44	5.31	1.75	5.80	.72	5.49	1.37	5.22	1.06
Distinctiveness	2.92	1.60	3.99	1.62	3.48	1.49	4.35	1.68	3.72	1.65
Belonging	5.38	1.28	5.62	1.55	5.49	1.12	5.67	.95	4.92	1.75
Meaning	5.22	1.53	4.89	1.16	5.90	.99	5.80	.94	5.25	1.36

DTA and identity motives

We also assessed *H3* that DTA would be positively related to the ratings of the specific motive that was threatened. Pearson correlations on DTA and identity motives were conducted assessing each experimental group separately. Whilst there was no relationship of DTA to identity motives in the efficacy, continuity and belonging conditions (*p's*>.20), there was a significant positive relationship in the distinctiveness

threat group between DTA and distinctiveness ratings as predicted (r=.39, *p*=.016). We also explored the relationship between DTA and identity ratings for both social identity and personal characteristic items separately. For personal characteristics, the same pattern emerged with only DTA being positively related to distinctiveness ratings after distinctiveness threat (r=.32, *p*=.043). For social identities, again the same pattern emerged with DTA positively related to distinctiveness ratings after distinctiveness threat (r=.38, *p*=.045), with an unexpected finding of a negative relationship between DTA and continuity after efficacy threat (r=-.42, *p*=.034).

Social attitudes

Finally, we assessed *H5* that these motive threats would change feelings towards Britain and Muslims. Again, we only included participants who identified as British and non-Muslim. A 5 (Motive threat: TV vs. Efficacy vs. Continuity vs. Distinctiveness vs. Belonging) x 2 (Group type: Britain vs. Muslim) mixed ANOVA was conducted. The findings revealed a main effect of group type (F (4, 120) = 100.29, *p*<.001, η^2=.455), with unsurprisingly Britain rated more favourably (*M*= 68.64, *SD*= 16.08) than Muslims (*M*= 51.12, *SD*= 15.67). There was also a main effect of motive threat (F (4, 120) = 2.61, *p*=.039, η^2=.080). Games-Howell tests revealed that continuity threat produced generally more favourable attitudes (*M*= 65.63, *SD*= 9.59) than the TV condition (*M*= 56.04, *SD*= 11.51)[21]. These effects were qualified by an approaching significant interaction (F (4, 120) = 2.02, *p*=.096, η^2=.063).

To explore this interaction, we assessed the effect of the manipulation on both feelings towards Britain and Muslims separately (adjusted alpha =.025). There was a

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[21] Games-Howell was used because the Levene's test suggested that homogeneity of variance was violated for attitudes towards Muslims (F (4, 120) = 3.12, *p*=.018).

main effect of motive threat on feelings towards Britain (F (4, 120) = 3.75, p=.007, η^2=.111). However, there was no effect of motive threat on feelings towards Muslims (F (4, 120) = 1.04, p=.391, η^2=.033). Planned comparisons assessing each motive threat to the control (adjusted alpha = .003) revealed that continuity threat significantly increased feelings towards Britain (p<.001), and there was an approaching significant effect of distinctiveness threat increasing feelings towards Britain (p=.086).

Although our primary focus was to explore attitudes towards Britain and Muslims, we nonetheless explored whether any other social groups were affected by the manipulation. Perhaps unsurprisingly, there was a significant main effect on feelings towards England (F (4, 120) = 3.67, p=.007, η^2=.109). This revealed the same pattern as the main analysis with only continuity increasing feelings towards England in comparison to the control (p<.001). The manipulation also affected feelings towards Americans (F (4, 120) = 2.51, p=.046, η^2=.077), and marginally towards immigrants (F (4, 120) = 2.08, p=.088, η^2=.065). However, exploring these using Tukey's HSD demonstrated no pairwise comparison was significant (p's>.10). No other effects of the manipulation on attitudes towards social groups were found (p's>.10). The descriptive statistics are presented in table 10.

Table 10: Mean and standard deviations for attitudes towards social groups. Higher scores reflect more positive attitudes.

	Television (n=24)		Efficacy (n=24)		Continuity (n=24)		Belonging (n=27)		Distinctiveness (n=26)	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Britain	61.7	16.1	66.7	16.6	77.8	12.0	67.4	14.0	69.2	17.6
England	62.1	16.4	68.8	17.0	78.7	13.6	67.4	14.0	68.1	18.1
Muslims	50.4	12.0	50.8	12.1	53.0	14.9	46.7	21.3	55.0	15.6
Immigrants	48.3	14.9	53.8	17.9	55.7	14.1	44.8	19.3	55.8	18.2
Americans	52.5	11.9	58.3	14.9	61.3	10.6	52.2	16.5	61.9	17.2

Discussion

Study four offered converging support for the idea that the motives of efficacy, continuity, belonging and distinctiveness serve as important buffers in managing existential concerns. After writing about memories that served as autobiographical threats to these motives, DTA was higher than for those who did not write about threatening memories. This study, to our knowledge, is the first to provide evidence for the role of DTA in these motive threats, complementing the findings of Study 3 and other MS studies that have suggested the importance of these motives in managing death awareness (e.g., Gailliot et al., 2006; Landau et al., 2009; Simon et al., 1997; Walsh & Smith, 2007). Importantly, this study demonstrates the increase of death-related thoughts when exposed to these threats, which would conflict with other perspectives that suggest that TM findings can be explained by more general threats to uncertainty, inconsistency (cf. continuity), control or meaning (e.g., Heine et al., 2006; Fritsche et al., 2011; McGregor et al., 2001; van den Bos, 2009).

Moreover, the findings suggest that immortality striving may particularly be the result of the need for self-continuity. The number of aspects that could be considered to have immortal properties was significantly higher after writing about memories that threatened continuity. Interestingly, whilst we were unable to find that threat affected attitudes towards outgroups; our findings did suggest that attitudes towards the ingroup were affected by continuity threat. Given that the ingroup under examination here falls under the umbrella of special cases of social identity with immortal properties, we suggest that this finding provides further evidence for the specificity of continuity concerns in immortality striving.

However, we were unable to confirm the prediction that motive threats would activate aspects of oneself that are directed at restoring the threatened motive, and only provided mild support that DTA was related to motive ratings. This might suggest that our manipulation did not threaten the motive in question and DTA was elevated because of something else specific to the memories participants wrote about. However, given that we chose manipulations that have provided similar effects to those expected in the present study (McGregor et al., 2001; Pickett et al., 2002; Shepherd et al., 2011), and we removed any participants who wrote about death-related themes, we find this explanation unlikely. Instead, we believe it more likely that the unconstrained method of measuring identity in the present study may have made it difficult to detect the expected effects. For example, it might be that only one element (or several elements) is required to cope with the threat. Thus, taking an aggregate score of each motive might have masked the finding from being detected. Alternatively, participants may not necessarily have responded to the threat in the way that we anticipated, as compensating for the threat is not the only way to cope with threat (see Vignoles, 2017 for examples of coping responses). For example, it is possible that participants simply denied the memory they wrote about as threatening which would prevent the need for changes to one's identity structure (e.g., Breakwell, 1986).

General Discussion

The main aim of this chapter was to support the role of the motives of self-esteem, meaning, efficacy, continuity, belonging, and distinctiveness in managing concerns about the awareness of death. Two studies provided general support for this claim, with the first study demonstrating that reminders of death increased the accessibility of aspects of oneself that conferred a sense of these motives, and the second study demonstrating the inverse of this effect, namely, that threats to these motives increase the accessibility of death-related constructs.

These findings add to the literature exploring additional motives in TMT processes beyond self-esteem and meaning (e.g., Fritsche et al., 2008; Landau et al., 2009; Simon et al., 1997; Walsh & Smith, 2007), and the first using the DTA hypothesis to demonstrate that threats to these motives increase the accessibility of death-related thoughts. These findings therefore provide strong convergent validity for the role of these motives in managing existential concerns.

It should be noted that whilst this study may be the first to demonstrate threatening these motives increases DTA, other studies have attempted to establish that these types of threats do not increase DTA, which would run counter to TMT claims about death awareness being a core human motive. We summarise the findings of these studies in table 11.

Table 11: A list of studies that have examined and failed to find the effect of motive threat on DTA.

Study	Study context	Delay	Finding
Proulx & Heine (2008, study 1b)	Exposure to a meaning threat secretly switching experimenter (v no experimenter change)	Yes (PANAS)	No effect of experimenter change on DTA ($F < 1$)
Proulx & Heine (2009, study 1)	Exposure to a meaning threat via reading an incoherent (v coherent) story	Yes (PANAS)	No effect of meaning threat on DTA ($F < 1$)
Proulx & Heine (2009, study 2)	Exposure to a meaning threat via reflecting on the self as incoherent (v coherent)	Yes (PANAS)	No effect of meaning threat on DTA ($F < 1$)
Navarette et al. (2004, study 2)	Participants wrote either about their own death, being a victim of theft, being isolated from friends/family (v control)	Yes (PANAS-X)	No main effect of experimental manipulation on DTA ($F (3, 96) = 1.99$, $p = .12$), but comparisons revealed that MS increased DTA (v control), but no other comparisons were significant.
McGregor et al. (1998)	Participants wrote about temporal discontinuity v their own death v television (control)	Yes (reading task)	MS increased DTA v control. No difference was found between temporal discontinuity and the control condition.

The studies in the table all have one aspect in common with each other and uncommon from the present study. This concerns whether there is a delay between the experimental manipulation and the administration of the DTA task. TMT outlines a dual-process model whereby MS produces the engagement of proximal defences that seek to remove thoughts of death from conscious awareness (Pyszczynski et al., 1999). Once these thoughts have faded from conscious awareness, but remain highly accessible, distal defences such as worldview bolstering become active.

As such, DTA is low immediately after MS, and becomes elevated after a delay (e.g., Arndt et al., 1997b; Greenberg et al., 1994). In contrast, because threats to self-esteem and worldviews do not involve explicit reminders of death (as is the case with the present study), proximal defences are bypassed, thus DTA should be elevated immediately and fade over time (Hayes et al., 2010). As such, it cannot be ruled out that the findings of the studies presented in the table are the result of the inclusion of a delay between the manipulation and administration of the word task.

In fact, given that the manipulation used for continuity threat was almost identical to the McGregor et al. (1998) study, it would seem highly likely that this is the case. Moreover, Webber et al. (2015) also revisited the meaning threats used by Proulx and Heine (2009) but did not include a delay and found the expected increase in DTA. The question of whether DTA may underpin all threats remains, but a recent meta-analysis appears to support the idea that MS in comparison to meaning/certainty threats have different time courses that would fit the dual-process model of TMT (Martens, Burke, Schimel, & Faucher, 2011). Whilst this study is not enough to conclusively state that DTA is an important mechanism in a range of threats, it is our opinion that no study exists that can counter this claim. However, more research is required to understand the compatibility (or differences) between these threat types.

A limitation of the present study is that the present analysis cannot state whether the roles of efficacy, distinctiveness, belonging, and continuity are independent from meaning and self-esteem. As we have outlined previously, these motives have been found to independently predict identity formation (e.g., Vignoles et al., 2006), but it is possible that when related to existential concerns these motives are subordinate to the motives of meaning and self-esteem. For example, continuity

may serve the meaning motive by providing a coherent narrative for which to understand oneself and the social reality, or that distinctiveness is a way of achieving and maintaining self-esteem (e.g., Tajfel & Turner, 1986). As we were unable to confirm the compensatory response mechanisms to coping with each motive threat, we cannot rule out this possibility.

This would seem likely a problem with our current method to measuring identity. Whilst the Who Are You task can increase the external validity of TM findings, the unconstrained responses at the same time may increase the variation in detecting effects. Indeed, it should be noted that the bias towards reporting individual-level aspects of oneself causes some difficulty in interpreting findings regarding social identity. Certainly, further research is required to further validate and disentangle some of the effects identified in the present study.

Existential, motive and intergroup threat: the same or different?

In sum, these findings contribute towards a broader understanding of the relationship between TM processes and a cascade of fundamental human motives. We believe these findings are compatible with the findings of the first chapter where perceiving symbolic and realistic threats from Muslims (as outlined by ITT) were found to be compatible with a range of perceived motive-based threats to British identity (as suggested by IPT). As such, we have established an interface between IPT and ITT, and IPT and TMT that may suggest that these approaches explore similar ideas from different levels of analysis as suggested in the literature review. The next chapter therefore attempts to further the interface between these theories by considering whether intergroup threats may be conceptualised as existential threats as suggested by TMT.

In addition, the present findings have also suggested that social identities, such as being British, may hold special importance in one's identity repertoire, as they constitute an effective way of buffering from existential concerns due to the possibility of transcending death. Becker (1973) argues that this human pursuit for "immortality projects" is what causes prejudice due to different projects conflicting with each other and thus denying death transcendence. This analysis would therefore seem compatible with premises from the first two studies of this thesis on identification and beliefs being an antecedent of threat perception. We therefore sought to explore the role of ingroup identification and beliefs further in relation to worldview threat in the next study.

Chapter V:

Is national essentialism and identification associated with levels of DTA when exposed to symbolic threats to worldview?

Abstract

Our findings so far suggest that ingroup national identification and essentialist beliefs are potential antecedents of perceiving Muslims as a symbolic threat. Previous research has suggested that essentialist beliefs and social identities may act as existential anxiety-buffers. This study aimed to explore whether strength of ingroup identification and endorsement of essentialist ingroup beliefs is related to DTA when exposed to symbolic threats to worldview. An online experimental study was conducted that took measures of national identification and essentialist beliefs before participants were asked to read a news article that suggested Muslims posed a symbolic threat to worldview (v control). The findings demonstrated that DTA was elevated after exposure to threat, but this was particularly the case for those that were high in national identification or endorsed essentialist ingroup beliefs. Moreover, DTA was found to moderate the relationship between these measures and ingroup bias. The findings add to the growing literature on the links between social identity, essentialism, and existential anxiety.

Introduction

"...there is a great deal of falseness and self-deception in the cultural causa-sui project, but there is also the necessity of this project. Man needs a "second" world, a world of humanly created meaning, a new reality that he can live, dramatize, nourish himself in. "Illusion" means creative play at its highest level. Cultural illusion is a necessary ideology of self-justification, a heroic dimension that is life itself to the symbolic animal. To lose the security of heroic cultural illusion is to die"

(Becker, 1973, p. 189)

Previous research has pointed towards the idea that social groups, and beliefs about them, may constitute effective ways to alleviate concerns over awareness of the inevitability of death (Castano & Dechesne, 2005; Castano, Yzerbyt & Paladino, 2004). One reason for this is because, in contrast to oneself whose mortal fate is inevitable, social groups are not necessarily subject to this outcome. Thus, identifying with social groups, especially when they are highly entitative, can be a useful strategy for alleviating existential anxiety (Castano, 2004b; Castano et al., 2004).

However, social groups are merely humanly constructed symbolic entities. Consequently, they require continual and consensual validation, as well as defence, to maintain them as effective buffers from existential concerns (Greenberg et al., 1997). The extent to which these social identities need to be continually validated and defended is likely to depend on the importance of one's social group to the individual self-concept (Tajfel & Turner, 1986). However, to our knowledge, no research has explored whether strength of social identification, and essentialist beliefs associated with identity, are related to levels of existential anxiety when exposed to symbolic threats to worldview. The current research aims to explore this gap, combining insights from SIT (Tajfel & Turner, 1986), Essentialism (e.g., Haslam et al., 2000) and TMT (Greenberg et al., 1986). We first present a brief reminder of TMT, before exploring how SIT and essentialism can be deployed to assess existential threat.

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Terror Management Theory

TMT (Greenberg et al., 1997) proposes that the unique human awareness of the inevitability of death, juxtaposed with the biological desire to survive, provide the active ingredients to the potential for existential terror. To manage this, individuals invest in - and identify with - cultural worldviews that provide a stable, orderly and meaningful sense of reality, as well as associated standards of conduct that if lived up to can afford individuals with a sense of self-esteem, and the possibility to transcend death either literally or symbolically. As such, TMT proposes that, in part, the ubiquitous striving for self-esteem is to defend from the anxiety that stems from knowledge of one's own corporeal existence.

However, cultural worldviews are not capable of eradicating the terror that comes from the knowledge of permanent annihilation of the self, instead only managing it so that individuals can go about their daily lives with relative equanimity despite the awareness of their inevitable mortality. Furthermore, as worldviews are merely symbolic constructions of reality, and there are very few objective metrics of one's value, they require continual maintenance in the form of consensual validation (Pyszczynski et al., 2015). As such, those who share one's worldview increase the legitimacy of one's worldview, whilst those who subscribe to alternative worldviews decrease this legitimacy.

Consequently, a core tenet of TMT is that if worldviews protect from existential anxiety, then reminders of mortality or threats to worldview increase the accessibility of death-related constructs and the need to maintain faith in one's worldview (Greenberg et al., 1997). Research has generally supported these assumptions, demonstrating that reminders of mortality (in comparison to a negative

or neutral topic) increase desires to maintain faith in one's worldview, and that threats to worldview increase the accessibility of death-related words, but not negative words (Schimel et al., 2007; for meta-analyses *see* Burke et al., 2010; Hayes et al., 2010).

Social Identity Theory

SIT (Tajfel & Turner, 1986) proposes that knowledge of membership to groups is an important aspect of an individual's self-concept. Because of this relevance to the self-concept, individuals are motivated to view their social identities positively to maintain or enhance self-esteem. At the same time, any valued social identity would therefore require continual maintenance and defence from perceived threats due to its subjective importance to the self-concept. Indeed, considerable amounts of research have identified that strength of identification is an antecedent to threat perception (for review *see* Riek et al., 2006).

As such, SIT and TMT are complementary in two important respects. Firstly, they both acknowledge the need and striving for self-esteem in human behaviour; and secondly, they recognise the impact that culture and groups can have upon the self-concept (Castano & Dechesne, 2005; Castano et al., 2004). Indeed, prior research has demonstrated social identity effects in TMT mechanisms. For example, reminders of death result in increased social identification to groups (e.g., Castano et al., 2002; Dechesne et al., 2000), more favourable views of ingroup members and more negative views of outgroup members (e.g., Greenberg et al., 1990, 1992) and stronger in-group biases in minimal group settings (e.g., Harmon-Jones, Greenberg, Solomon, & Simon, 1996). In contrast, threatening one's social group leads to increased DTA (Cohen et al., 2013; Hayes et al., 2008a; Hayes et al., 2015; Schimel et al., 2007).

What TMT research has not yet demonstrated is whether strength of social identification is associated with DTA when exposed to worldview threat. As previously stated, research in the Social Identity tradition has tended to demonstrate that strength of identification is associated with threat perception (e.g., Branscombe et al., 1999; Riek et al., 2006). In contrast, previous TMT research has only selected participants based on whether they are a member of the threatened group in question (e.g., Cohen et al., 2013) or participants that score highly on pre-measures of identification (e.g., Hayes et al., 2008a; Hayes et al., 2015; Schimel et al., 2007), thus are unable to demonstrate whether individual differences in strength of identification moderate levels of DTA when exposed to a threat to worldview, something that the present research seeks to address. In addition, to our knowledge, only one study has currently explored the possibility of potential individual differences in levels of DTA when exposed to worldview threat (Roylance et al., 2014), thus the present research would be a generally welcome addition to an underexplored avenue of TMT.

Essentialism

In addition to social identification as an antecedent of existential threat, the present research also explores whether essentialist beliefs also contribute towards a stable and orderly worldview. Essentialist beliefs about social groups have been found to constitute two factors: (1) *natural kind* beliefs that are the view that groups are natural and not socially constructed, thus having clear-cut boundaries and being historically invariant; (2) *entitativity,* that is the belief that groups have an essence that leads to group homogeneity and is informative about members (Haslam et al., 2000, 2002).

Both these sets of essentialist beliefs are likely to contribute towards a stable and orderly worldview. Firstly, they constitute a meaning framework assisting the

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perceiver to understand the social reality. Secondly, they suggest that certain groups are temporally enduring, which may be useful in alleviating existential anxiety (Castano & Dechesne, 2005). Thirdly, they also implicate the idea that group members are similar to each other that may infer a sense of consensual validation for one's worldview (for similar ideas *see* Hogg, 2009). Indeed, Young (2003) has suggested that essentialism is a form of response to ontological insecurity as it emphasises that the self (and others) are unchanging, but also that the self has some essential and valued quality (either cultural or biological) that is associated with one's group. Thus, essentialist beliefs about one's own group may provide a distinctive identity with a clear group prototype that can offer an unambiguous worldview, maximise self-esteem processes and a possibility of death transcendence.

Evidence for essentialist beliefs in managing existential anxiety comes from several studies. Keller (2005) reports that belief in genetic determinism about social categories, a type of essentialist belief, is positively related to fear of death scales. Experimental research demonstrates that primed thoughts of death increase the perception of group entitativity (Castano et al., 2002), and enhances perceptions of collective continuity, which in turn enhances entitativity and identification (Sani et al., 2008; Herrera & Sani, 2013).

Moreover, evidence for essentialist beliefs managing death anxiety can be viewed by exploring strategies that may seek to retain or enhance entitativity. Castano (2004b) found that after being subliminally primed with thoughts of death, participants made *over-exclusion* effects when categorising stimuli in a subsequent ingroup/outgroup task. That is, they were more likely to exclude targets with a low sense of in-groupness, but at the same time, more likely to include targets that had a

high degree of in-groupness. Thus, it seems that identification with social groups, particularly those that are highly entitative, may well be useful in managing existential anxiety (Castano & Dechesne, 2005).

If essentialist beliefs about one's own group serve as an anxiety-buffering mechanism, it would be likely that certain threats that impinge upon these beliefs may temporarily increase DTA in line with TMT proposals. For example, previous research has highlighted that essentialist beliefs increase the perception of symbolic threats to identity (e.g., Zagefka et al., 2012). This is because symbolic threats can include concerns over the loss of ingroup traditions, norms and values that may hinder death transcendence strategies for managing existential anxiety (Cinnirella, 2014; Castano & Dechesne, 2005). Secondly, essentialist beliefs can imply that the group is not susceptible to socio-cultural shaping (Zagefka et al., 2012), so perceived challenges to the ingroup can be considered in direct conflict to one's worldview beliefs. Thirdly, symbolic threats can question the validity of the in-group's norms, values and traditions, thus compromising the extent to which they can be used for self-esteem purposes (Cinnirella, 2014).

The role of DTA in worldview defence

An additional line of inquiry for the present research is to explore the role of DTA in producing worldview defence after experiencing threat. There is little existing research so far on the relationship of DTA to worldview defence, but some research has suggested that DTA mediates the relationship between threat and defence (Fransen et al., 2008; Vail et al., 2012a). The idea that DTA acts as a mediating variable between social identification, essentialism and ingroup bias would be compatible with literature on intergroup threat (e.g., Riek et al. 2006).

Other research has suggested that DTA exhibits an *interactional mediation* (Hayes et al., 2010). That is, DTA is related to worldview defence but only in the threat condition. For example, Das et al. (2009) observed that DTA was related to Islamophobic prejudice, but only in those who were exposed to terrorism news reports (for similar findings *see* Hayes et al., 2015).

However, no research to our knowledge has explored how national essentialism and identification may produce differences in DTA levels after worldview threat and, in turn, how DTA is then subsequently related to worldview defence. Therefore, it is difficult to assess what role DTA will have in the present study. Whilst it is possible that DTA may mediate the relationship between these measures and defence in the threat condition, there may exist a more complex moderated relationship between these variables. This is because DTA itself is a proxy of existential anxiety, which is the motivating force in the need to affirm or defend one's worldview (Hayes et al., 2010). Thus, it is possible to expect that those who highly identify or essentialise their ingroup demonstrate increased DTA when exposed to worldview threat, but there may be an important qualifying effect on defence between those who demonstrated differing levels of DTA. Supporting this possibility, Das et al (2009) found that prejudice towards Muslims varied as a function of both DTA and levels of dispositional self-esteem. However, given that there is little research concerning this aspect, and none (to our knowledge) using the measures in the present study, we will approach the role of DTA in an exploratory fashion.

Study 5 aims and hypotheses

In summary, the present study aims to expand upon existing research in several ways. First, in comparison to previous research that has explored how MS increases

identification or essentialist beliefs about one's ingroup (e.g., Castano et al., 2002, Herrera & Sani, 2013; Sani et al., 2008), the present study aims to assess whether the inverse is true. Do those that highly identify and/or essentialise the ingroup demonstrate higher levels of DTA when exposed to threats to worldview? Second, by examining this question, we will expand upon prior research that has explored DTA and worldview threat by exploring whether there are individual differences in levels of DTA in the face of threat, something to which our knowledge has been generally overlooked by TMT researchers (but see Roylance et al., 2014).

To assess this possibility, we conducted an online study where participants first completed a measure of British national identification and essentialist beliefs. They were then randomly allocated to read a news article that focused on the incompatibility of Muslim and British worldviews (or a control article). Participants then completed a measure of DTA before finally rating their attitudes towards both Muslims and Britain. This therefore allowed us to assess whether differences in DTA after exposure to worldview threat, are associated with levels of national identity and essentialist beliefs. In addition, we could also therefore explore the relationship between DTA and prejudice.

H1: Those exposed to the threatening article will demonstrate higher levels of DTA

H2: Strength of identification and/or essentialist beliefs will be positively related to levels of DTA, but only when exposed to worldview threat.

H3: Natural kind beliefs of discreteness and naturalness will be positively related to levels of DTA after worldview threat.

H4: National identification will be positively related to levels of DTA after worldview threat, particularly in those who also view the nation as highly entitative or of a natural kind.

In addition, the present design allows us to assess the relationship between DTA and prejudice, as well as how this relationship may vary as a function of national identification and essentialism. Whilst we suspect that the relationship between DTA and defence will be limited to the threat group (e.g., an interactional mediation), some research has suggested that DTA may more straightforwardly mediate the link between the threat manipulation and defence. Additionally, to our knowledge, no research has explored the link between identification, essentialism, DTA, and prejudice thus making *a-priori* predictions difficult, so we will consider this aspect in an exploratory fashion.

Method

Participants

148 British Non-Muslim nationals were recruited to take part in an online study via British-based internet forums and social media. This sample size was obtained by recruiting as many participants as possible by a certain end date. 6 participants were removed for either not completing all the measures, following task instructions properly or suspected to not have engaged with the study materials. 11 participants were removed from the final analysis due to their answers on the memory check indicating they had not engaged with the article content (7- Threat, 4- No Threat). Therefore, the final sample consisted of 131 participants (*M*age = 28.3, *SD*age = 9.4), with 65 males, 66 females. Participants were randomly assigned to either the threat

group (n=66), or the no threat group (n=65). Participants had the opportunity to opt in to a lottery for participation with the chance to win a £50 Amazon voucher.

Materials and procedure

The survey was pitched as an investigation of memory for media content. Participants were informed that they would read a news article and after a delay answer questions regarding how well they could remember the content of the article. Participants were also informed that we were also interested in their beliefs and views about being British.

In the first part of the study, participants completed the scale of British identification used in Study 2 containing 7 items (Cinnirella, 1997), on a 7 point likert scale from (1) not all all to (7) extremely. These items provided a good level of reliability ($\alpha = .88$) with a higher score on this scale reflecting stronger identification with being British. They then completed the scale of essentialism used in Study 2 that assesses the nine essentialist beliefs of discreteness, uniformity, informativeness, naturalness, immutability, stability, inherence, necessity, and exclusivity. Each scale had their own personalised scale anchors (*see* Haslam et al., 2000). The scales for necessity, uniformity, informativeness, inherence, and exclusivity were again reverse scored.

Participants were then informed they were beginning the learning phase of the study. During this phase, participants read one of two news articles. They were instructed to remember as much content about the article as possible as they would be later tested on it. Whilst the current research has suggested that Muslims are perceived to pose both a realistic and symbolic threat to identity (Study 1 and 2), to economise the design we only focused on symbolic threat, which generally has been shown to be

the strongest predictor of Islamophobic prejudice (Cinnirella, 2014). The symbolic worldview threat article was headlined: 'British Muslims: Islamic values should be taught in our schools!' coupled with a school classroom with a poster that said 'British schools, Islamic rules'. The article discussed how British-Muslims wanted a change to the British school curriculum to implement more Islamic-related teaching and values. In addition, it also more broadly spoke of a rising Muslim population in the UK and the apparent desire some Muslims had for the implementation of Sharia Law in Britain. The control article discussed British summer weather and forecasting and was headlined: 'Never Fear: The Great British Summer is finally here!' with a picture of women enjoying the weather on a beach. The content of both articles was loosely based on an amalgamation of actual news stories but was created by the researchers for this study to ensure control over length and content (for full wordings of these articles *see* Appendix, Attachment B and C).

Participants were then informed they would complete a few delay measures before being asked to recall the content of the article. In fact, both delay measures were the dependent variables of this research. The first delay measure was a word-stem task traditionally used to measure DTA (e.g., Greenberg et al., 1994; Schimel et al., 2007) that was used in Study 3 and 4 of this thesis.

The second delay measure was a feeling-thermometer (e.g., Velasco-González et al., 2008) towards a variety of social groups. To maintain the cover story, this measure was pitched to participants as having the possibility to disrupt retention of learned information and a variety of social groups were given to avoid arousing suspicion. Responses were provided on an 11 point-Likert scale ranging from 'Intensely cold or unfavourable feeling' (1) to 'Intensely warm or favourable feeling'

(11). Participants were asked to rate their feelings towards a variety of social groups: *their friends, America, Britain, Christians, Muslims, Europeans, Immigrants,* and *British newspapers*.

The final phase of the experiment consisted of a series of open-ended memory questions for participants to answer about the article they had just read. The final phase here was only included to maintain the cover story and to check these answers to ensure participants had engaged with the content of the article. On completion of these questions, participants were then debriefed and given the opportunity to enter a prize draw to win a £50 Amazon voucher.

Results

Death-Thought Accessibility

Our first hypothesis (*H1*) stated that in comparison to the control condition, participants in the threat condition would exhibit higher DTA. An independent samples t-test was therefore conducted to assess the effect of the article type on DTA. The analyses revealed that article type had a significant effect on DTA (t (129) = 2.06, p = .041, d =0.35), with DTA significantly higher after being exposed to the threat article (M = 2.00, SD = 1.14) than the no threat article (M = 1.62, SD = 1.00).

Feeling-Thermometer

In addition, a 2 (threat v no threat) x 2 (Britain v Muslim) analysis was conducted to assess the effect of article type on feeling thermometer ratings of the ingroup and outgroup. Not surprisingly, there was a main effect of group being rated (F (1, 129, = 115.89, p<.001, η^2= .473). Britain was rated much more positively (M = 7.97, SD = 1.58) than Muslims (M= 5.87, SD = 1.75). This was qualified by an interaction of

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group type and article type (F (1, 129) = 12.17, p=.001, η^2=.086). Planned comparisons (adjusted alpha = .025) demonstrated that there was an effect of article type on feelings towards Britain (t (129) = 2.49, p = .014, d = 0.43), with more positive feelings after the threat article than the no threat article. Additionally, the article also significantly affected feelings towards Muslims (t (129) = 2.28, p = .024, d =0.40), with more negative feelings when exposed to the threatening article than the no threat article (see table 12).

Table 12: Means and standard deviations for group ratings by article type.

	Threat		No Threat	
	M	*SD*	*M*	*SD*
Britain	8.30	1.48	7.63	1.61
Muslims	5.53	1.85	6.22	1.58

Principal Components Analysis

To assess the structure of essentialist beliefs about Britain, a principal components analysis was conducted using varimax rotation on the nine essentialism items. The analysis yielded a two-factor solution explaining 50.73% of the data, with all items receiving factor loadings greater than .50 (for precise loadings, *see* Appendix table 3). The factors were identical to those concerning British essentialist beliefs in Study 2. The first factor included the beliefs of discreteness, naturalness, immutability, and stability, whilst the second factor included the items of uniformity, informativeness, necessity, exclusivity and inherence. As such, they resemble the concepts of *natural kind* and *entitativity* beliefs (Haslam et al., 2000). Composite scores of these factors were produced for the main analyses.

National Identity and Essentialism

We now turned to assess whether national identity and essentialism were associated with levels of DTA for those exposed to the threatening article (*H2*, *H3* and *H4*). Preliminary analyses assessing the bivariate correlations between the variables for each condition independently suggested that national identity ($r=.27$, $p=.014$), natural kinds ($r=.26$, $p=.017$) and entitativity ($r=.35$, $p=.002$) were weakly correlated with DTA in the threat group, but not in the no threat group (p's$>.250$). Additionally, exploring the subcomponents of natural kind beliefs suggested that discreteness was positively related to DTA ($r = .26$, $p=.038$), and stability was marginally related to DTA ($r=.23$, $p=.063$) after worldview threat, but again were not related in the control group (p's$>.20$).

To assess this further, regression analyses were conducted to assess the effect of the article type, national identity and the essentialism factors on DTA. The article type was coded as -1 = No Threat; 1 = Threat. The essentialism factors and national identity were also centred before interactions were produced by multiplying the variables in question together (Aiken & West, 1991). The findings revealed an approaching significant effect of national identity ($\beta=.19$, $t=1.87$, $p=.064$), and entitativity ($\beta=.18$, $t=1.81$, $p=.072$) on DTA. These were qualified by an approaching significant three-way interaction between article type, national identity and entitativity ($\beta=-.19$, $t=1.95$, $p=.054$). We therefore, decomposed this three-way interaction by exploring the relationship between national identification and essentialism by each condition separately.

This analysis revealed only a significant effect of entitativity and a near significant effect of national identity in the threat condition. That is, entitativity was

positively related to levels of DTA (β=.37, t=2.38, p=.023), whilst national identity had a marginal significant positive effect on levels of DTA (β=.30, t=1.94, p=.057). Natural kind beliefs, however, did not produce a significant effect on DTA scores (β=.22, t=1.42, p=.161), and follow–up analysis still suggested this was the case when each natural kind belief was explored separately (*p's*>.30). For the no threat condition, none of the variables or interactions were significantly associated with levels of DTA (*p's*>.10). Therefore, *H2* was supported, with partial support for *H3*, but *H4* was not supported. Importantly, as the findings demonstrated that DTA was only related to these measures in the threat condition, the conditions for DTA as mediating variable (at least at a global sample level) had not been met (Baron & Kenny, 1986).

Mediation analyses

We now turned to assessing the role DTA has in the relationship between exposure to worldview threat and defence. As the current findings have found so far no support for DTA as a mediating variable at a global sample and prior research has suggested that DTA may only mediate the link between the experimental group and defence (e.g. interactional mediation; Hayes et al., 2010), we focused our analysis only on the experimental condition.

To assess whether mediation had occurred in the threat condition, path analysis was conducted with Amos (version 21) using bootstrapping of 1000 samples with a 95% confidence level to test for mediation effects (Preacher & Hayes, 2008). When the confidence level does not include zero, bootstrapping indicates that significant mediation has occurred. Effect sizes (ES) are given as standardised. A fully mediated model was tested, with pathways from the predictors and interactions to DTA, and DTA to in-group bias. Ingroup bias was computed by subtracting the scores assigned

about feelings towards Muslims to scores assigned to feelings towards Britain. A higher score therefore indicates greater in-group bias. Findings demonstrated that significant mediation had only occurred for the effect of entitativity on in-group bias ($ES = .14$, 95%Cl .01-.29), whilst all other confidence levels included zero suggesting DTA had not significantly mediated the relationship for these variables (see Figure 3).
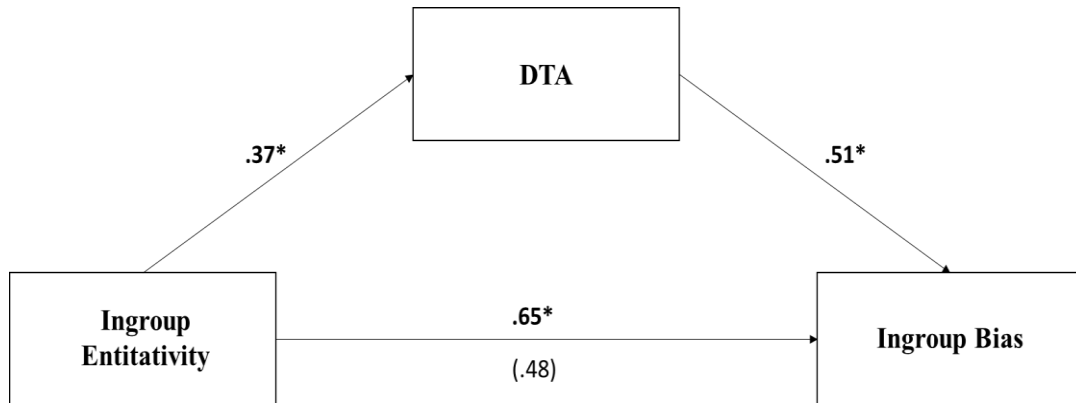

Figure 3: Mediation analysis of the effect of entitativity on ingroup bias when exposed to the threatening article. Coefficients are unstandardized and from the multiple regression analyses. Coefficients in parentheses demonstrate the direct effect of entitativity on bias when in the presence of DTA. *$p<.06$

Moderation analyses

We now assess the possibility that DTA acts as a moderating, rather than mediating, variable to ingroup bias in the threat condition. DTA scores were centred before the interactions were computed. Again, the dependent variable was ingroup bias. For the threat condition, regression analyses revealed that national identity ($\beta=.76$, $t=2.60$, $p=.012$) positively predicted in-group bias, and this was qualified by an interaction between DTA and national identity ($\beta=.75$, $t=2.53$, $p=.014$). There was also a two-way interaction between the essentialism factors ($\beta=.60$, $t=2.09$, $p=.041$), and a marginal interaction of DTA and entitativity ($\beta=.61$, $t=1.95$, $p=.057$). Finally, these effects were qualified by a marginal three-way interaction between DTA, entitativity and natural kind beliefs ($\beta=.65$, $t=1.69$, $p=.097$). In the control condition, there was only an effect

of national identity ($\beta=.76$, $t=2.60$, $p=.012$) on in-group bias, and importantly no presence of an effect of DTA or an interaction with DTA on ingroup bias (p's>.10).

Breaking down these interaction effects, firstly, the marginal three-way interaction appeared to be the result of a slightly diverging effect of the two-way interaction of entitativity and DTA at high and low levels of natural kind beliefs. That is, at low levels of natural kind beliefs, DTA appeared to be trending to *decreasing* levels of ingroup bias when entitativity was high, albeit this interaction was statistically non-significant ($p>.10$).

Decomposing the two-way interaction between entitativity and DTA (see figure 4), simple slopes analyses were conducted using 1 SD below and above the mean (Aiken & West, 1991). This demonstrated that at low levels of entitativity, there was no effect of DTA on ingroup bias ($\beta=.20$, $p=.495$), but at high levels of entitativity, DTA increased ingroup bias ($\beta=.81$, $p=.036$).
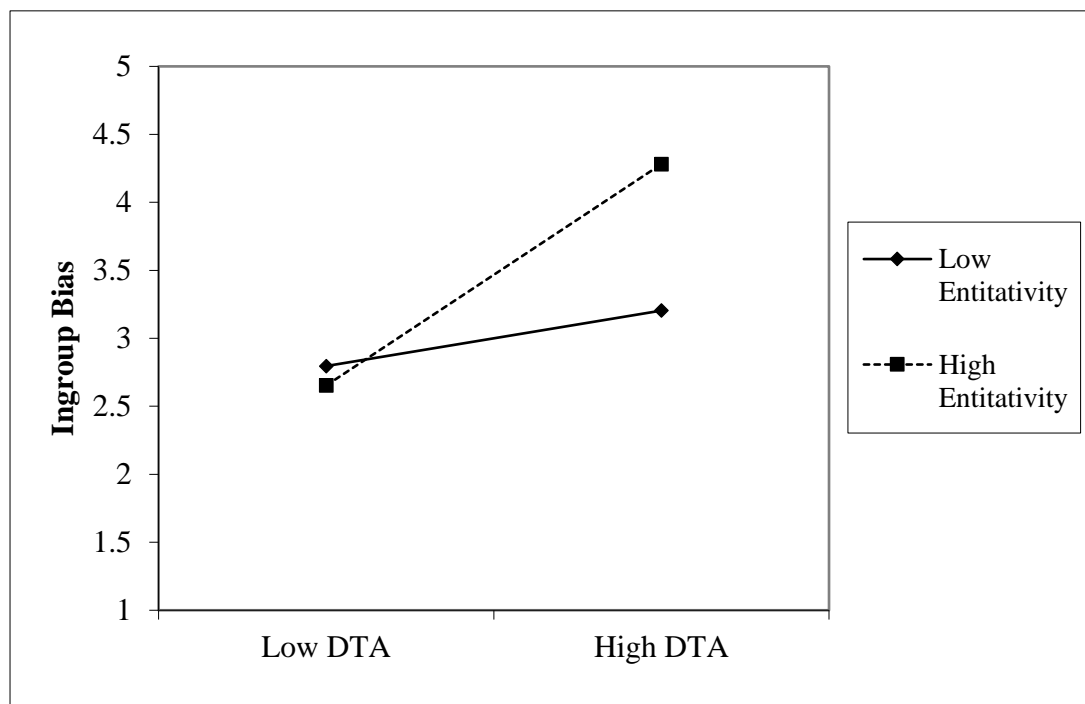
Figure 4: The relationship between DTA and national entitativity on ingroup bias, plotted at +/- 1 SD below and above the mean.

Breaking down the interaction between national identity and DTA showed a similar effect on ingroup bias (see figure 5). That is, DTA exerted a significant effect on in-group bias at high (β=.95, p=.008), but not low levels of national identity (β=.20, p=.493). These analyses therefore appear consistent with the assertion that DTA acts as a motivating factor in producing worldview defence.
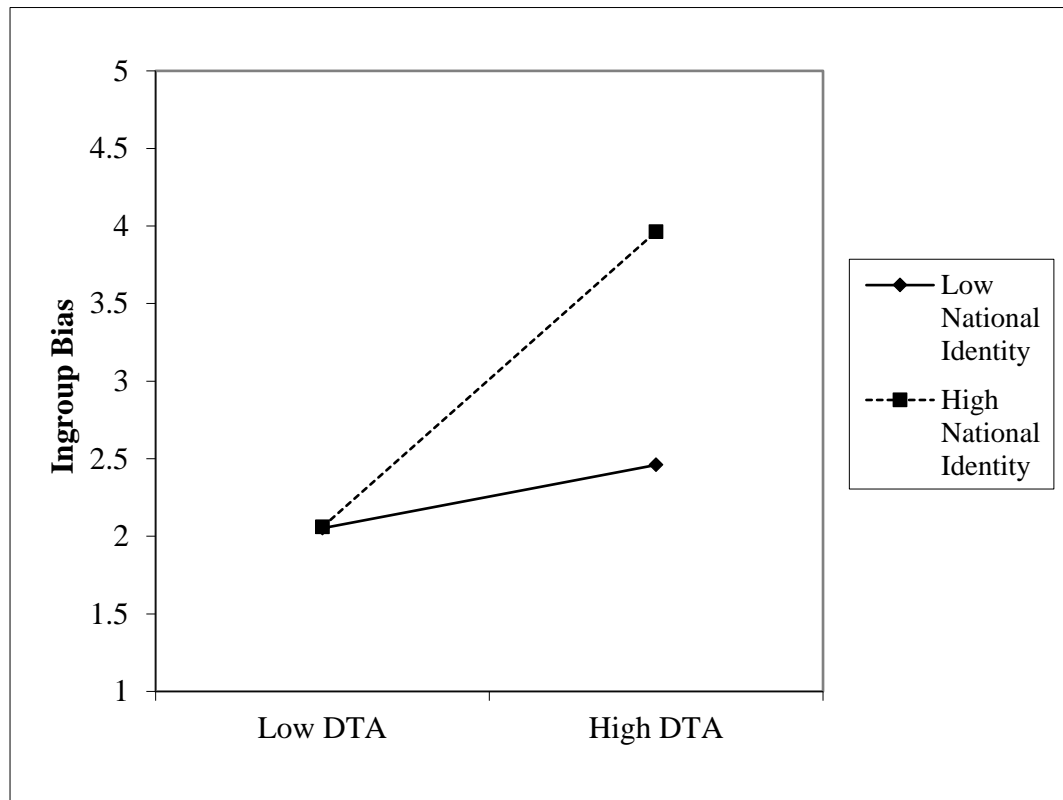
Figure 5: The relationship between DTA and national identity on ingroup bias, plotted at +/- 1 SD below and above the mean.

Despite support for both the mediating and moderating effect of DTA when exposed to threat, it appeared that there was stronger support for DTA as a moderating variable. However, to explore this question further, we created both the mediating and moderating models using Structural Equation Modelling in Amos (version 21) to explore which model fitted the threat data better. In both models, the residuals of the predictor variables were allowed to correlate, and only the significant pathways indicated by the regression analyses were input. To assess fit, we deployed chi-square

tests, root mean square of approximation (RMSEA), goodness of fit index (GFI) and the comparative fit index (CFI), whereby a good-fitting model would be indicated by a non-significant chi-square test, a value of RMSEA less than .06 and CFI/GFI greater than 0.95 (Hu & Bentler, 1999). Whilst neither model perfectly met the criteria across all fit tests, the moderating model fit the data considerably better across all indexes (χ^2 (9) = 16.67, p = .054; CFI = .973; GFI = .971; RMSEA = .115) than the mediating model (χ^2 (10) = 30.41, p = .001; CFI = .858; GFI = .919; RMSEA = .177). The mediating model in fact did not meet any of the criteria as a good-fitting model. Therefore, it was accepted that the moderating role of DTA was the superior model.

Auxiliary analyses

Despite the focus of the present study on exploring bias specifically through attitudes towards Britain and Muslims, we nonetheless explored whether the current manipulation affected any of the feelings towards the other social groups. There was a marginal effect of article type on feelings towards immigrants (t (129) = 2.28, p=.080), whilst all other social group ratings were not affected by the manipulation (p's>.10). The threatening article decreased feelings towards immigrants (M= 6.08, SD = 1.63) in comparison to the no threat article (M=6.58, SD =1.68). Further regression analyses with ingroup bias (Britain – Immigrants) revealed a similar pattern of findings to the main analysis in the present study. That is national identification (β=.91, t=3.86, p<.001), natural kind (β=.55, t=2.31, p=.025) and entitativity beliefs (β=.53, t=2.10, p=.041) positively predicted ingroup bias. There was also a marginal interaction between the essentialism factors in predicting bias (β=.46, t=1.98, p=.053), that illustrated the same pattern with entitativity exhibiting a stronger effect on bias at high (β=.98, p=.006), than low levels of natural kind beliefs (β=.52, p=.041).

Interestingly, however, our analyses did not detect any effect or interaction with DTA on ingroup bias ($p > .10$). Thus, our findings seem to suggest that the role of DTA on ingroup bias was specific towards the source of the threat.

Discussion

The current study aimed to explore whether DTA levels would increase as a function of social identification and essentialist ingroup beliefs when exposed to a threat to worldview. The present findings support this assertion; social identification and entitativity beliefs positively predicted levels of DTA for those who were exposed to the threatening article. In addition, the findings also suggest that DTA acts in a moderating capacity to these measures on worldview defence, which is consistent with TMT assertions of DTA motivating worldview defence (Hayes et al., 2010).

The current findings contribute to the research that has proposed a link between existential anxiety, essentialism and social identity (e.g., Castano et al., 2002; Herrera & Sani, 2013; Sani et al., 2008), and research exploring worldview threat and DTA (e.g., Cohen et al., 2013; Hayes et al., 2008a, 2015; Schimel et al., 2007). The present research expands upon these findings in notable ways. Firstly, previous research exploring these links has deployed the mortality salience (MS) paradigm demonstrating that MS increases in-group identification and entitativity, whilst this is the first study, to our knowledge, to demonstrate that threats to these beliefs increase DTA. This provides good convergent validity for the links between existential anxiety, essentialism, and social identity. Secondly, whilst previous research has demonstrated that national worldview threat increases DTA, this is the first study to demonstrate individual differences in national essentialism and identification predict DTA levels when exposed to national worldview threat. This is important because individual

differences in DTA levels after exposure to worldview threat has largely been neglected by TMT researchers (but see Roylance et al., 2014). We also believe these findings to be complementary to existing research on essentialism, identification and intergroup threat (e.g., Branscombe et al., 1999; Riek et al., 2006; Zagefka et al., 2012).

Why does exposure to symbolic threat increase DTA for strong identifiers and those who endorse essentialist in-group beliefs? The current design and study aims do not allow us to assess this question. However, we believe that our findings presented so far in this thesis can help shed light on this question. Our examination so far has suggested that the fundamental human motives of esteem, efficacy, meaning, continuity, belonging and distinctiveness are: (1) perceived to be threatened when experiencing intergroup threats such as the symbolic threat to worldview in the present study; (2) perceived threats to these motives are predicted by strength of social identification and essentialist beliefs; (3) these motives are related to TM processes in that MS causes a need to affirm these motives, and threats to these motives increases DTA. As such, we would suspect that strong identifiers and those that define the group in essentialist terms experience threat that compromises these motives that in turn increases the accessibility of death-related thoughts.

Our findings also indicated that whilst exposure to the threatening article decreased feelings towards immigrants, the effect of DTA might have been specific to Muslims. We believe this decline in feelings towards immigrants and Muslims may reflect the blurred association between anti-immigrant and anti-Muslim prejudice (e.g., McLaren & Johnson, 2007; Pew, 2016), as in Western countries such as Britain, Muslims tend to be immigrants. However, we feel that as DTA may have exerted

specifically on anti-Muslim attitudes, this may highlight that DTA may be directly channelled towards the source of the threat. In other words, DTA drives hostility towards the source of the threat (e.g., Muslims), but at the same time more broadly affects attitudes towards immigrants by virtue of the fact that Muslims in the UK tend to be immigrants. Importantly, we believe this finding may offer novel and additional support for the role of DTA as an important mechanism in prejudice and defence, by suggesting that DTA (at least after worldview threat) may not lead to generalised, but instead specific forms, of defence to cope with the threat.

Additionally, it is worthwhile acknowledging that our findings also suggested there might be cases where levels of DTA may not lead to increased defence. Although statistically non-significant, our findings suggested that when natural kind beliefs were low and entitativity was high, DTA may lead to *decreasing* levels of bias. This is interesting as it suggests that DTA should not necessarily always be associated with hostility and defence (*see* Jonas & Fritsche, 2013; Vail, Juhl, Arndt, Vess, Routledge, & Rutjens, 2012 for similar ideas). Additionally, as DTA is an implicit measure of existential threat, it suggests that for some forms of essentialism the article might have been threatening in a slightly different way and in turn led to decreasing levels of bias. For example, as natural kind beliefs may imply ethnic conceptions of the national group that suggest the group is impermeable with rigid boundaries and is not prone to socio-cultural shaping (Pehrson et al., 2009; Zagefka et al., 2012), it might be that for these participants the article was threatening in the way that was intended. Therefore, high levels of DTA led to a need to defend this belief by decreasing feelings towards Muslims who are perceived to be trespassing and contaminating the ingroup. In contrast, when natural kind beliefs are low, it instead implies the group is malleable, permeable, and open to socio-cultural shaping. It is possible then that the articles

negative stance on the possibility of change, and presence of Muslims as British citizens might have also been somewhat threatening to participants with low levels of natural kind beliefs. Therefore, high levels of DTA would lead to decreasing levels of ingroup bias to affirm one's beliefs about the nature of the national ingroup.

Some limitations of the present study should be addressed. First, one might be sceptical that the effects of the present study were the result of worldview threat and not MS itself. It is possible that the emphasis of the threat article on Muslims activated thoughts of terrorism that in turn activated DTA, rather than DTA being elevated because of a worldview threat that was independent of terrorism. This argument might have some validity given that sociological analyses of media reporting in the UK have noted the increased homogenisation of Muslims and terrorism (e.g., Moore et al., 2008; Poole, 2011), and there is some evidence of think 'Muslim', think 'terrorist' effects (e.g., Park, Felix & Lee, 2007). Moreover, essentialist beliefs are often linked to stereotype endorsement (e.g., Bastian & Haslam, 2006).

Despite this, we find it hard to reconcile this possible explanation with the present findings. Whilst studies may suggest that essentialism is related to stereotype endorsement, it is equally unrelated to stereotype knowledge (Bastian & Haslam, 2006). Given it is the knowledge, not the endorsement of the stereotype, which would be the requirement for mortality to become salient, it is hard to see why social identification and essentialism would be positively associated with DTA if the present study merely reflects a nuanced MS paradigm. Nonetheless, future research exploring these ideas that can more accurately disentangle MS and worldview threat effects would be worthwhile.

Second, it should be acknowledged that this is the first time, to the best of our knowledge, the DTA measure has been deployed in an online format. Whilst our study may therefore demonstrate some promise in translating TMT research into an online format, there may be potentially less rigour in conducting TMT research online. Indeed, it is customary in TMT research to probe for suspicion at the end of the study but the current design did not permit us to do so. Whilst this may not necessarily be a limitation of our study, it may be worthwhile seeing whether TMT studies conducted online may produce differing findings to those conducted in the laboratory. Some of the marginal effects presented here might reflect an increase in random variance due to the design choice that might have masked some effects from being detected.

In summary, this research points to the idea that levels of DTA when exposed to threat may alter dependent on one's strength of social identification and essentialist beliefs about the ingroup. It also elucidates further on the role of DTA in producing worldview defence. We believe that by furthering our understanding of the conditions when DTA is elevated, and the role of DTA in defensive responses, we can begin to understand how to combat the role of existential terror in intergroup conflict and prejudice. We believe this study marks an important step in that direction.

Chapter VI:
Outgroup-based strategies to reducing prejudice

Abstract

This study attempted to explore how intervention strategies based on shifting outgroup perceptions could be used to reduce prejudice towards Muslims. The present study explored the role of surprising category combinations, which have been argued to be an effective way of reducing prejudice because they elicit counter-stereotypic thinking. The role of essentialism and TMT were considered in relation to this idea to explore the efficacy of this strategy. An online experiment was conducted whereby participants were asked to reflect on a Muslim Priest (unsurprising) or Muslim Police Officer (surprising) category combination. Some participants were also reminded of death before this task via a sentence-unscrambling task. The findings suggested surprising category combinations concerning Muslims did not increase emergent attributes or reduce prejudice towards Muslims. In addition, MS did not affect responses on the category combination task, but did surprisingly lower perceptions of group entitativity. The present findings may call into question the issue of using surprising category combinations in reducing prejudice when one of the categories is dominant, although methodological issues may be present. In addition, the findings may also suggest that lowering perceptions of outgroup entitativity may be a subtle form of worldview defence.

Introduction

The thesis so far has suggested that prejudice towards Muslims may be the result of perceiving Muslims as posing a realistic and/or symbolic threat that in turn can be considered to undermine the motives of meaning, self-esteem, efficacy, continuity, distinctiveness and belonging. In addition, the thesis has found that perceiving the category Muslims as highly entitative is a potential antecedent of threat perception, and this may particularly be the case when the group is also viewed as immutable.

This is because perceiving the category Muslims as a homogenous, informative entity may increase the perceived threatening nature of the group. This is because it can increase the perception of intentionality and the collective responsibility of the group and its members in its actions (e.g., Castano et al., 2003b; Lickel et al., 2003). Moreover, it is associated with stereotype endorsement (e.g., Bastian & Haslam, 2006; Spencer-Rodgers et al., 2007), which in the case of Muslims is overwhelmingly negative (e.g., Moore et al., 2008; Poole, 2002; Richardson, 2004). Finally, when this can be further attributed to a potentially immutable (e.g., biological) basis it might imply that the group cannot change, and that certain behaviours are "lurking beneath the surface" of all group members (Andreychik & Gill, 2015; Denson et al., 2006).

A feature of many prejudice reduction strategies is to challenge the prevailing representations of a group, particularly with counter-stereotypic information, with the aim that this information is incorporated into the representations of these groups (see Hewstone, 1994 for a review). One particular way that this has been proposed is via the use of surprising category combinations that are effective at reducing stereotyping, and represent a promising avenue for prejudice reduction (e.g., Hutter & Crisp, 2005;

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Hutter, Crisp, Humphreys, Waters, & Moffitt, 2009; Vasiljevic & Crisp, 2013). However, whilst research has aimed to identify the cognitive processes underpinning surprising category combination effects (e.g., Hutter & Crisp, 2006; Siebler, 2008), little is known about the motivational bases to how people respond to surprising category combinations. Additionally, whilst research has suggested that exposure to surprising category combinations may be effective in reducing prejudice (Vasiljevic & Crisp, 2013), little is understood about the mechanisms through which surprising combinations might reduce prejudice. The current research attempts to address these issues both by utilising TMT to offer an existential perspective on human motivation (Greenberg et al., 1986), as well as essentialist beliefs about social categories (e.g., Haslam et al., 2000).

Category combinations

Recent work has suggested that exposure to surprising category combinations may be effective at reducing stereotyping, and represent a promising avenue for prejudice reduction (e.g., Hutter & Crisp, 2005; Hutter et al., 2009; Vasiljevic & Crisp, 2013). These studies show that when asked to generate attributes about a surprising category combination (e.g., a 'female mechanic' or a 'male nurse') that the combination increases the amount of emergent attributes, and decreases the amount of constituent attributes in comparison to those asked to think about an unsurprising category combination (e.g., Hastie, Schroeder, & Weber, 1990; Hutter & Crisp, 2005; Hutter et al., 2009; Kunda, Miller, & Claire, 1990). Emergent attributes are novel traits that are the result of reflecting on the category combination itself, rather than the result of reflecting on either of the constituent categories that make up this combination. In contrast, constituent attributes are traits that were present when thinking of either the

categories that make up the category combination. For example, if someone classified a 'Harvard-educated bricklayer' as non-materialistic, but did not use this to describe someone who is 'Harvard-educated' or a 'bricklayer' this would be an emergent, novel attribute. In that sense, emergent attributes can be considered non-stereotypic thinking, as they are new traits that arise from reflecting on the category combination itself; whilst constituent attributes can be considered stereotypic because they are inherited traits that derive from one of the single categories used to make up that combination.

Some research has considered the cognitive processes underlying this effect. Hutter and Crisp (2006) have suggested that surprising category combinations produce inconsistencies with one's schematic framework, which engages heightened cognitive activity to resolve this inconsistency. That is, there is an initial search of memory stores to locate information to frame the category combination, which in the case of a surprising combination will likely fail, causing then a switch to a more cognitively demanding process to understand the combination (Hutter et al., 2009). Supporting this two-step process, findings demonstrate that under high cognitive load, the generation of emergent attributes, but not constituent ones, is impaired when confronted with surprising category combinations (Hutter & Crisp, 2006). Moreover, there are longer response latencies associated with surprising combinations (Siebler, 2008).

As surprising combinations produce an increase of thinking in non-stereotypic ways, it has been posited that this might be an effective way of reducing prejudice towards groups (Hutter & Crisp, 2005; Hutter et al., 2009; Vasiljevic & Crisp, 2013). This is presumed to be because not only do surprising combinations increase non-stereotypic thinking that might lead to stereotype change, but they also maintain a

level of constituent inheritance from the superordinate category that may satisfy a level of typicality for generalisation to occur (Hutter & Crisp, 2005). Indeed, whilst little evidence exists to corroborate this claim, recent evidence has suggested that asking participants to generate surprising category combinations might lead to increases in generalised tolerance, egalitarianism and reduce prejudice towards a range of outgroups (Vasiljevic & Crisp, 2013).

More generally, the idea that surprising combinations may reduce prejudice through the increase in non-stereotypic thinking is not a new notion. A feature of many prejudice reduction strategies is to challenge negative stereotypes of groups with counter-stereotypic information, with this information being incorporated into the representations of these groups (see Hewstone, 1994 for a review). This work has generally shown that exposure to counter-stereotypic members of a group may be effective in changing negative stereotypes of a group (e.g., Blair, Ma, & Lenton, 2001; Dasgupta & Greenwald, 2001; Hewstone & Hamberger, 2000; Weber & Crocker, 1983), although only if the counter-stereotypic information is not extreme in deviation from the superordinate category (Rothbart & John, 1985; see Hewstone, 1994 on subtyping). As such, from the view of Hutter and Crisp (2005) surprising combinations meet these requirements for generalisation processes because they not only increase non-stereotypic thinking, but also retain a level of constituent inheritance.

However, whilst studies find that surprising combinations generate non-stereotypic thinking, at the same time these attributes may be generated to *causally* explain the relationship between the two categories to resolve the inconsistency. For example, Hutter et al. (2009) found that whilst participants were more likely to use emergent attributes to describe an 'Oxford-educated bricklayer', they were also more

likely to use causal attributes that explained this association by attributing the person as unique and an underachiever. Whilst one view of this might be that the emergent attributes might generalise to the broader category, another view might be that participants generated attributes that aimed to resolve this inconsistency, namely "by writing it away". In that sense, surprising combinations may not necessarily promote stereotype change (and in turn reduce prejudice), because the emergent attributes may isolate the combination in a way (e.g., by labelling it as 'unique') so that it bears no reflection on the superordinate category (e.g., subtyping; Hewstone, 1994). Indeed, research demonstrates that there is little to no stereotype change when the stereotype-inconsistent information is distilled amongst a few exemplars (e.g., Weber & Crocker, 1983).

Therefore, in our view the question remains whether surprising combinations can lead to prejudice reduction, and under which conditions might surprising combinations most effect reductions in prejudice. We believe this question might be better explored not from a cognitive perspective of stereotyping, but from the literature that has proposed motivational bases for stereotyping and categorisation (e.g., Allport, 1954; Jost & Banaji, 1994; Tajfel & Turner, 1986), and namely that of TMT (Greenberg et al., 1986).

Terror Management Theory

As we have outlined elsewhere in this thesis, at the heart of TMT lies the proposition that humans are motivated to maintain stable, meaningful worldviews to defend against the existential anxiety that stems from the awareness of the inevitability of death (Greenberg et al., 1986). Thus, from a TMT view, as stereotypes permit understanding the social reality with a sense of meaning and predictability, they may

serve an important function for worldviews in assuaging this anxiety (Schimel et al., 1999). Importantly, Schimel and colleagues (1999) point out that this view of stereotyping is similar to cognitive perspectives, which suggest that stereotypes derive from strategies that aim to reduce cognitive effort.

Supporting this assertion, research has identified that under MS individuals are more likely to engage in stereotyping (Greenberg et al., 1990; Schimel et al., 1999 Study 1), and prefer stereotype-consistent exemplars (Schimel et al., 1999 Studies 3-5). More importantly for the current research, another study by Schimel and colleagues (1999, Study 2), found that under MS participants who were confronted with sentence stems that suggested a stereotype-inconsistent behaviour was occurring (e.g., "Mary paid for their dinner"), were more likely to explain this perceived inconsistency (e.g., "because Tom forgot his wallet"). In that sense, one view of this finding might be that when confronted with surprising behaviours, participants were motivated to "write away" the inconsistency and in turn maintain a meaningful and predictable worldview.

As such, we propose that the extent to which surprising category combinations decrease stereotyping (and in turn prejudice), might depend on the extent to which individuals are highly motivated to maintain a meaningful conception of reality. That is, when reminded of death, individuals should be motivated to affirm their worldview, and therefore increase their use of stereotyping because stereotypes are a way to view the social reality with a sense of predictability. However, this should be more difficult when exposed to a surprising category combination because it does not fit in with one's worldview. As such, to reconcile this conflict, individuals may process the surprising combination in a way that minimises its impact on maintaining a meaningful worldview, for example, by 'writing away' the inconsistency. In other

words then, reminders of death should engender subtyping as a response to surprising combinations because it permits resolving the inconsistency in a way that maintains one's worldview. As such, whilst it should be expected that surprising combinations will increase the number of emergent (e.g., non-stereotypic) attributes which in turn should reduce levels of prejudice, it is expected that MS will reduce the effectiveness of surprising category combinations on reducing prejudice. That is, whilst there should be an increase in emergent attributes irrespective of a death reminder, this increase should not lead to any changes in prejudice when reminded of death because the attributes generated should be ones that can encourage subtyping to retain a clear and orderly worldview.

Essentialism

An additional focus of this research is to consider the role that essentialist beliefs about social categories may play in surprising category combinations reducing prejudice. The current thesis has reviewed how essentialist beliefs about groups, particularly entitative and immutability beliefs, are associated with increased stereotyping of that group (e.g., Bastian & Haslam, 2006; Spencer-Rodgers et al., 2007), and has found these beliefs to be predictive of perceiving Muslims as a symbolic and realistic threat (Study 2). As we have previously mentioned, this is because entitative beliefs imply that a group is homogenous, with an underlying essence that is informative about members, whilst immutability beliefs may imply that the group revolves around some unchanging (e.g., biological) determinant. As such, perceiving a group to be highly entitative and/or immutable increases the likelihood of stereotyping, which in the case of Muslims can be considered an antecedent of threat perception because these stereotypes are particularly negative.

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As stereotyping is associated with these beliefs, it is possible that surprising category combinations that elicit non-stereotypic thinking will lead to reductions in prejudice, in part (at least) due to revisions in these beliefs. For example, reflecting on a surprising category combination that does not fit the stereotypic framework of that group, may reduce the perception that the group is entitative because it implies the group is less homogenous and informative than originally thought. Considerable research (including found in the present thesis) demonstrates that when a group is viewed as highly entitative or as immutable (whether experimentally or dispositionally), it is associated with a range of negative intergroup outcomes, including prejudice and stereotyping (e.g., Abelson et al., 1998; Bastian & Haslam, 2006; Castano et al., 2003b; Haslam et al., 2002; Spencer-Rodgers, et al., 2007). However, little research to our knowledge has explored whether exposure to certain information about outgroups can alter endorsement of these beliefs, and the extent to which this change may explain changes in prejudicial attitudes.

Despite this, research has supported the idea that perceptions of ingroup entitativity may increase (for example after MS; Castano et al., 2002; Herrera & Sani, 2013), or decrease when the group's norm is perceived to be subverted (Sani, 2005). Moreover, experimentally altering levels of interaction between group members can alter perceptions of group entitativity (Gaertner & Schopler, 1998). Therefore, it appears that entitativity beliefs are not static beliefs, but in part are dependent upon the information that is currently accessible or salient, as well as what is currently motivationally pressing.

Moreover, findings have shown that attending integrated schools can reduce essentialist beliefs about ethnic groups in children (Deeb, Segall, Birnbaum, Eliyahu,

& Diesendruck, 2011). Their findings show that whilst essentialist beliefs were similarly high amongst all children in kindergarten, by age 7, and more noticeably by age 12, those who attended an integrated school demonstrated considerably lower levels of essentialist beliefs. The authors argue that these findings are supportive of the idea that as familiarity with a group increases, there is decreased likelihood to stereotype and hold essentialist beliefs. Taken together then, surprising category combinations that increase counter-stereotypic attributes, may decrease the extent to which a group is viewed as entitative, and in turn reduce prejudice towards that group. The current study tests this possibility.

Study 6 aims and hypotheses

In summary, the present research aims to explore whether exposure to surprising category combinations can reduce prejudice. The current research will explore this in relation to Islamophobic prejudice. Our focus on the perception of Muslims seems a new one for the literature of surprising category combinations (to our knowledge), which gives the study novelty, but also the ability to explore the effect of category combinations on a group that is highly stereotyped and negatively perceived in many Western countries.

Additionally, the research aims to elucidate the motivational underpinnings of this effect by utilising TMT. It is believed that the extent to which surprising category combinations will reduce prejudice towards Muslims, will depend on the extent to which individuals will need to maintain a meaningful, stable and predictable worldview. Finally, the present research seeks to specify the mechanisms that may facilitate surprising category combinations leading to reduced prejudice, namely by exploring the role of entitativity and immutability beliefs.

To explore this, an online experiment was conducted where death was first made salient or not, and then participants were asked to reflect on either a surprising (Muslim Police Officer) or unsurprising (Muslim Priest) category combination and to generate attributes for these categories. These attributes were then assessed to a different sample of participants who generated attributes for the constituent categories that make up these combinations (e.g., Muslim, Priest, and Police Officer). By comparing these samples, a score can be obtained for the number of novel, non-stereotypic attributes elicited by the category combination (e.g., ones that were not listed when writing about the constituent categories that make up this combination).

In addition, after completing these tasks, participants then answered some questions concerning their essentialist beliefs about the category Muslims, as well as some scales that assess their levels of prejudice towards Muslims. This allowed us to test whether the manipulations affected levels of prejudice towards Muslims, and whether any effect on prejudice was mediated by changes in essentialist beliefs.

H1: Those exposed to a surprising category combination will generate more emergent (non-stereotypic attributes), and less constituent (stereotypic) attributes.

H2: Those exposed to a surprising category combination will demonstrate lower levels of prejudice towards Muslims, but only amongst those who have not previously been reminded of death.

H3: Those exposed to a surprising category combination will demonstrate lower perceptions of entitativity and immutability, but only amongst those who have not previously been reminded of death.

H4: Perceptions of entitativity and immutability will mediate the link between the experimental conditions and prejudice towards Muslims.

Method

Participants

One hundred-and-thirty-four participants were recruited from the online platform Crowdflower. Participants were paid $0.35 for taking part. Prior TMT research has suggested that 15-20 participants is sufficient to detect an effect with the MS manipulation (e.g., Greenberg et al., 1994; Rosenblatt et al., 1989) therefore we ensured to collect enough data to have a minimum of 15 participants per cell even after removal criteria (e.g., minimum sample size 60). The current sample size was also determined by the amount of the amount of available funds left for data collection. Two participants were removed for not meeting the sample criteria (British, Non-Muslim), and 21 were removed for not completing all the measures in the study. Finally, 12 participants were removed because of their answers on the conjunction task. Three were removed for giving an insufficient amount of responses (less than 5 responses), and 9 were removed because their answers were identical to another participant's responses suggesting multiple participation. The final sample therefore consisted of 99 British non-Muslim participants $(M_{age} = 36.7, SD_{age} = 11.1)$, with 49 males and 50 females. Ethical approval was given by the College Ethics Committee at Royal Holloway, University of London.

An additional sample of 63 undergraduate participants collected at the university was used to generate attributes of the constituent categories that made up the category combinations in the main study. 56 of this sample were female, and 7 male $(M_{age} = 19.0, SD_{age} = 3.7)$. This samples response to the constituent categories could then be compared to the main samples category conjunction responses to explore the number of attributes listed that were constituent or emergent. This follows the

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procedure used in existing research in this area (e.g., Hutter & Crisp, 2005; Goclowska & Crisp, 2013).

Materials and Procedure

The study was pitched as an exploration of individual differences in the beliefs and perceptions of social groups. Participants were informed they would be taking part in two tasks that would assess individual differences, before being asked questions about their beliefs and perceptions of social groups. Participants first completed some basic demographic information before continuing to the main part of the study.

The first task was the MS manipulation adapted from Hirschberger (2006), but was pitched to participants as a task that assessed pattern recognition via a sentence-unscrambling task. Participants were told to unscramble a series of words to form a grammatically correct sentence and that their performance on this task was being timed. There were 20 sentences in total, 13 that were neutral in content and kept consistent between both conditions (e.g., "*he washed the car at the weekend*"). The other 7 sentences either included death-related themes or pain-related ones. Examples of the death-related sentences include: "*they lowered the coffin into the ground*" and "*he dreamed that he died last night*"; examples of pain-related sentences include: *"he injured his shoulder playing tennis"* and *"she hurt her ankle as she fell"*. The order of the twenty sentences was randomised for each participant. Participants were randomly assigned to the pain or death condition (see Appendix, Attachment D).

Participants then moved onto the second task which was the category combination task (e.g., Hutter & Crisp, 2005), and were presented with a category combination and instructed to think about what this person might be like if they met them. They were then instructed to spontaneously list 10 single-word adjectives to

describe this person. Participants were either randomly assigned to the unsurprising (*Muslim Priest*) or the surprising (*Muslim Police Officer)* category combination[22]. No time limit was given to completing this task, but participant's responses on this task were timed.

At the end of the task, participants were given a single item question that asked them to rate the difficulty of the task on a 7-point Likert scale from (1) extremely easy to (7) extremely difficult. On completion of these two tasks, participants then completed the dependent measures of the study.

Measures. After completing these two tasks, participants were asked to complete measures of entitativity and immutability beliefs about Muslims. These items were modelled on the Haslam et al. (2000) scales that have been deployed in the current thesis, but were adapted for easier understanding of the items. The scale had seven items that tapped into different essentialist beliefs about social groups: *"To what extent are members of this group similar to each other?"* (uniformity); *"To what extent is knowledge of this group membership informative about its members?"* (informativeness); *"To what extent does belonging to this group exclude members from being part of other groups?"* (exclusivity); *"To what extent does this group have an underlying reality, meaning that although members might have differences and similarities on the surface, underneath that they are basically the same?"* (inherence); *"To what extent does membership to this group require members to have necessary*

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[22] We chose to deploy the term priest (rather than cleric) to ensure the category was understood by all participants. In addition, the category police officer was selected as the surprising category combination here because of its equivalence as a profession, but also that it contrasts with dominant social media representations of Muslims that are noticeable for deviance and terrorism (e.g., Moore et al., 2008).

features to be a member?" (necessity); "*To what extent is membership to this group permanent?*" (immutability); and "*To what extent is membership to this group easy to change?*" (immutability reversed). We used two items to measure immutability as our prior findings (as well as other research in this area) suggest that this belief should be independent from the other beliefs measured (as these other beliefs are a part of entitativity), therefore having two items would help assess the entitativity factor and immutability component of natural kind beliefs. Responses were given on a 7-point Likert scale from not at all (1) to extremely (7).

Next participants completed a single-item feeling thermometer to assess participant's levels of prejudice towards Muslims (e.g., Velasco-González et al., 2008). Responses were provided on an 11-point Likert scale ranging from 'Intensely cold or unfavourable feeling' (1) to 'Intensely warm or favourable feeling' (11).

We also used a five-item measure of contact intentions with Muslims (e.g., Velasco-González et al., 2008). These items were "*I would be happy to have Muslims as next-door neighbours*"; "*I would be happy to have a Muslim as a close friend*"; "*I would be happy to work with a Muslim*"; "*I would be interested in meeting more Muslims*"; and "*I would go out with a Muslim*". These items were again assessed on a 7-point Likert scale ranging from strongly disagree (1) to strongly agree (7).

Finally, participants were presented with a survey page that indicated the study was over and gave them some brief information about the study's aims of reducing prejudice towards Muslims. This page also provided participants with a link to an actual charity if they would like to "donate, volunteer, or simply know more about the work being done to reduce Islamophobic prejudice" (for full wordings of this page, see Appendix Attachment E). Unknown to participants, their behaviour on this page

was being assessed by the survey. The survey logged the number of clicks participants made on this page of the survey[23], as well as the number of seconds spent on this page. These acted as behavioural measures to assess the effect of our experimental manipulations. On completion of this page, participants were directed to the actual debrief that explained the full aims of the study.

Attribute coding

Participant responses on the category conjunction task were compared to the in-house sample who was asked to consider attributes of each single category (e.g., 'police officer' or 'muslim'). A rater who was blind to the experimental conditions and hypotheses was asked to code answers on the category conjunction task as to whether each attribute was *emergent* or *constituent*. Emergent attributes are those that are only used in relation to category combination, and not when describing either of the single categories that make up this combination. In contrast, a constituent attribute is an answer is given that was provided when thinking about either of the constituent categories that make up the category combination. Answers that included a repetition of the same idea or attribute (e.g., 'terrorist' and 'terrorism') were only counted once. This procedure is the same that has been used in previous research deploying this task (e.g., Goclowska & Crisp, 2013; Hutter & Crisp, 2005). A second rater coded a random 25% subsample of the answers to ensure consistency in the coding. There was strong agreement between the raters for both constituent attributes (r = .85, *p* <.001) and emergent attributes (r = .92, *p* <.001). Scores for both constituent and emergent attributes were calculated into percentages of the total attributes listed to account for

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[23] The findings indicated that only 9 participants clicked on this page of the survey, thus there was not enough variable data to extrapolate anything meaningful from the 'click' variable, so will be discussed no further.

any potential differences in the number of attributions listed by participants. As these scores were expressed as a percentage and therefore directly proportional to each other, we computed an attribute index score (constituent minus emergent attributes) for levels of stereotyping mirroring prior research in this area (Hutter et al., 2009). Therefore, scores above zero reflect more constituent attributes, whilst scores below zero reflect more emergent attributes written about the category combination.

Results

Task timing and difficulty

We first explored whether there was any difference in the time taken to complete the category conjunction task as well as its difficulty dependent on the type of category combination. We also considered whether the MS manipulation might have affected this. A 2 (Combination type: surprising v unsurprising) x 2 (MS: yes v no) ANOVA found a significant main effect of conjunction type on difficulty ratings (F (1, 95) = 5.97, p =.016, η^2=.059) and a near significant effect of conjunction type on time taken (F (1, 95) = 3.83, p =.053, η^2=.039). No other effects were significant ($p's$>.10). For the significant effect of difficulty ratings, the findings suggested that participants exposed to the surprising combination (M = 4.45, SD = 1.53) found the task harder than those writing about the unsurprising combination (M = 3.67, SD = 1.75). Similarly, amount of time spent was longer for the surprising combination (M = 139.53, SD = 101.44) than the unsurprising combination (M = 105.30, SD = 68.58). Taken together, it suggests that the surprising category combination required more cognitive effort to generate attributes, thus the manipulation could be considered successful and replicates prior research in this area (e.g., Siebler, 2008, see table 13 for descriptive statistics).

Attributes

We now turned to our first hypothesis (*H1*) that surprising category combinations would be related to an increase in emergent and decrease in constituent attributions. A 2 (Combination type: surprising v unsurprising) x 2 (MS: yes v no) independent measures ANOVA was conducted to assess the effect of the category conjunction type on stereotyping, as well as the effects of MS. The findings suggested there was no difference in level of stereotyping as a function of either experimental manipulation or the interaction between them (*p*'s>.40). The descriptive statistics are provided in table 13. Therefore, *H1* was not supported.

Table 13: Means (standard deviations in parentheses) of stereotyping, time taken and difficulty ratings as a function of category combination and MS

	Unsurprising		Surprising	
	Death	Pain	Death	Pain
Stereotyping	1.76 (51.39)	15.52 (55.30)	10.80 (45.67)	13.56 (57.54)
Time taken (s)	99.31 (60.75)	109.91 (75.02)	117.93 (77.82)	160.33 (117.65)
Difficulty	3.40 (1.82)	3.88 (1.70)	4.54 (1.45)	4.37 (1.62)

Dependent measures

We first conducted a factor analysis using varimax rotation to assess the factor structure of the essentialism and contact items. The analysis yielded a three-factor solution, with the contact items constituting one factor, and the essentialism items constituting two distinct factors. However, the third factor was dropped for a few reasons. Firstly, the third factor only explained a small amount of variance in comparison to the other two factors, and only consisted of two items, which were not the expected immutability items (informativeness and the reversed immutability item). Finally, the informativeness item loaded more strongly in the other essentialism factor. Therefore, for parsimony we only explored one factor of essentialism that included

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the beliefs of uniformity, inherence, necessity, immutability, exclusivity, and informativeness (for full loadings see Appendix, table 4). This factor resembles the entitativity factor found by Haslam et al. (2000, 2002) and the preceding studies in this thesis, although now includes beliefs of immutability. Composite scores of contact intentions (α = .94) and entitativity beliefs (α = .82) were computed.

We now explored *H3* that suggested that surprising combinations would reduce levels of essentialist beliefs but only when death was not salient. We conducted a 2 (Combination type: surprising v unsurprising) x 2 (MS: yes v no) ANOVA on entitativity ratings of Muslims. This produced only a near significant effect of MS (F (1, 95) = 3.13, p =.080, η^2=.032), which surprisingly suggested that entitativity scores were lower after being reminded of death (*M* = 4.07, *SD* = 1.22) than when reminded of pain (*M* = 4.50, *SD* = 1.12). No other effect was significant (*p*'s >.50, see table 14 for descriptive statistics). As such, *H3* was not supported and in fact, the findings suggested there was a marginal effect in the opposite direction.

Next, we explored whether the experimental manipulations had affected prejudice or contact intentions towards Muslims (*H2*). Both ANOVAs suggested that the experimental manipulations, and the interaction between experimental conditions, had no effect on contact intentions or feelings towards Muslims (*p*'s>.30, see table 2). As the findings failed to show any indication that the experimental manipulations had affected feelings or contact intentions towards Muslims, the requirements of mediation had not been met (Baron & Kenny, 1986), thus *H4* was not supported.

Finally, we also explored whether the experimental manipulations had any behavioural effect towards information regarding a donation campaign towards fighting Islamophobia. A 2x2 ANOVA indicated that there was a marginal effect of

category conjunction on time spent reading about the charity aims (F (1, 95) = 3.51, p =.064, η^2=.036), with the surprising combination (M = 8.35, SD = 7.54) leading to marginally longer time spent on the page than the unsurprising combination (M = 5.98, SD = 4.22). No other effects were significant (p's>.50). The descriptive statistics are presented in table 14 below.

Table 14: Means (standard deviations in parentheses) of entitativity, contact intentions, prejudice and time spent on the charity page as a function of category combination and MS

	Unsurprising		Surprising	
	Death	Pain	Death	Pain
Entitativity	4.13 (1.33)	4.55 (1.07)	4.03 (1.16)	4.45 (1.18)
Contact	4.35 (2.24)	4.78 (1.62)	4.69 (1.69)	4.38 (1.66)
Prejudice	5.45 (3.33)	6.12 (2.78)	6.31 (2.66)	6.04 (2.78)
Behavioural (s)	5.83 (4.06)	6.10 (4.41)	8.31 (7.37)	8.38 (7.85)

Discussion

The findings of the study did not support the idea that prejudice can be reduced by exposure to surprising category combinations, and there was no evidence that this effect might be qualified by TMT processes. Additionally, the present study found no support for an increase in emergent attributes when reflecting on a surprising category combination. Therefore, the present research is inconsistent with both the literature on surprising combinations (e.g., Hattie et al., 1990; Hutter & Crisp, 2005; Kunda et al., 1990) and TMT research on stereotyping (e.g., Schimel et al., 1999).

What might account for these inconsistent findings? There are few possible explanations. Firstly, it is possible that the combination was not very surprising to participants, or that potentially our unsurprising category actually elicited some surprise. The latter might be plausible given the use of the term 'Priest' that is more associated with Christian rather than Muslim culture. As we did not include a direct

manipulation check to measure surprise this cannot be ruled out, however we find both possibilities unlikely for two reasons. Firstly, the surprising combination was made specifically to be counter-stereotypic to media reporting and representations of Muslims (e.g., Moore et al., 2008; Poole, 2002). Secondly, our findings did suggest that participants found the surprising combination subjectively more difficult, and they took longer to generate attributes, which is consistent with some of the research in this area that suggests that surprising combinations elicit a two-step process to understanding the target (e.g., Hutter & Crisp, 2006; Siebler, 2008). Therefore, the current findings seem to support the idea that the manipulation did work as intended.

Another possible reason to account for the findings is that the category Muslims may potentially have been dominant when reflecting on either category combination. Research has highlighted that whilst individuals may belong to multiple categories, these categories may not necessarily have equal weighting in framing the individual. That is, one category may be dominant over the other, and the individual may be simplified by deriving impressions from the dominant social category (e.g., McCrae, Bodenhausen, & Milne, 1995). Given as we have outlined elsewhere, that Muslims are 'hyper-visible' in the UK media (e.g., Jaspal & Cinnirella, 2010), it might be that this category was viewed as dominant in processing the individual. Importantly, in instances of category dominance, the other category is actively suppressed, leading to longer response times for attributional decision-making (McCrae et al., 1995). Therefore, this explanation might account for the longer response times to the surprising category combination, as there may have been active suppression of the competing way to classify the individual.

Finally, it is also worthwhile noting that the finding may be masked by the different samples used to gather data for the constituent categories and the combination categories. The sample used to devise the attributes of the constituent categories was collected at the university and could be considered a young, liberal demographic who might be more susceptible to providing socially desirable responses about Muslims. In contrast, the main sample was collected online and was middle-aged ($M_{age} = 36.7$). Thus, the attributes of the category Muslims might not have entirely encompassed the representations of Muslims portrayed in the British media. This is particularly evident when looking at the raw data. Some negatively valanced attributes (e.g., radical, dangerous, intolerant) were classified as emergent attributes as the in-house sample did not list these as attributes of Muslims, despite the fact that these attributes are in line with media representations and commonly associated stereotypes of Muslims (e.g., Moore et al., 2008; Pew, 2011; Poole, 2002; Saeed, 2007).

It is worth noting that if the typical finding was masked due to socially desirable responding and/or affected because of category dominance, then this would add some important qualifications to the claim made in existing research that surprising category combinations may be an effective way at reducing prejudice (Hutter & Crisp, 2005; Vasiljevic & Crisp, 2013). That is, the present study did not find any changes in either desire for contact or levels of prejudice towards Muslims[24]. For example, as we previously outlined, it might be that surprising

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[24] It should be noted that the present study did find behavioural changes towards Muslims, with an increase in amount of time spent reading about the aims of the study and a Muslim-based charity when writing about the surprising combination. However, it is hard to explain why participants in this case might exhibit a different behavioural response, but not an actual change in their subjective attitudes. We suspect therefore that this might have been measuring something else instead, for

combinations elicit emergent attributes only to the extent that they resolve

inconsistencies but keep the superordinate stereotype intact. Alternatively, surprising

combinations may be ineffective at reducing prejudice towards groups where the

category is perceived as dominant and informative, as perhaps is the case with

Muslims. However, further research is needed to disentangle these potential effects,

and corroborate these ideas more clearly.

Additionally, the present study did not support that surprising category

combinations and MS would affect levels of entitativity, and in fact, the findings

suggested that perceptions of entitativity were *lower* after MS, which was opposite to

what was expected. This finding runs counter to other research in this area that

suggests that entitativity is increased after MS (Castano et al., 2002; Herrera & Sani,

2013). However, this difference may be representative of when entitativity is

attributed to the ingroup in comparison to the outgroup. For example, when

attributed to the ingroup, entitativity provides clear prototypes of "who we are", that

therefore furnish one's worldview with clear norms and standards of conduct to live

up to. Moreover, ingroup entitativity may offer "celestial value" to the group in that

it transforms the group into something meaningful that operates on a different level

of existence to the self (Castano, 2004a).

In contrast, when attributed to the outgroup, entitativity provides clear

prototypes of "who they are" which can increase the perceived threatening nature of

the group because it increases the sense of intentionality and cohesion (e.g., Castano

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example, resource depletion. This is because surprising combinations are believed to activate
executive functioning to resolve inconsistencies (e.g., Hutter & Crisp 2006; Hutter et al., 2009) that
might have depleted subsequent available resources, in turn leading to longer response times in
completing the study (see Baumeister, Muraven, & Tice, 2000; Richeson & Trawalter, 2005).

et al., 2003b). Moreover, these beliefs transform it into a "real" group that consequently might offer validity to the alternative worldview, and in turn undermine the degree that one can subscribe to one's own worldview (see Solomon et al., 1991). As such, decreasing the perception that the category Muslims is entitative might constitute a subtle type of worldview defence by dismissing the group as less "real" than the ingroup thus minimising the threat.

If lowering perceptions of group entitativity acted as a subtle worldview defence, but high perceptions of entitativity are associated with stereotyping which is expected after MS, then the question remains how might one expect MS to lead to both increasing and decreasing levels of entitativity? Potentially, this could be explained by exploring more closely the sub-facets of entitative beliefs. One view of entitativity is that it concerns the extent to which a social aggregate constitutes a 'group' relying on indices of similarity, proximity, and common fate/goals (Campbell, 1958). Therefore, these ideas suggest that group entitativity has rich inductive potential, which is informative about group members (e.g., Haslam et al., 2000; Rothbart & Taylor, 1992). On the other hand, entitativity might also be viewed to suggest that the group is highly reified; the belief that the group has some sort of an underlying reality or 'celestial properties' (e.g., Castano & Dechesne, 2005; Haslam et al., 2000). At least in the case of Muslims, believing this group to be highly reified, might imply a sense of validity to an Islamic worldview because it suggests a sense that the group is "real" and legitimate. Thus, one possible reconciliation might be that MS might lead to *both* increasing and decreasing levels of entitativity dependent on the precise belief being examined.

To explore this idea, we ran a MANOVA with the essentialist beliefs as separate dependent variables. Wilks' Lambda test suggested there was no multivariate effect of MS on these beliefs, but the univariate analyses suggested that MS decreased perceptions of necessity ($p=.050$), immutability ($p=.080$) and inherence ($p=.085$). Therefore, it seems that this effect might be reducible to specific essentialist components. However, we did not find that MS increased perceptions that the group was informative or homogenous. Future research should explore this further.

In summary, this study attempted to explore whether prejudice towards Muslims could be reduced by exposure to a surprising category combination. The present findings suggested that this was not the case, possibly because Muslim is viewed as a 'dominant' category, but the current study may present some issues with interpretation due to the different demographics between the samples that were used to compare the data. In addition, whilst MS did not affect prejudice towards Muslims or interact with the category combination to affect stereotyping, MS did lower levels of entitativity, possibly as a subtle worldview defence mechanism. Further research in this area is needed because understanding ways in which stereotypes associated with groups may be changed, and the conditions under which this change may occur, is beneficial to understanding how to best combat prejudice.

Chapter VII:

Ingroup-based strategies to reducing prejudice

Abstract

The present study explored whether reminders of tolerance, via the use of essentialist narratives about national identity, could improve attitudes and relations towards Muslims. The study also explored how different reminders of death, such as terrorism, may affect the extent to which tolerance produces positive intergroup outcomes. An online experiment was conducted were participants either read: a paragraph about the tolerant roots of British identity; Christian roots of British identity or a control passage. In addition, participants also watched: a video concerning the Death of Diana (MS); the 7/7 bombings (TS); or a control video. The findings of the study suggested that tolerance did decrease opposition to Muslim rights, but only when reminded of death. When participants were reminded of terrorism, tolerance reminders increased the opposition to Muslim rights. The findings of the present study are discussed in relation to both practical and theoretical implications, with the key implication being that reminders of prosocial ingroup norms are effective at improving intergroup relations, but only when they are not perceived to be threatened.

Introduction

So far in the thesis we have explored how national essentialism and identification are antecedents of threat perception and prejudice. In addition, research has shown that one's social identity and beliefs about one's social group may hold anxiety-buffering functions that shield individuals from the terror that arises from knowledge of one's inevitable demise (e.g., Castano & Dechesne, 2005; Keller, 2005). This is because they can often be important sources of one's sense of distinctiveness, belonging, continuity, meaning, self-esteem and efficacy, which in turn may be beneficial in alleviating existential concerns as suggested by studies 3 and 4 (but see also Sani et al., 2007; Smeekes & Verkuyten, 2013).

If those who strongly identify and/or hold essentialist beliefs about Britain are most commonly associated with holding prejudicial attitudes towards Muslims, then in our view, it should follow that any prejudice reduction strategy should be designed with these individuals in mind. Fortunately, prejudice should not be considered an automatic outcome of essentialising or strongly identifying with one's own group, instead depending on the contents and also context in which they are used (e.g., Reicher & Hopkins, 2001; Verkuyten, 2003). Therefore, one potential way to reduce prejudice is to promote prosocial values associated with one's social identity, which in turn may lead to more positive intergroup relations. One particular value that may be beneficial to facilitating positive intergroup relations is that of tolerance (e.g., Greenberg et al., 1992; Smeekes et al., 2012; Smeekes & Verkuyten, 2014a).

The current aim of this research therefore is to explore how promoting tolerance as a key British value, particularly with essentialist narratives, may reduce prejudice and opposition towards Muslims. This is not only because recent research

has demonstrated that historical, essentialist narratives can be appealing to understanding *us*, in turn shaping attitudes towards other groups (e.g., Smeekes & Verkuyten, 2013; Smeekes et al., 2011, 2012; Zagefka et al., 2012), but also because essentialism may buffer from existential concerns (e.g., Castano & Dechesne, 2005; Herrera & Sani, 2013; Keller, 2005). The present research also explores the role of social identification in this prejudice reduction strategy, as this approach may be particularly effective for those who highly identify and are more inclined to act in accordance with the group's norms and beliefs (Doosje et al., 1999). Finally, the present research also considers some of the potential limitations of such an approach; namely that the extent to which promoting tolerance as a way to reducing prejudice depends on the degree to which that value is not perceived to be challenged or under threat.

Essentialism

Essentialist beliefs, whether pertaining to one's sense of a group as natural kind or as highly entitative, are both descriptive and normative. This is because they provide clear descriptions of "who we are", and how "we" should behave and relate to others (Hogg, 2009; Smeekes et al., 2012; Zagefka et al., 2012). In that sense, essentialist beliefs can lead to increased concerns over group change and contamination, but also the need to defend the ingroup from these changes (Smeekes & Verkuyten, 2013; Zagefka et al., 2012). Therefore, for example, when one's nation is defined in ethnic, natural kind terms this can lead to the rejection of minority groups who are perceived not to have membership 'in their blood' and are contaminating the ingroup (e.g., Pehrson et al., 2009; Zagefka et al., 2012). Similarly, when one's group is highly entitative, it can increase sensitivity to those who are perceived to deviate from the

group prototype (Hogg, 2009), for example as we have argued to be the case so far with Muslims due to media reporting characterising them as deviant and threatening to traditional British values (e.g., Jaspal & Cinnirella, 2010, Poole, 2002). These concerns over losses or revisions to the ingroup may represent an existential threat because these groups can afford a sense of death transcendence (Castano & Dechesne, 2005; Sani et al., 2007). Indeed, as we have seen identified in the present thesis, one's nation may represent a special type of social identity in that it can alleviate existential concerns surrounding continuity (studies 3 and 4). Moreover, those high in national essentialism are associated with increased levels of DTA after exposure to symbolic threats to worldview (Study 5).

As such, essentialist beliefs can be associated with perceiving threat and prejudice from others, but this does not mean that essentialist beliefs should always lead to increasing levels of prejudice. For example, some essentialist beliefs about homosexuality are associated with *decreasing* levels of prejudice (Haslam et al., 2002; Haslam & Levy, 2006). This is because essentialist beliefs about homosexuality imply that it is biologically determined and immutable, thus suggesting that it is natural. Therefore, essentialism should not be viewed as inherently oppressive, nor de-essentialism inherently progressive (Verkuyten, 2003). Instead, it depends on the content that is essentialised and the context in which they are used. For example, essentialist discourse surrounding culture and ethnicity can be used to both support and reject notions of multiculturalism (Verkuyten, 2003). This is because on one hand, essentialist notions can be used to reject the feasibility of culture adoption, but on the other, they can also be used to argue for respecting the existence of other cultures and the right to one's own cultural identity.

Nations may particularly be the kind of group that is viewed in essentialist terms because they are often perceived as having shared roots, heritage, and history (Bhabha, 1989; Connor, 1994; Smith, 2001). This sense of a shared cultural heritage may satisfy a sense that "we" will live on, and by extension a part of the self will also endure (Castano & Dechesne, 2005; Condor, 1996). However, because of this need to preserve one's cultural traditions, customs, and beliefs, this can make individuals resistant to change and oppose social developments that undermine this sense of continuity (Jetten & Hutchinson, 2011; Jetten & Wohl, 2012; Smeekes & Verkuyten, 2013). As such, this might lead to hostility towards others who are perceived to challenge and/or usurp national cultural traditions (e.g., a symbolic threat), such as seems to be the case with Muslims in many Western nations (Cinnirella, 2014). Therefore, the extent to which individuals will display prejudice and opposition to change depends on the understanding of one's national identity, and the way in which it is (if at all) essentialised (Reicher & Hopkins, 2001; Verkuyten, 2003).

Across Europe and the US, national heritage and identity may often be viewed to be deeply embedded within Christian traditions (Alba, 2005; Colley, 1992). This view of national identity places Islam and Muslims as being in conflict with these beliefs, and as such they are positioned as a perceived threat to the continuation of one's national cultural heritage (Smeekes et al., 2011). Consequently, when individuals view their nation's core identity to be built upon Christian traditions, they will be motivated to defend their national group from those that impinge upon these beliefs. In part, this is because this may lead to fears of the group ceasing to exist as a collective, which would also represent an annihilation of the symbolic individual self. Indeed, Dutch participants who were asked to reflect on the existential threat associated with loss of their culture (Smeekes & Verkuyten, 2013), or were reminded

of the Christian roots of Dutch identity (Smeekes et al., 2011; Smeekes & Verkuyten, 2014a) demonstrated increased opposition to Muslim rights.

Of course, one's national history may also be framed in different ways that lead to a more positive reception to cultural diversity. For example, representations of Britain may be entrenched in ideas of tolerance and freedom (Hopkins & Reicher, 1996; Liu & Hilton, 2005; Strong, 1998). By doing so, this may imply the need to be accepting of others cultural beliefs. Supporting this, Reicher, Cassidy, Wolpert, Hopkins, and Levine (2006) found that Bulgarians who opposed the oppression of Jews in World War II tended to conceptualise their national identity as being rooted in religious tolerance. More recently, Smeekes and colleagues (2012; see also Smeekes & Verkuyten, 2014a) found that those who endorsed historical notions of Dutch identity as being embedded in tolerance (Studies 1 and 2), or were reminded of their nation's tolerant roots (Study 3) demonstrated decreased levels of opposition towards Muslim rights, via decreased perceptions of Muslims as a continuity or symbolic threat. Therefore, by viewing tolerance as a core component to one's national culture, it reduces the threatening nature of Muslims as their presence and traditions are viewed as less in direct conflict with one's own.

National identification

As we have outlined, essentialist national beliefs are a key component to national identity, being both descriptive and normative in nature. That is, they prescribe clearly defined, rigid boundaries and prototypes of "who we are" that shape how members behave and relate to others. This can lead to increased opposition to others who are believed to be threatening the nature of one's identity, for example by not meeting the necessary requirements for membership or deviating from the unambiguous group

prototype. By defending one's national culture, this ensures the continuation of the collective and the part of the self that identifies with it.

Of course, not everyone will necessarily feel the need to preserve the group identity equally. As we have outlined and found in the thesis so far, strength of national identification is an antecedent of perceiving Muslims as a symbolic and realistic threat (Studies 1 and 2), as well as an existential threat (Study 5). From an SIT perspective, this is because as one increasingly identifies with the ingroup it becomes subjectively more relevant to the self-concept, thus motivating a need to defend the group from perceived threats (e.g., Branscombe et al., 1999). As such, as has commonly been identified in the literature and this thesis, strength of national identification is a predictor of anti-Muslim attitudes (e.g., Ciftci, 2012; Velasco-González et al., 2008). This would imply that prejudice reduction strategies might be best suited at targeting those high in national identification.

It is fortunate then that those who also strongly identify with the ingroup are also more inclined to act in accordance with the group's norms and beliefs (Doosje et al. 1999). Therefore, those who highly identify and define their nation in ethnic, natural terms or perceive their group as highly entitative, tend to hold stronger anti-minority or Muslim attitudes (e.g., Effron & Knowles, 2015; Pehrson et al., 2009), not just because they perceive Muslims as threatening, but also because they are acting in accordance with their groups' beliefs. In other words, the way in which strongly identified group members behave is affected by how they understand their own national identity (Reicher & Hopkins, 2001). As such, when someone considers tolerance as a key component of their national identity, they should be more likely to respond positively towards Muslims, especially if that specific norm is salient.

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Supporting this idea, Smeekes and Verkuyten (2012) found that the effects of a historically tolerant national past decreased opposition for Muslim rights, but particularly for those who strongly identified with the ingroup (for similar findings *see* Butz, Plant, & Doerr, 2007).

Terror Management Theory

The current approach to understanding prejudice has placed strong emphasis on the need to maintain faith in cultural worldviews, and the standards promoted within them, to defend against the awareness of death (Greenberg et al., 1986). As we have previously outlined, essentialist beliefs may serve a particular anxiety buffering function. This is because they provide a way to imbue the world with a sense of meaning, for example, by suggesting that groups are naturally existing and are furnished with relatively unambiguous prototypes (see Castano & Dechesne, 2005; Hogg, 2009; Keller, 2005), but also because they imbue groups with 'celestial' properties that promise the possibility of death transcendence (Castano, 2004a). Thus, when reminded of death, individuals tend to increase perceptions of group entitativity, which in turn increases identification (e.g., Castano et al., 2002; Herrera & Sani, 2013).

Consequently, essentialist notions about one's own nation might be quite appealing because they may assuage existential-related concerns. At the same time, TMT asserts that individuals need to live up to the standards promoted within their worldview, which can often mean defending one's worldview from those that are perceived to impinge on the validity of one's own (Greenberg et al., 1986). Thus, generally, MS can increase derogation and prejudice towards others (e.g., Das et al., 2009; Greenberg et al., 1990; for a review see Burke et al., 2010).

However, fortunately, prejudice and hostility should not be considered an automatic outcome of MS. This is because whilst MS engenders a need to maintain faith, and live up to the standards and norms promoted within one's worldview, these norms do not necessarily need to be aggressive (Jonas & Fritsche, 2013). Indeed, as we have outlined, the contents of one's national identity can be complex and important in understanding the relationship between ingroup identification and outgroup discrimination (Reicher & Hopkins, 2001). For example, when the Christian roots of British identity are salient, this may engender hostility and prejudice towards Muslims because they impinge upon the validity of Christian national traditions; but when the tolerant roots of British identity are salient, this may engender the need to be tolerant and accepting of Muslims.

Therefore, TMT would predict that the effects of MS are dependent on what aspect of one's worldview is "most salient, accessible or psychologically pressing" (Dechesne et al., 2003, p.733). Supporting this assertion, Greenberg, and colleagues (1992) found that conservatives, not liberals, responded to MS with increased derogation. They suggested that this is because liberal worldviews place a strong emphasis on tolerance. In a follow-up study, they found that those who were reminded of the value of tolerance before MS did not demonstrate increased worldview defence. Similar findings have been found when participants have been reminded of the norms of egalitarianism (Gailliot, Stillman, Schmeichel, Maner, & Plant, 2008) and fairness (Jonas, Sullivan, & Greenberg, 2013)

Moreover, descriptive norms (such as essentialist beliefs) about the ingroup produce similar effects as to when participants are reminded of a certain value. For example, Abdollahi, Henthorn, and Pyszczynski (2010) found that social consensus

estimates on martyrdom could affect their support for violent attacks. That is, when social consensus was high for pro-martyrdom, MS increased support for martyrdom, but when it was high for anti-martyrdom, MS did not lead to increases in support. Relatedly, Giannakakis and Fristche (2011) found that when participants were informed that the ingroup is highly collectivistic, MS led to increased ingroup bias, but when informed that the ingroup is highly individualistic, MS decreased ingroup bias. Thus, somewhat paradoxically, adhering to group norms led to reduced bias towards one's own group.

Taken together then, essentialist beliefs about one's nation are both descriptive and normative (Zagefka et al., 2012), which may act as a blueprint for how group members approach relations with other groups. However, the precise reaction to others is dependent on how the group is essentialised (Verkuyten, 2003). This effect may be most particularly prominent after MS, because essentialist beliefs may reduce existential concerns, thus leading to increased affiliation and desire to live up to the collectively shared norms promoted within one's national worldview. In addition, this may particularly be the case for those who strongly identify with the ingroup as they are most likely to act in accordance with group norms (Doojse et al., 1999; Turner, Hogg, Oakes, Reicher, & Wetherell, 1987), but are also the ones that are most likely to hold negative attitudes towards Muslims (e.g., Ciftci, 2012; Velasco-González et al., 2008).

Does promoting tolerance always lead to less prejudice?

The approach outlined so far to reducing prejudice would seem promising with ideas of essentialism, SIT and TMT converging on the notion that when the tolerant norms of the nation are made salient, this should decrease prejudice and opposition towards

Muslims, particularly amongst those who are high identifiers, and thus most likely to hold anti-Muslim attitudes. However, will promoting tolerance always produce positive intergroup relations? Unfortunately, we suspect the answer is likely no. Whilst tolerance might promote more acceptance of those who hold different beliefs, the extent to which tolerance will reduce prejudice depends on the extent to which this norm is not viewed to be challenged.

This might be particularly the case for Muslims who are often characterised as being *intolerant* of others practices, beliefs and traditions, perhaps most notably through the Rushdie Affair (e.g., Ansari, 2004; Abbas, 2007). More recently, however, this view of intolerance may be most prominent through the perceived threat of terrorism that suggests a desire to annihilate Westernised worldviews. In the UK media, the value of British tolerance has often been contrasted with Muslim intolerance (Poole, 2002, 2011; Saeed, 2007), thereby placing Muslims as symbolically threatening to this value. When this sense of tolerance is perceived to be threatened, there is an almost paradoxical acceptance of the need to be intolerant towards those who threaten this value (Billig, Condor, Edwards, Gane, Middleton, & Radley, 1988). Indeed, analyses of the British media reporting has suggested that there is a certain 'threshold of tolerance' towards Muslims, which when crossed permits the withdrawal of this tolerance and the acceptability of becoming intolerant (Richardson, 2009). This might particularly be the case after incidents of Islamic-related terrorism, with Prime Minister Theresa May describing Britain as having "far too much tolerance" of Islamic extremism, and former Prime Minister David Cameron suggesting that Islamic extremism wishes to "destroy everything…[Britain] stands for: peace, tolerance, liberty" (Guardian, 2017; Independent, 2015).

As such, whilst MS may increase the need to affiliate with the salient norms of one's worldview, thereby decreasing opposition to Muslim rights and prejudice towards Muslims, we suspect that when MS is in the form of Islamic-related terrorism, this might have the reverse effect and lead to increased opposition in defence of the value of tolerance. Supporting this assertion, Dechesne and colleagues (2003) have proposed two additional hypotheses to TMT that aim to elucidate the link between DTA and defence. They propose that the extent to which certain social information enhances or reduces MS effects on defence, depends on the extent to which these behaviours are related. That is, when there is no relationship between the social information and behaviour, the information is likely to insulate from the effects of MS and mitigate defensive reactions (substitution hypothesis). For example, when self-esteem is bolstered, defensive reactions towards others are reduced (e.g., Arndt & Greenberg, 1999; Harmon-Jones et al., 1997). However, when there is a relationship between the social information and behaviour, this information is likely to enhance the effects of MS on defensive reactions (contingency hypothesis). For example, if the domain of self-esteem that is bolstered is subsequently called into question, then this produces a contingency effect, which increases the effect of MS on worldview defence (Arndt & Greenberg, 1999). It should be noted that the ideas of substitution and contingency effects to MS remains largely untested, and we look to extend this idea beyond the effects of self-esteem by demonstrating that reminders of prosocial values can in fact lead to increased opposition towards others when this value is perceived to be threatened.

In addition, it should also be noted that our idea that reminders of terrorism and other types of death may evoke different reactions might be considered somewhat contrary to some existing TMT research that has explicitly compared MS and

terrorism reminders (e.g., Landau et al., 2004). Firstly, it should be noted that in studies where MS and terrorism are directly compared, there was no expected difference in direction of the effects because both MS and terrorism were expected to increase support for George Bush and his counter-terrorism policies (Landau et al., 2004). Second, research has identified that contrasted with traditional MS manipulations, different ways of thinking about death can produce different effects (e.g., Cozzolino, Staples, Meyers, & Samboceti, 2004; Florian & Mikulincer, 1997; Fritsche et al., 2008). For example, Florian and Mikulincer (1997) found that making either the inter- or intra-personal aspects of death salient led to increased severity ratings for transgressions dependent on whether they were inter- or intra-personal in nature. Finally, as we have outlined, TMT has a long history of demonstrating that reactions towards others is dependent upon aspects of one's worldview that are most central, accessible or salient (Dechesne et al., 2003). Thus, we propose that whilst mortality reminders (or threats to worldview) may evoke an increase in DTA that produces the need to affirm and behave in line with one's worldview, the way in which this is channelled is dependent upon the way that the mortality reminder (or worldview threat) is concretised. In the case of terrorism, this should be a reminder of how Islamic extremism is intolerant towards the beliefs of one's own group, which places Muslims in direct conflict with the value of tolerance. This would therefore produce a *contingency* effect whereby there is a need to defend this value, even if it means paradoxically behaving in ways that are intolerant.

Study 7 aims and hypotheses

The aims of this study are to explore how prejudice towards Muslims, as well as opposition towards Muslim rights, can be reduced by reminders of national tolerance,

particularly when it is essentialised. In addition, we also want to explore how strength of national identification moderates the effect of tolerance on these outcomes. Finally, we also want to explore the role TMT processes in these outcomes. Whilst MS should increase adherence to salient worldview norms, thus enhancing the effect of tolerance on prejudice reduction and opposition towards Muslim rights, we believe that this will be dependent on the type of mortality reminder. When the terrorism is salient, this should place Muslims in direct conflict of the salient norm, leading to increased opposition and prejudice towards Muslims.

An online study was conducted with British nationals that first assessed their levels of national identification. Participants were then exposed to a historical essentialism reminder that either suggested Christian or tolerant values were a core component of British identity. Participants were also asked to watch a video, which would remind them of death (MS), terrorism (TS), or a control video. Finally, they were asked to rate their attitudes, support for Muslim rights and desire for contact with Muslims.

H1: Relative to the control, those who are exposed to Christian essentialist narratives about British identity will demonstrate increased opposition, prejudice, and decreased desire for contact with Muslims. However, those who are exposed to tolerant essentialist narratives of British identity will demonstrate decreased opposition, prejudice, and increased desire for contact.

*H2*a: This effect of Christian/tolerance primes will be most pronounced when death is made salient.

*H2*b: However, the direction of the tolerance prime will depend on the type of mortality reminder. Those exposed to MS/tolerance will display lower levels of

prejudice, opposition towards Muslims and increased desire for contact, but those exposed to terrorism salience (TS) will displayer higher levels of prejudice, opposition, and decreased desire for contact with Muslims.

H3: Strength of national identification will moderate the above effects. That is, these effects will be strongest amongst those who highly identify with the ingroup.

Method

Participants

One hundred-and-seventy-two participants were recruited from the online platform Crowdflower. Participants were paid \$0.40 for taking part. As mentioned in the previous study, prior TMT research has generally found 15 to 20 participants per cell sufficient to detect an effect (e.g. Rosenblatt et al., 1989). Therefore, we sought to obtain a sample that would provide a minimum of 15 participants per cell even after removal criteria was applied (e.g., minimum sample size 135). Again, sample size was also determined by the amount of available research funds left. Six participants were removed for not meeting the sample inclusion criteria (British, Non-Muslim), and 18 were removed because they did not complete all the measures in the study. Finally, eight participants were removed because either they did not answer the experimental manipulation check or their answer indicated that they did not engage seriously with the experimental task. The final sample therefore consisted of 140 participants *(M_{age}* = 35.5, *SD_{age}* = 11.3), with an exactly equal split of males and females. Eighty-five participants reported being a Christian (60.7%), 36 atheist (25.7%), 14 agnostic (10%), 3 Jewish (2.1%), and 2 Buddhist (1.4%). Ethical approval was given by the College Ethics Committee at Royal Holloway, University of London.

Materials and Procedure

The survey was pitched as an exploration of national history and the perception of social groups. Participants were first asked to complete some basic demographic information before continuing to the main part of the study.

The first part of the study was the British identification scale containing 7 items (Cinnirella, 1997) used in Studies 2 and 5. These items provided a good level of reliability ($\alpha = .89$) with a higher score on this scale reflecting stronger identification with being British. Responses were provided on a seven-point Likert scale with extremely (7) and not at all (1) as the scale anchors.

Next participants were informed they would take part in a writing task about national history. The task was adapted from Smeekes and Verkuyten (2014b, Study 3) to reflect both natural kind and entitative beliefs, as well some content adapted to reflect actual British history. Participants were randomly assigned one of three passages to read and to write a few short sentences about what they had just read. Those in the *Christian essentialism* condition read the following:

"Historians have convincingly shown that Britain is originally a Christian country. Christian norms and values have been a central part of the British identity since the Middle Ages. The British have always been inspired by Christian traditions and customs, and these traditions can still be found everywhere in present British society. The generational passing down of these values is a key historical aspect of British identity. It is this common feature that binds British members together, makes them similar to each other, uniting them in having the same common goals and fate."

Participants assigned to the *tolerant essentialism* condition read the following passage:

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"Historians have convincingly shown that people from different backgrounds have been living together for a very long time in Britain. Since the Middle Ages, Britain has been in favour of liberty and tolerance welcoming various Germanic communities to Britain, continuing later into more modern migration of groups such as the Huguenots, Africans and Indians. This history of tolerance and freedom provides the roots of British identity, that has been passed down generationally, and these traditions can still be found everywhere in present British society. It is this common feature that binds British members together, makes them similar to each other, uniting them in having the same common goals and fate."

Participants assigned to the *control condition* were asked to read a short paragraph on the invention of the first telephone (see Appendix, Attachment E). After the writing task, participants were immediately presented with the second experimental manipulation. Participants were informed they would watch a short video (<4 minutes) concerning national history (see Appendix, Attachment F). This acted as the MS manipulation for the present study. Participants either watched a short television news clip concerning the 7/7 London Underground bombings (Terrorism Salience; TS), the death of Princess Diana (Mortality Salience; MS), or Andy Murray winning Wimbledon (control). We chose to use this as a control despite the difference in valence because we believed that this patriotic event might increase identification, which would provide an appropriate comparison to the effect that MS also has on identification (e.g., Castano et al., 2002; Herrera & Sani, 2013). Participants were informed that they would not be able to continue with the study until they had watched the video, and the next page button was set-up so that it would not appear until after 180 seconds. The next page of the study asked participants to describe their thoughts

and feelings on what they had watched. After taking part in both tasks, participants were then presented with the dependent measures of the study.

Measures. A single-item feeling thermometer was taken to assess participant's levels of prejudice towards Muslims (e.g., Velasco-González et al., 2008). Responses were provided on an 11-point Likert scale ranging from 'Intensely cold or unfavourable feeling' (1) to 'Intensely warm or favourable feeling' (11).

We used a five-item scale of Opposition to Muslim Rights adapted from previous research (e.g., Smeekes et al., 2012; Smeekes & Verkuyten, 2014a). These items were: *"The right to establish own Islamic schools should always exist in Britain"; "British TV should broadcast more programmes by and for Muslims"; "In Britain, the wearing of a headscarf should not be forbidden"; "The British government does not really listen to what Muslims want"* and *"In Britain, more measures against discrimination of Muslims are needed"*. These were assessed on a 7-point Likert scale ranging from strongly disagree (1) to strongly agree (7), therefore a lower score reflects increased opposition to Muslim rights.

We also used a five-item measure of contact intentions with Muslims (e.g., Velasco-González et al., 2008). These items were *"I would be happy to have Muslims as next-door neighbours"; "I would be happy to have a Muslim as a close friend"; "I would be happy to work with a Muslim"; "I would be interested in meeting more Muslims";* and *"I would go out with a Muslim"*. These items were again assessed on a 7-point Likert scale ranging from strongly disagree (1) to strongly agree (7), therefore a lower score reflects decreased desire for contact with Muslims.

Finally, participants were presented with a survey page that indicated the study was over and gave them some brief information about the study's aims of reducing

prejudice towards Muslims. This was the same set-up was used in Study 6. Unknown to participants, their behaviour on this page was being assessed by the survey. The survey logged the number of clicks participants made on this page of the survey[25], as well as the number of seconds spent on this page. These acted as a behavioural measure to assess the effect of our experimental manipulations. On completion of this page, participants were directed to the actual debrief that explained the full aims of the study.

Results

We first investigated the effect of the experimental manipulations on attitudes towards Muslims, opposition to Muslim rights and contact intentions towards Muslims. A factor analysis using varimax rotation on the contact intentions and Muslim right items confirmed a two-factor solution, but suggested that the item "*In Britain, the wearing of a headscarf should not be forbidden*", did not load well on the opposition rights factor (<.50) and loaded across both factors equally well. Therefore, this item was dropped from the analysis (for full loadings, *see* Appendix table 5). Composite scores of the contact intentions ($\alpha = .91$) and opposition rights ($\alpha = .80$) were computed.

A 3 (Video: MS v TS v Control) x 3 (Essentialism: Christian v Tolerance v Control) between-subjects MANOVA was conducted on the feeling thermometer scores, as well as opposition rights and contact intentions[26]. This was to assess *H1* and

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[25] Like with the previous study, the findings indicated that only 18 participants clicked on this page of the survey, therefore this produced very little variation for any meaningful analysis. Additionally, analyses on the behavioural timings showed no effects as a result of the experimental manipulations, so this variable will be discussed no further.

[26] Given that one of the experimental conditions concerns Christian historical roots of British identity we also explored whether religious affiliation affected these results. There was an approaching significant interaction of Christian (Yes v No) x Video type on opposition towards Muslim rights (*F*

H2 regarding the effect of the essentialism and MS primes on prejudice and discrimination towards Muslims. No effects were found concerning contact intentions (*p's*>.10). However, there was a main effect of video type on feelings towards Muslims (F (2, 131) = 5.90, *p*=.004, η^2=.083). Bonferroni tests indicated that this main effect on feelings towards Muslims was that both the TS (M = 5.09, SD = 3.16. *p*=.001) and MS (M = 5.69, SD =2.42, *p*=.021) videos resulted in more negative feelings towards Muslims than the control video (*M*=7.00, SD =2.15). No other effects on feeling thermometer scores were significant (see table 15 for descriptive statistics).

Table 15: Means (standard deviations in parentheses) of feeling thermometer scores towards Muslims

	TS	MS	Control
Control	5.10 (3.29)	5.65 (2.32)	6.46 (1.90)
Christian	4.83 (3.54)	5.88 (1.96)	7.29 (2.47)
Tolerance	5.31 (2.81)	5.53 (3.04)	7.11 (2.07)

The findings also demonstrated a marginal effect of video type on opposition to Muslim rights (F (2, 131) = 2.64, *p*=.075, η^2=.039). Bonferroni tests indicated that this marginal effect of opposition towards Muslim rights was that the TS (*M*=3.68, *SD*=1.47) resulted in a significant effect of increased opposition towards Muslim rights in comparison to both the control (M = 4.13, SD = 1.09, *p*=.045) and the MS video (M = 4.10, SD = 1.09, *p*=.049). This was qualified by an interaction between video type and essentialism on opposition towards Muslim rights (F (4, 131) = 2.81, *p*=.028, η^2=.079). Exploring this interaction (see table 16 for descriptive statistics) by assessing the effect of essentialism prime by each video separately (corrected alpha =

(2, 121) = 2.86, *p*=.061, η^2=.045). This essentially demonstrated that when exposed to the control video, Christian participants demonstrated lower levels of opposition to Muslim rights (*p*=.045). Importantly, there was no evidence that religious affiliation interacted with the passage manipulations, and moreover it did not change the pattern of the main findings.

.017), demonstrated marginal effects of essentialism on opposition to Muslim rights in only the TS (F (2, 42) = 2.55, p=.090, η^2=.108) and MS videos (F (2, 45) = 2.72, p=.077, η^2=.108). Bonferroni tests demonstrated that the tolerance prime marginally increased opposition to Muslim rights (v control) when exposed to the TS video (p=.033), whilst the tolerance prime (v control) marginally decreased opposition to Muslim rights when exposed to the MS video (p=.025).

Looked at differently, there was a significant effect (adjusted alpha = .017) of video type on opposition to Muslim rights when primed with tolerance (F (2, 42) = 6.52, p=.003, η^2=.237). Bonferroni tests showed that the tolerance prime increased opposition when exposed to TS (p=.011), and decreased opposition when exposed to MS although the latter trend was non-significant (p=.324). However, the two death-related conditions differed significantly from each other (p=.001). Therefore, *H1* that regarded the main effect of essentialism was not supported; but *H2a* and *H2b* were supported as the findings suggested that reminders of death and essentialism prime interacted to affect opposition towards Muslim rights, and that the direction of this effect depended on the type of death reminder.

Table 16: Means (standard deviations in parentheses) of scores on opposition towards Muslim rights.

	TS	MS	Control
Control	4.06 (1.49)	3.72 (.98)	4.17 (1.30)
Christian	3.85 (1.25)	4.06 (.82)	4.09 (1.12)
Tolerance	2.94 (1.47)	4.58 (1.30)	4.15 (.95)

National identity

We now turned to whether national identity would moderate the effects of the experimental manipulations on the dependent variables in the current study (*H3*). Separate regression analyses were conducted with the outcomes of attitudes,

opposition rights, contact intentions, and timings concerning reading about a Muslim Charity. Two separate dummy variables were created for the essentialism manipulations (Aiken & West, 1991). The Christian essentialism manipulation (1= *Christian*, -1 = *tolerance*, -1 = *control*), and the tolerance essentialism manipulation (1= *tolerance*, -1 = *Christian*, -1= *control*). The same procedure was applied to the video manipulations, such that a TS variable (1 = *TS*, -1 = *MS*, -1 = *Control*) and a MS variable (1 = *MS*, -1 = *TS*, -1 = *Control*) were produced. British national identity was standardised before interactions between the variables were produced (Aiken & West, 1991).

The findings demonstrated that whilst there was a significant negative relationship of identity on opposition to Muslim rights (β = -.19, t=2.06, p=.042), and a marginal negative relationship to contact intentions (β = -.16, t=1.68, p=.096), British identity did not significantly interact with any of the experimental manipulations (p's>.10). In fact, even with the presence of British identity as a predictor, the analyses revealed a similar pattern of findings to the main analysis. This was further supported by using British identity as a covariate. The interaction between essentialism and video type on opposition rights became even more significant (F (4, 130) = 3.00, p=.021, η^2=.085).

Discussion

The aims of the present study were to explore whether reminders of tolerance (via exposure to essentialist narratives) as a key British value would lead to more positive responses towards Muslims, and the extent to which this effect was moderated by national identification and MS/TS. Our findings supported that tolerance did lead to less opposition towards Muslim rights, but this was dependent on what mortality

reminder participants were exposed to. Those who were exposed to MS demonstrated decreased opposition, but those who were exposed to TS demonstrated increased opposition. Our findings therefore suggest that reminders of ingroup tolerance might be an effective way of improving intergroup relations, but only if that value is not considered to be under threat. In our view, these findings have several theoretical and practical implications.

Firstly, the present study expands upon research exploring the effects of tolerance reminders on improving intergroup relations (e.g., Greenberg et al., 1992. Smeekes & Verkuyten, 2012), by demonstrating that reminders of tolerance can have beneficial *or* harmful effects dependent on whether that value is perceived to be challenged by the outgroup in question. This has important practical implications given that it is common for world leaders to remind individuals to be tolerant after terrorist attacks. Our findings suggest that this should lead to greater *intolerance* towards Muslims due to the representation of Islam and Muslims in most Western news media, which tends to position both as contradictory with the value of tolerance. We believe it to be noteworthy that after the recent terrorist attacks on French and British soil, neither Prime Minister Theresa May nor former Prime Minister David Cameron made efforts to remind British citizens that the vast majority of Muslims are *tolerant* of other beliefs. Instead, the choice was to focus on the perceived threat to this value and/or the extent that British citizens need to be tolerant themselves. As our findings reflect, this sort of discourse is likely to be a recipe for disaster in ongoing intergroup relations.

Additionally, our findings add to the research that suggests that different MS manipulations may evoke subtle differences in worldview affirmation and defence

(e.g., Cozzolino et al., 2004; Florian & Mikulincer, 1997; Fritsche et al., 2008). Firstly, our present findings add to this by suggesting that TS and MS should not necessarily be considered to produce the same response. This is because TS is an amalgamation of both a reminder of one's mortality (a physical threat) and a threat to worldview (symbolic threat). Therefore, terrorism represents a hybridised threat that may make Islamophobia a special type of prejudice (Cinnirella, 2012; Jaspal & Cinnirella, 2010). Secondly, we believe our finding, that reminders of tolerance and TS produce increased opposition to Muslim rights, to be consistent with the proposition by Dechesne et al. (2003) on contingency effects to MS and defence. To our knowledge, little MS research has explored the idea of contingency effects outside of MS and self-esteem (e.g., Arndt & Greenberg, 1999), so our findings are a welcome addition by demonstrating that they can be applied to ingroup norms and beliefs.

However, it should be mentioned that our findings are not entirely consistent with prior research in this area. Firstly, whilst tolerance did affect levels of opposition to Muslim rights, there was no evidence that reminders of the Christian roots of British national identity affected opposition (in contrast to the findings in the Netherlands of Smeekes & Verkuyten, 2014a; Smeekes et al., 2011). There are a few possible reasons for this. Firstly, it is possible that this manipulation will have only been effective for those who self-identify as Christian. However, we find this unlikely as religious affiliation showed no interaction with the essentialism prime. Secondly, it is possible that the Christian roots of British identity were already salient and/or accessible to participants in the control group. Thirdly, participants might have just rejected the notion of the Christian roots of British identity. This might be likely as whilst recent surveys have highlighted that Christianity is viewed as an important feature of British national identity, this view is generally held by a minority of British people (Pew,

2016). However, as we did not include a manipulation check, in our view, either of these reasons is possible, and further research is required to disentangle these explanations.

Secondly, whilst our findings did demonstrate that tolerance affected opposition to Muslim rights, this was only apparent in the TS/MS groups, but Smeekes et al. (2012; see also Smeekes & Verkuyten, 2014a) found that it affected levels of opposition without the need to manipulate thoughts of death. However, it should be noted that their results only demonstrated an indirect effect of the prime, not a direct effect, in that the manipulation directly affected levels of perceived threat, which in turn affected opposition. In that sense, our findings might not actually be inconsistent with this research, as we did not include a measure of perceived threat. In contrast, because our hypothesis was that TS/MS would increase the magnitude of this effect on opposition to Muslim rights, it is possible that this increase made it detectable, but the precise actual relationship should still be considered indirect through changes in threat perception. Again, future research could test for this possibility.

The third difference with the findings of this research is that we did not find that strength of national identification moderated the effects of the essentialism primes, whilst Smeekes et al. (2012) found that the value of tolerance was effective at lowering opposition only in those who strongly identified with being Dutch. We suspect this might be representative of the fact that we also included TS/MS manipulations, which have been found to increase national identification (e.g., Castano et al., 2002; Herrera & Sani, 2013), whereas our measure of national identification was taken before the manipulations in line with the procedure used by Smeekes and colleagues. It is therefore possible that these manipulations caused

changes in identification, which in turn led to changes in the need to affirm these beliefs. Therefore, in future work it might be better to include the measure of national identification after such manipulations or to trial before and after positioning of this measure to test for order effects.

Additionally, it should be noted that whilst our findings suggest that reminders of tolerance and TS/MS can affect opposition towards Muslim rights, there was little evidence to suggest that they led to any attitudinal change towards Muslims or desire for contact. In fact, the present findings suggested that MS/TS both decreased positive attitudes towards Muslims. We suspect this discrepancy might be because whilst the value of tolerance implies the need to be accepting of other's beliefs and rights to practice them, it does not imply the need to feel favourable towards those who hold different beliefs (e.g., van der Noll et al., 2010). Thus, there may have been a need to behave in line with one's collectively shared norms, but at the same time decrease positivity towards those who subscribe to the alternative worldview. Secondly, TMT research has also identified that once one has defended one's worldview, this mitigates further need for defence (e.g., Hayes et al., 2008a, Hayes et al., 2015). Therefore, once participants had affirmed or defended their need to be tolerant in line with their worldview beliefs, there was no further need for defence. This might explain why there was no effect on contact intentions as this measure was deployed last.

Some limitations of the present research should be acknowledged. First, as we have mentioned, the present research lacked the inclusion of manipulation checks that would help support the conclusions of the present research. For example, whilst unlikely, there might be alternative explanations for the diverging effects of MS/TS other than the perception of tolerance threat. Second, whilst the present research has

emphasised the role of essentialist beliefs in national identification and intergroup relations, the present research did not actually compare a de-essentialist narrative that would have been able to explicitly assess the effect of essentialist beliefs about one's nation. Future research should explore this, because it would be interesting to see what outcomes de-essentialist narratives have on intergroup relations, particularly after MS. Finally, whilst the current findings demonstrate the applicability of historical, essentialist tolerant reminders to a different national context (Smeekes et al., 2012), further research is still needed to see how reminders of tolerance translate to a range of intergroup contexts. It would be interesting to see whether these findings can be observed in other social identities that are not so enduring and historically vibrant as one's national identity, as this identity might particularly be a special case that is useful in alleviating existential concerns.

In summary, the present findings suggest that essentialist notions about tolerance as a key ingroup value can be effective at promoting more positive intergroup relations, possibly because of the need to adhere to collective norms that can buffer from existential-related concerns. This approach might be a promising avenue to promoting more positive intergroup relations, but as highlighted in the present study, there is a need not only to consider representations of the ingroup, but also representations of the outgroup. Otherwise, as our findings suggest, prosocial norms can turn destructive in the facilitation of positive intergroup relations.

Chapter VIII:
General discussion

The aim of this thesis was to explore multiple socio-psychological perspectives on identity, threat, and coping as a means of exploring the antecedents of Islamophobic prejudice in the UK. In particular, the present thesis explored the IRM (Cinnirella, 2014); which attempts to combine the insights of SIT, ITT, TMT, and IPT to provide a parsimonious framework to understanding prejudice. By doing so, the IRM attempts to achieve an approach that is greater than the sum of its parts.

Moreover, in the literature review chapter of this thesis two particular revisions to the IRM were proposed. Firstly, the inclusion of essentialist beliefs, both pertaining to the ingroup and outgroup, to explore additional antecedents of threat perception alongside strength of national identification. Second, was the attempt to redefine the concept of threat perception that could sufficiently incorporate the hypotheses that could be derived from TMT. By doing so, the IRM's redefined concept of threat perception positions TMT's notion of existential anxiety as of paramount importance in understanding prejudicial attitudes. This is reflected in the five experimental studies conducted in this thesis that explore hypotheses derived from TMT.

With the theoretical multiplicity of the IRM, it would be impossible to cover all the theoretical arguments advocated by such an approach in one thesis alone. Therefore, the present research covered in the thesis represents initial exploratory findings of some of the key arguments of the IRM. In particular, the present thesis sought to explore four potential areas of interest:

(i) The interface between intergroup threats (as suggested by ITT) and motive-based threats (as suggested by IPT)

(ii) How identity motives (as suggested by IPT) buffer from the awareness of the inevitability of death (as suggested by TMT)

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(iii) How essentialist beliefs (both ingroup and outgroup) and national identification are antecedents of intergroup threat perception. Moreover, how essentialist ingroup beliefs and national identification are related to levels of existential anxiety when exposed to symbolic worldview threat.

(iv) How existential anxiety is related to Islamophobic prejudice, and whether DTA is an important mechanism underpinning prejudicial attitudes

In addition, based on the findings of the first five studies of this thesis, two potential strategies to reducing prejudice towards Muslims were explored. The first explored how interventions that challenge outgroups representations (via a category combination task) could reduce prejudice towards Muslims. The second considered how ingroup representations (via the promotion of tolerance as an ingroup norm) could promote more positive relations and decrease prejudice towards Muslims. As the current approach explored in the thesis places strong emphasis on TMT, both interventions were explicitly tested in relation to its theorising.

Key summary of the findings and avenues for future research

The present thesis presents a number of cross-sectional and experimental studies to explore Islamophobic prejudice utilising the IRM. The included research highlighted, in our view, a number of key findings that have both practical and theoretical implications for understanding prejudice.

Intergroup threat

The first two studies of the thesis examined the extent to which symbolic and realistic intergroup threats (as suggested by ITT), when broken down into their constituent elements, consisted of multiple threats to identity motives (as suggested by IPT). More

specifically, this research supported the idea that symbolic, physical and economic threats perceived to be posed by Muslims are related to threats to the motives of esteem, efficacy, continuity, meaning, distinctiveness and belonging in relation to British identity. In our view, the present findings elucidate the motivational processes that may underpin the threat-prejudice link which has been largely ignored by ITT researchers, and also provides a more encompassing range of motives related to identity processes than are traditionally examined in SIT.

What is the benefit of such an approach? We believe by understanding more clearly the impact that realistic and symbolic threats have upon identity processes, this can in turn lead to greater understanding of how to combat prejudice. For example, although we did not examine the relationship of personal and collective threats on identity motives in the present thesis, one of the benefits of the IRM is its ability to explain threat and prejudice at multiple levels of analysis; from the intrapsychic, interpersonal, intergroup, and societal levels (Cinnirella, 2014). The IRM would therefore suggest that certain motives might particularly be threatened at *multiple levels*. For example, continuity might be compromised at a collective level through concern over changes or losses to ingroup values and fear that the ingroup might cease to exist, but also at a personal level as terrorism threatens personal existence (Cinnirella, 2014).

The possibility then that realistic and symbolic threats might threaten *multiple* motives at *multiple* levels may particularly hinder restoration strategies aimed to restore that motive, proliferating the use of prejudice as a coping response to identity threat. For example, when personal control is threatened, individuals might compensate for this lack of control by turning to groups or vice versa (e.g., Kay et al.,

2009; Shepherd et al., 2011; *see* also Heine et al., 2006 on fluid compensation). However, when this motive is perceived to be threatened at multiple levels, individuals may seek alternative strategies to enhancing this motive, for example by endorsing social representations of Muslims that seek to limit their rights and/or delegitimise British-Muslims in an attempt to take back control (Jaspal & Cinnirella, 2010).

Of course, it should be noted that the current thesis (and the IRM) has carried an assumption that the number of motive threats that are implicated in realistic and symbolic threats (particularly when threatened at multiple levels) crystallises their effect on prejudice by reducing alternative coping mechanisms to coping with the threat. A potential issue with this approach is that it is not made clear *why* prejudice remains a more viable alternative to coping with threat than other coping responses (e.g., identity readjustment; remooring and denial), nor has the current thesis explored whether the number of motives threatened increases the use of prejudice and decreases the use of alternative strategies.

Whilst future research should explore this idea as it would have useful implications as to *why* and *when* prejudice is used as a response to threat perception, and how alternative strategies can be promoted that reduce prejudice. We would tentatively suggest that the extent to which certain strategies are deployed after threat perception depends on the extent to which these threats might be accommodated into one's identity repertoire. Accommodation (such as IPT's assertions of identity readjustment and remooring) has long been considered a coping response to threat perception (for example see ideas on cognitive consistency, Festinger, 1957; see also Solomon et al., 1991 for types of responses to threat). It is possible that accommodation responses to threat are hindered when multiple motives are

compromised because it would require considerable revision to one's identity structure (cf. Hayes et al., 2015). This might particularly be the case in high identifiers because their social group is subjectively important to their sense of self. Therefore, accommodation as a strategy is likely to be used when it involves modification to peripheral, not central, elements of one's identity. Supporting this idea, Hayes and colleagues (2015) found that participants responded to threat with increased derogation (cf. prejudice) when they could not accommodate for the threat. Likewise, when participants accommodated for the threat, they were less likely to engage in derogation. Importantly, accommodation operated through the modification to *peripheral* but not *central* beliefs that led to reduced derogation.

As such, it is possible that when perceiving threats, individuals first seek to accommodate for the information through such strategies as identity readjustment. The number of motives that are compromised by this threat might make accommodation strategies difficult (especially amongst high identifiers), which in turn leads to prejudice as a response to coping with the threat. As such, this view of prejudice would imply that it is a consequence of the inability to accommodate for the information. This might suggest that intervention strategies that do not require considerable changes to one's identity (especially central identity elements) might be most effective at reducing prejudice. Future research could explore this idea.

Additionally, we believe an approach that explores realistic and symbolic threats from a motive perspective might be able to detect individual differences in how threats are both concretised and responded to. Prior IPT research has identified that there are individual differences in the emphasis placed upon each motive in identity formation (Vignoles et al., 2002). For example, Vignoles and Moncaster (2007)

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describe how previous data has shown that one participant's strength of identification may be highly correlated with self-esteem concerns (r = .90), whilst another participant's strength of identification may be unrelated to self-esteem concerns (r = -.07), suggesting that other motives are more important in their identity formation.

If individual differences exist in the extent to which motives are related to identity structures, then it is plausible that this may also affect the extent to which realistic and symbolic threats are viewed, and subsequently responded to. For example, those whose identity structures are strongly related to continuity concerns may be particularly concerned over threats to the continuity of the group and its continued existence, whilst those whose identity structures are not guided by continuity may concretise the threat in a different way. This in turn would also lead to different responses in how the threat is responded to (see Breakwell, 1986; Branscombe et al., 1999 for types of responses to different threats).

Supporting this possibility, Vignoles and Moncaster (2007) suggested that differential emphasis of identity motives within one's identity repertoire could predict ingroup and outgroup evaluations. They proposed that as the need to belong is satisfied through inclusion to the ingroup, and distinctiveness needs are satisfied by contrasting with an outgroup, that different emphasis on these motives in one's identity structure would be relevant to predicting subsequent ingroup and outgroup evaluations. Their findings demonstrated that for those high in national identification, both distinctiveness and belonging motive strengths were related to ingroup bias, albeit in slightly different ways. The belonging motive was related to increases in evaluations of the ingroup, whereas the distinctiveness motived was related to decreases in evaluations of the outgroup. As such, both belonging and distinctiveness concerns led

to intergroup discrimination, but the way in which it is expressed is dependent on what motives are most relevant to one's self-concept. We believe this idea to be particularly worthwhile exploring because if threats and responses to threat are dependent on the strength of each motive in one's identity repertoire, then this might also imply that intervention strategies designed to reduce prejudice might be most effective by being tailored towards one's identity structure.

Existential anxiety

The reformulated proposal of the IRM put forward by the present thesis has placed the notion of existential anxiety of paramount importance in explaining prejudice. Expanding upon the initial research that was conducted in this thesis that suggested that self-esteem, efficacy, meaning, continuity, distinctiveness, and belonging concerns were implicated in intergroup threats, studies 3 and 4 explored whether these motives offered anxiety-buffering functions against the awareness of death. Study three found that after MS individuals were more likely to write about *central* aspects of themselves that more strongly satisfied the motives of self-esteem, meaning, continuity and efficacy. Study four found that threats to the motives of continuity, efficacy, distinctiveness and belonging led to increases in DTA. The present findings therefore suggest that a wider range of motives than is traditionally examined in TMT may have anxiety-buffering functions, and suggests that when these motives are compromised (such as when experiencing intergroup threat) DTA is elevated. Therefore, in our opinion, these findings support the notion that intergroup, motive, and existential threat are complementary definitions of threat that can be combined in such a way that can provide an overarching understanding of threat from multiple levels of analysis.

However, our findings suggested that whilst MS led to a generalised increase in these motives (except for distinctiveness and belonging), threats to specific motives did not lead to increases in the motive that was under attack. We suspect that this might be because of the way in which we measured identity and the motives via the 'Who Are You' task. Whilst this unconstrained method can provide a holistic snapshot of one's identity, and responses to MS, it at the same time might have increased variability in responses potentially masking effects from being detected. For example, if one's sense of distinctiveness is threatened, they might respond to this distinctiveness threat by affirming their uniqueness in another identity element. Presumably, a threat to this motive does not require an individual to generate ten aspects themselves that confer a sense of uniqueness, and the threat can be alleviated by affirming just one or two aspects oneself. Therefore, the unconstrained method taking aggregate levels across all identity elements might have masked the presence of this finding.

One way this could be improved is by pre-selecting an identity (e.g., national identity) for participants to rate across these motives. Alternatively, research could also develop dependent measures or materials that are specifically designed to tap into each motive. For example, prior TMT research has used social consensus estimates to demonstrate differences in inclusionary and uniqueness needs (Simon et al., 1997). Similarly, other research has used vignettes (such as political candidate statements) that strongly espouse a specific motive. For example, Shepherd and colleagues (2011) compared the effect of MS/control threat primes on endorsement of political candidates that espoused strong sense of order (e.g., efficacy) or immortality (e.g., continuity). They found that MS (relative to control threat) increased support for the candidate espousing continuity, whilst control threat (relative to MS) increased

support for candidate espousing efficacy themes. However, creating multiple conditions that tap into each motive might be impractical given the number of motives that were under examination in the present thesis. Indeed, we believe this issue represents the difficulty of measuring the influence or effect of multiple motives, and why IPT has struggled to gain traction with researchers (see Vignoles, 2014).

It should also be acknowledged though that fluidly compensating for one's sense of distinctiveness after having it threatened (as an example), is not necessarily the only way in which this threat can be responded to. As we have already mentioned, individuals can respond to threats in various ways and the strategy used may depend on various psychological and situational factors (e.g., Breakwell, 1986; Tajfel & Turner, 1986). For example, a person could write about a time when they did not feel unique, but simply deny the experience as threatening altogether. By denying the experience as threatening this may prevent the need to realign, adjust or alter one's identity structure in response to the threat. Other strategies might also include distancing or reducing identification with the aspect of themselves that was threatened to mitigate its impact upon the self-concept (Tajfel & Turner, 1986). Alternatively, a person might also re-moor the identity in such a way that it retains its distinctiveness (cf. Ethier & Deaux, 1994). For example, a British national experiencing their national distinctiveness is threatened might re-define the nation in such a way that it elicits different intergroup comparisons by which its distinctiveness can be maintained. In short then, it is also possible that individuals will have chosen to cope with the threat in various ways than what we had expected.

Future research in this area could again explore individual differences in motive strengths to one's self-concept. It is possible that these differences will shape

reactions after MS and worldview threat. For example, as we have already outlined, there appear to be individual differences in the importance of motives for identity processes. Therefore, whilst our present findings suggested that MS leads to increases in continuity, self-esteem, meaning, and efficacy, it is possible those who highly emphasise continuity in their identity structure will respond to MS in ways that emphasises continuity. Similarly, if responses to MS are specific dependent on individual identity structures, then another interesting question is whether threats to motives that are relatively unimportant in one's identity formation would still lead to increases in DTA. Taking the two participants as an example again where self-esteem concerns were either highly correlated or uncorrelated to identity centrality (Vignoles & Moncaster, 2007), it is possible that exposure to self-esteem threats might only be existentially threatening to the one whose self-esteem is highly relevant to their self-concept.

This proposal might have some validity to it given that the present thesis has found individual differences in levels of DTA after exposure to worldview threat (Study 5). The exploration of individual differences in DTA levels after threat has been somewhat neglected so far in TMT research (but see Roylance et al., 2014), and the present thesis offers the novel contribution of demonstrating that strength of national identification and essentialist ingroup beliefs predict DTA levels after exposure to national worldview threat. This complements research supporting that MS increases national identification and essentialist beliefs (e.g., Castano et al., 2002; Herrera & Sani, 2013), and extends prior research exploring national worldview threat that has only explored strong identifiers (e.g., Schimel et al., 2007). Future research could explore whether this is specific to the context of national identities, or whether it is applicable to a range of social identities. As we have mentioned elsewhere in the

thesis, national identity might be particularly useful in assuaging existential concerns, as it constitutes a group that is particularly enduring.

Our findings also suggested that DTA was an important mechanism driving ingroup bias. That is, whilst it was those who highly essentialised or identified with being British that were most likely to demonstrate increased levels of DTA; ingroup bias was particularly evident amongst those who were strong in national identification or essentialism *and* did exhibit higher levels of DTA. In other words, our findings appear consistent with the TMT assertion that DTA is the motivating force behind worldview defence (e.g., Hayes et al., 2010). Our findings also support the idea that DTA exhibits an interactional mediation between threats and defence (e.g., Das et al., 2009), with the novel contribution of exploring this in relation to social identification and essentialist beliefs something which to our knowledge so far has previously only been tested using the MS hypothesis (e.g., Castano et al., 2002; Herrera & Sani, 2013).

This research therefore adds to the literature suggesting that DTA is an important mechanism underpinning prejudicial attitudes. A question however remains as to whether DTA *always* produces a need for defence (Hayes et al., 2010). Whilst the present thesis has particularly focused on DTA producing prejudicial responses, as we have mentioned previously (and potentially is hinted at in the data of Study 5), prejudice should not be considered an automatic response to increased DTA. Instead, the way in which DTA is responded to depend on the salient, accessible, or central components of one's worldview (Dechesne et al., 2003). To that end, some research has identified that the relationship between DTA and defence can be attenuated by increasing the salience of alternative anxiety buffers. For example, as we have already mentioned in the literature review chapter, fortifying self-esteem can mitigate

defensive reactions as long as the domain in which it is bolstered is not challenged (Arndt & Greenberg, 1999). Moreover, there is evidence to suggest that it is explicit, but not implicit, self-esteem that produces defensive reactions after MS (e.g., Schmeichel, Gailliot, Filardo, McGregor, Gitter, & Baumeister, 2009).

Alternatively, it might be possible to channel DTA into positive behaviours through, for example, increasing the salience of close relationships (e.g., Mikulincer, Florian, & Hirschberger, 2004) or children (e.g., Fritsche, Jonas, Fischer, Koranyi, Berger, & Fleischmann, 2007). This is because offspring and close relationships may offer a way to transcend death, and constitute important sources of self-esteem, that may help alleviate concerns over one's personal mortality (Florian et al., 2002). Moreover, this could be especially promising as prior research has highlighted that DTA decreases after one's worldview is affirmed, thus rendering no need for further defence (e.g., Hayes et al., 2015). The possibility that DTA could be redirected into less harmful outcomes for intergroup relations represents a promising avenue for prejudice reduction (for more on this see Jonas & Fritsche, 2013; see also Vail et al., 2012b for an overview of positive trajectories of existential anxiety).

Another interesting question that arises from the present findings, given that they demonstrate that DTA is elevated after a range of threat types, is whether DTA may underpin all types of threat (Hayes et al., 2010). As we have outlined in the discussion of Chapter IV, whilst there is some evidence that other types of threat can produce worldview defence, and not increase DTA (e.g., Proulx & Heine, 2008, 2009), these studies in our view are fatally flawed. This is because they have included a delay before measuring DTA, when non-death related threats should not require a delay to generate an increase in DTA because proximal defences are bypassed (e.g.,

Pyszczynski et al., 1999). Therefore, it is very possible that these studies did not find an increase in DTA because it had dissipated through the inclusion of a delay. Indeed, the present thesis used the same manipulation by McGregor et al. (1998) and did find an increase in DTA. Similarly, the studies conducted by Proulx and Heine (2008, 2009) have been found to increase DTA when a delay has not been included (Webber et al., 2015). That is of course not to say that all threats should necessarily increase DTA. One possibility that has been highlighted is that certain types of threats may be strong enough to elicit defence, but not strong enough to increase DTA (Hayes et al., 2010; Webber et al., 2015). However, it is important for research in this area to design studies that appropriately account for the different time courses of different threat types (for a meta-analysis see Martens et al., 2011).

Antecedents of threat perception

Another avenue of interest for the present thesis was to explore antecedents of perceiving Muslims as a symbolic and realistic threat. In the original conceptualisation of the IRM, only one antecedent was identified, SIT's notion of strength of identification moderating threat perception and response (e.g., Branscombe et al., 1999). The thesis looked to expand upon this aspect of the IRM by including entitativity and natural kind beliefs, two types of essentialist beliefs (Haslam et al., 2000). The thesis also considered how these belief types may be differentially related to threat perception and prejudice, dependent on whether they concerned the ingroup or the outgroup.

Across three studies, essentialism and identification were found to be predictors of threat perception (Studies 1, 2, and 5). Firstly, regarding outgroup essentialism (Study 2), entitative beliefs were associated with perceiving Muslims as

a threat because entitativity can imply that knowledge of group membership is richly informative and is therefore often linked to stereotype endorsement (e.g., Spencer-Rodgers et al., 2007). Our findings however also suggested that when the group was also viewed as a natural kind, that this increased the relationship between entitativity and threat. This is because whilst entitativity can lead to stereotype endorsement, natural kind beliefs can provide explanations for the existence of these stereotypes (cf. Lee et al., 2013). Therefore, natural kind beliefs can imply that the members of certain group members are "lurking beneath the surface" of all group members (Denson et al., 2006), particularly if they emphasise a biological or genetic component to the group (Andreychik & Gill, 2015; Jayaratne et al., 2006). To our knowledge, little research has explored the interface between entitativity and natural kind beliefs in relation to prejudice (but see Andreychik & Gill, 2015), so the present findings offer useful additions to a neglected aspect of essentialism research.

Regarding ingroup essentialism, both entitativity and natural kind beliefs were associated with perceiving Muslims as a threat (Study 2). This is because both natural kind and entitative beliefs can lead to clear descriptions over "who we are" and "who we are not". For example, entitativity can increase the clarity of ingroup prototypes that in turn can lead to increased sensitivity to those who deviate from these prototypes (e.g., Hogg, 2009). In contrast, natural kind beliefs can imply that the group has rigid, clear-cut boundaries of membership, and that the group is natural and not prone to socio-cultural shaping. Therefore, these beliefs might imply ethnic conceptions of British identity that exclude Muslims as members and suggest they are contaminating the ingroup (e.g., Pehrson et al., 2009; Zagefka et al., 2012). Importantly, our findings also suggested that the relationship between national identification and threat perception is moderated by levels of national entitativity; supporting perhaps the idea,

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that entitativity licenses the use of biases amongst strong identifiers to defend collective interests (Effron & Knowles, 2015). Our research therefore is consistent with the proposition that it is important to go beyond ideas of SIT's notion of strength of identification moderating threat perception, and consider the contents associated with one's social identity (e.g., Reicher & Hopkins, 2001).

Interestingly, our findings also suggested that the relationship between essentialist beliefs and threat perception may go beyond simple notions of a two dimensional structure to essentialism. That is, our findings also suggested that specific components of natural kind beliefs may be associated with threat perception, and the specific components that are associated with threat may depend on whether they relate to *us* or *them* (Study two). For British natural kind beliefs, discreteness and naturalness were strong predictors of threat perception, whilst for Muslim natural kind beliefs stability and immutability were predictors of threat perception. In our opinion, these findings are consistent with the notion that ingroup natural kind beliefs are related to threat perception over concerns of the group having impermeable, clear-cut boundaries and resistant to socio-cultural shaping; whilst outgroup natural kind beliefs are related to threat perception when they imply a biological, immutable component to group behaviour.

Finally, our research also supported the idea that national ingroup essentialism and identification (Study five) constitute anxiety-buffers from death-related thoughts (e.g., Castano & Dechesne, 2005). The present research, to our knowledge, was the first to explore essentialism and strength of identification as antecedents of threat perception using the DTA hypothesis. This provides strong convergent validity for the interface between TMT, SIT, and essentialist beliefs. In addition, we believe that this

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finding to be compatible with the previous findings of ingroup essentialism and identification being antecedents of symbolic and realistic threats, but further suggest that one reason why these might be related to threats is because they constitute important anxiety-buffers from existential concerns.

However, it should be noted that the findings of Study two and five were not entirely consistent with each other. In the second study, we found that entitativity beliefs moderated the effect of national identity on realistic and symbolic threat, but this was not apparent when exploring existential threat. This was surprising given that entitativity has been argued to provide groups with "celestial" value that might be useful in death transcendence (Castano, 2004a), but also provide relatively unambiguous group prototypes that provide a clear set of norms to live up to. Secondly, whilst our findings from Study five did suggest that entitativity beliefs were independently related to existential threat, natural kind beliefs (nor its subcomponents) did not predict DTA. However, that is not to say that natural kind beliefs were entirely unrelated with DTA; as they were correlated with each other, and like with Study two this particularly concerned the discreteness component of natural kind beliefs. Therefore, we believe this to be partially consistent with our previous findings. We suspect these discrepancies might reflect differences in sample sizes of the two studies (Study two: n=368; Study five: n=66), as it is possible that there was not enough power in Study five to detect some of the findings that were present in Study two.

Additionally, what our findings did stress is that levels of DTA constitute an important qualifying role between those who are high in national group essentialism or identification. Why might individuals of similar levels of national essentialism and identification have different levels of DTA, and why in turn is this important in

predicting increased group bias? We suspect, as we have mentioned before, that this is because it is important to go beyond generic relationships between these constructs and prejudice, and to examine the *contents* that are associated with them (e.g., Reicher & Hopkins, 2001; Verkuyten, 2003). Whilst we can only speculate what exactly differentiated these individuals in the current study, this might be related to the extent that different high national identifiers (or those high in national essentialism) endorsed multicultural conceptions of British society. For those that did endorse a multicultural British society, the contents of article may not have been threatening because it affirmed their belief of equality, diversity and opportunity towards those of any background or faith thus keeping levels of DTA at baseline. As DTA levels are low, this would not lead to the need to defend or affirm one's worldview. In contrast, for those that did find the article threatening, their DTA levels would be high, thus producing a need to defend one's worldview. As such, we suspect that DTA was able to discriminate between different types of essentialist and identity contents, and in turn producing changes in defence. However, further research is required to examine this possibility.

Reducing prejudice: promoting prosocial norms is not enough

The final study conducted in this thesis explored the extent to which promoting tolerance through essentialist, historical narratives about British identity could lead to both increasing and decreasing levels of opposition to Muslim rights dependent on whether that norm was perceived to be challenged by Muslims. The findings suggested that whilst MS led to increased adherence to the salient norm of tolerance, thus decreasing opposition to Muslim rights, in contrast, TS led to increased defence of the salient norm, thus increasing opposition to Muslim rights. Whilst prior work in this

area has suggested that promoting prosocial norms such as tolerance might be a useful strategy to improving intergroup relations (e.g., Greenberg et al., 1992; Smeekes et al., 2012), our present findings suggest that promoting prosocial ingroup norms is not necessarily enough. If that norm is perceived to be under threat by the outgroup, then promoting prosocial norms might lead to increased, rather than decreased, levels of hostility and discrimination.

In our opinion this finding represents the need for researchers to not only consider how ingroup representations can change attitudes towards outgroups, but also how the outgroup is represented vis-à-vis the ingroup. If the outgroup is perceived to be challenging the ingroup norm, this can be symbolically threatening, subsequently leading to the defence of this norm. This is particularly the case of Islamophobia in the UK, where media representations have often focused on the alleged intolerance of Muslims towards those who hold different beliefs (e.g., Richardson 2009). This perception of intolerance can lead to the acceptance to withdraw one's own tolerance, and increase objection towards the other belief system in defence of this norm.

Future research could explore whether this finding might translate to other prosocial norms beyond tolerance. For example, researchers have investigated the extent to which egalitarianism might also produce more positive group relations and decreased prejudice (e.g., Gailliot et al., 2008). Again, it seems plausible that the extent to which egalitarianism produces the desired effect, depends on the extent to which the outgroup is also viewed to value this norm. In the case of Muslims, egalitarianism might have opposite effects given that media representations of Islam often focus on the oppression of women and their perceived treatment of second-class citizens through focusing on issues such as the veil (e.g., Poole, 2002). As such, it is

possible that when reminded of this incompatibility, ingroup members will be prepared to defend this norm, even if it means paradoxically not behaving in line with this norm. In general, prosocial norms have previously been described as a moral dilemma in the sense that it can often require acceptance of other beliefs that one might disagree with (Billig et al., 1988; Smeekes et al, 2012). In our opinion, our findings represent this dilemma by demonstrating that the decision to uphold this norm may depend on the extent to which individuals perceive this norm not to be challenged, otherwise this norm may be withdrawn, leading to increased hostility. Morever, evidence of this dilemma is further reinforced by the MS/tolerance group that demonstrated decreased opposition to Muslim rights, but also increased levels of prejudice.

It is worth mentioning that our findings particularly suggested that tolerance changed opposition when death was made salient, supporting TMT assertions of the functions of worldviews, and the need to live up to the values promoted within them (Greenberg et al., 1986). However, our findings suggested that the type of death reminder was important in the direction of this opposition. In our view, this highlights a neglected aspect of MS in that different types of threat can produce different reactions (but see Cozzolino et al., 2004; Florian & Mikulincer, 1997; Fritsche et al., 2008), even if DTA may underpin both types of threat. This is because reactions after MS are contingent upon the salient, accessible, or central information to one's worldview (Dechesne et al., 2003). Therefore, not all types of MS should necessarily be considered equal; instead, the meaning attached to the threat is important in determing how it is responded to. Indeed, our findings from Study 5 also indicated that the way in which DTA exerts itself might be specific to the way in which it was increased. Future research should explore how other death reminders may produce

differential reactions, because this can help us understand how various natural forms of MS shape behaviours in different ways.

More generally, our findings coalesce with other TMT research that suggest that MS can promote peaceful, positive outcomes as well as increased hostility and prejudice (see Jonas & Fritsche, 2013; Niesta et al., 2008), and that these reactions after MS are contingent upon the salient or accessible information (e.g., Gailliot et al., 2008; Greenberg et al., 1992). This is because by living up to the standards of one's worldview, individuals can feel that a valued symbolic aspect of oneself may live on beyond the physical annihilation of the self. If alleviating existential concerns is a core motive behind human behaviour, then possible interventions for reducing prejudice might be most effective if they attempt to buffer from these concerns. Thus, perhaps one strategy for promoting positive intergroup relations might be to focus on the generational continuity of prosocial values. Recent research exploring value transmission between parent and child has found that this is stronger amongst self-transcendent (e.g., helping, caring) than self-enhancement (e.g., power, achievement) values (Doering, Makarova, Herzog, & Bardi, 2017). If a core motive driving human behaviour is to feel an aspect of oneself as enduring, then perhaps promoting the knowledge of certain values as more enduring might be an effective way of promoting certain prosocial behaviours. Of course, as the current thesis has shown, there is a pressing need to ensure that the other group is viewed not to be threatening this value; otherwise prosocial values can have destructive outcomes for intergroup relations. Future research could test whether interventions that target both ingroup and outgroup perceptions are most effective at prejudice reduction.

Limitations of the present research

As with all research in Psychology, the present research conducted in the thesis is not without limitations. Firstly, much of the conducted research in this thesis suffers from a lack of statistical power. This makes certain effects harder to detect and may account for several marginal effects reported in the present thesis; it also increases the chance of making a type II error (Cohen, 1992). Moreover, the number of analyses conducted in this thesis, and comparisons made, also increases the chance of making a type I error (Gelman & Loken, 2013). Secondly, and related to the first issue, the present thesis does not include a replication of the findings. This is especially important, given the reliability crisis that is currently ongoing in Psychology. It would be worthwhile to conduct further research that aims to repeat some of the findings in the present research, not only to demonstrate their reliability, but also to provide further support for some of the conclusions that have been drawn in the thesis. For example, some of the conclusions of the experimental research conducted in the thesis could have been strengthened by inclusion of additional measures and manipulation checks.

The present thesis is also limited to how the IRM can be used to explain Islamophobic prejudice in the UK, so it would be worthwhile exploring the extent to which this approach can apply to other prejudices and intergroup contexts. As we outlined in the literature review chapter, the IRM attempts to offer a general model of prejudice, but the precise relationships between intergroup and motive threat may be specific to the intergroup context and dependent upon dominant social media representations of the ingroup vis-à-vis the outgroup. Researchers therefore need to pay close attention to media representations in understanding and formulating predictions of the precise relationships between intergroup threats and identity

motives. We would suggest that the approach might particularly be applicable to settings where there is a lot of negative media coverage of the outgroups of interest (Cinnirella, 2014). For example, we suspect that the IRM may extend to understanding anti-EU or anti-immigration attitudes in Britain, as well explaining reactions towards Muslims in a range of Western countries. It might also be germane to understanding conflicts that particularly centre on 'eternal' groups that might constitute special identities due to their anxiety-buffering properties.

In addition, whilst the IRM places strong emphasis on media representations, the current thesis did not particularly explore the role of media representations on threat perception. Whilst there is considerable research to support the idea of media representations being important in individual attitudes (e.g., McCombs & Shaw, 1972), for practical reasons of limiting the scope of this thesis we did not choose to pursue this as an avenue of interest. Nonetheless, this is an aspect of the IRM that should be investigated further. It is possible that this could be tested experimentally, for example by exposing participants to different media articles that emphasise different identity motives being threatened to see whether the relationships between intergroup threats and motive threats change. However, we suspect that a qualitative approach exploring reactions of British nationals to media news content about Muslims might be more richly informative about the relationships between these types of threats.

Finally, we believe it is worthwhile to focus on some potential issues the IRM might have with parsimony and falsifiability. An ongoing challenge for Psychologists is to continue expanding knowledge of human behaviour but at the same time retain parsimony in the concepts that are used to explain such behaviour. To that end, a

criticism that could be levied at the IRM is that a multi-theoretical approach that proposes multiple motives and various levels of analysis lacks parsimony in its explanation of prejudice. This might be a worthwhile criticism given that our findings did show that there was considerable shared variance between the motive threats. Moreover, the lack of multi-item scales to measure these threats meant that it was not possible to conduct analyses that could more accurately model the unique contribution of each threat type, or their legitimacy as separate types of threat.

Whilst it might not have been all that surprising to find considerable shared variance between the motive threats, given that our rationale around intergroup threats is that they can be broken down into constituent elements of motive threats, an interesting question concerning parsimony is whether all six motives are needed to explain intergroup threat and prejudice. Whilst prior research has identified these six motives as independently contributing towards identity formation (Vignoles et al., 2006), there is a possibility that some motives might be more important than others in explaining prejudice. For example, unlike IPT, some other theories covered in the present thesis place certain motives, such as self-esteem, as superordinate (e.g., Greenberg et al., 1986; Tajfel & Turner, 1986). Therefore, threats to these other motives may simply represent nuanced threats to self-esteem for example. Nonetheless, as we have mentioned, one possible benefit to this perspective might be the understanding of individual differences in the way threat types are concretised, and responded to, dependent on the emphasis of identity motives within personal identity structures (e.g., Vignoles et al., 2002; Vignoles & Moncaster, 2007).

Finally, it could be argued that as the IRM does not propose generic relationships between identity motives and intergroup threats, instead suggesting they

are dependent on media representations, this might make the approach somewhat unfalsifiable. Discrepant findings between researchers could easily be positioned as reflective of subtle differences in media representations or intergroup settings, with little accompanying rationale provided, and the approach might make a-priori predictions about the relationships between intergroup threats and motive threats rather difficult. This might particularly be an issue because of the IPT component of the IRM, as IPT has been criticised for some of its theorising being unfalsifiable and difficult to test (see Vignoles, 2014). In contrast, TMT is a parsimonious framework, with a strong history of producing empirically testable hypotheses (Pyszczynski et al., 1997; see also Pyszczynski et al., 2015 for more on this point). Therefore, the choice to place TMT front and centre of the IRM may not just be a theoretically beneficial one, but a pragmatic one too. However, additional exploration into how the IRM could be refined further is required.

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Appendices

Table 1: Factor loadings of the essentialist beliefs in Study 2 for categories Britain and Muslims.

	Britain		Muslims	
	1	2	1	2
Discreteness	.09	**.63**	.11	**.61**
Naturalness	.03	**.70**	.11	.16
Immutability	-.12	**.64**	.24	**.70**
Stability	.07	**.63**	.01	**.72**
Necessity	**.64**	-.04	**.60**	.17
Uniformity	**.78**	.01	**.64**	.41
Informativeness	**.67**	.11	**.69**	-.03
Inherence	**.53**	.09	**.74**	.06
Exclusivity	**.56**	-.06	**.50**	.43
Variance (%)	23.09	19.11	23.47	20.00

Table 2: Standardised effect sizes (ES) and 95% confidence levels for the bootstrapping analyses of mediation effects in Study 2

Dependent variable	Predictors	ES	95%Cl
Esteem threat	British Identity (BI)	.14*	.075 - .204
	British Natural Kind (BNK)	.06	-.011 - .124
	British Entitativity (BE)	.09*	.033 - .152
	Muslim Natural Kind (MNK)	.05	-.006 - .105
	Muslim Entitativity (ME)	.13*	.063 - .188
	BI x BE	.07*	.001 - .140
	MNK x ME	.08*	.017 - 142
	MNK x BE	.09*	.024 - .161
Efficacy threat	BI	.19*	.096 - .271
	BNK	.09*	.001 - .183
	BE	.12*	.055 - .211
	MNK	.08*	.003 - .156
	ME	.17*	.083 - .259
	BI x BE	.11*	.010 - .204
	MNK x ME	.11*	.031 - .196
	MNK x BE	.08*	.021 - .203
Continuity threat	BI	.19*	.101 - .273
	BNK	.09	-.003 - .172
	BE	.11*	.045 - .196
	MNK	.06	-.019 - .130
	ME	.18*	.095 - .259
	BI x BE	.09	.000 - .181
	MNK x ME	.11*	.033 - .191
	MNK x BE*	.11*	.032 - .206

Distinctiveness threat	BI	.19*	.102 - .269
	BNK	.08	-.012 - .164
	BE	.11*	.042 - .195
	MNK	.06	-.010 - .132
	ME	.17*	.086 - .249
	BI x BE	.09*	.002 - .185
	MNK x ME	.10*	.025 - .184
	MNK x BE	.12*	.036 - .206
Belonging threat	BI	.18*	.095 - .252
	BNK	.09	.000 - .167
	BE	.11*	.044 - .186
	MNK	.06	-.011 - .129
	ME	.17*	.090 - .247
	BI x BE	.09*	.009 - .183
	MNK x ME	.11*	.031 - .182
	MNK x BE	.11*	.026 - .192
Meaning threat	BI	.19*	.099 - .278
	BNK	.09	-.002 - .178
	BE	.12*	.049 - .210
	MNK	.08*	.001 - .150
	ME	.18*	.087 - .259
	BI x BE	.10*	.009 - .201
	MNK x ME	.11*	.030- .195
	MNK x BE	.12*	.023 - .206
Prejudice towards Muslims	BI	.14*	.073 - .195
	BNK	.08*	.011 - .145
	BE	.09*	.032 - .149
	ME	.14*	.074 - .203
	BI x BE	.07*	.006 - .136
	MNK x ME	.09*	.034 - .157
	MNK x BE	.09*	.019 - .156
	Economic threat	.08*	.025 - .126
	Symbolic threat	.23*	.149 - .313
	Terrorism	.12*	.065 - .194

*significant mediation has occurred because confidence level does not include zero

Table 3: Factor loadings of the British essentialism items in Study 5.

	Natural Kinds	Entitativity
Discreteness	**.71**	.15
Naturalness	**.76**	-.04
Immutability	**.83**	.04
Stability	**.79**	-.03
Necessity	-.07	**.52**
Uniformity	.07	**.80**
Informativeness	.00	**.68**
Inherence	.19	**.70**
Exclusivity	.00	**.50**
Variance (%)	27.06	23.66

Table 4: Factor loadings of the Muslim essentialist beliefs and contact intention items in Study 6. F1 represents the contact factor, F2 represents the entitativity factor, and F3 was the factor that was dropped from the final analysis

	F1	F2	F3
Muslim neighbours	**.92**	-.04	-.20
Muslim friends	**.93**	.10	.02
Muslim co-workers	**.93**	.01	.08
Meet more Muslims	**.91**	-.03	-.13
Date Muslims	**.79**	-.01	-.23
Uniformity	.02	**.84**	-.01
Informativeness	.12	**.57**	-.43
Exclusivity	-.22	**.72**	-.13
Inherence	.10	**.80**	-.13
Necessity	-.01	**.72**	.22
Immutability	.08	**.71**	.40
Immutability (R)	-.23	.04	**.86**
Variance (%)	34.58	26.93	10.77

Table 5: Factor loadings of the Muslim opposition and contact intention items in Study 7.

	Contact intentions	Opposition rights
Islamic schools	.17	**.72**
Islamic TV	.35	**.74**
Muslim Headscarf	.49	.47
Listen to Muslims	.07	**.81**
Discrimination Laws	.17	**.77**
Muslim neighbours	**.86**	.26
Muslim friends	**.90**	.14
Muslim co-workers	**.91**	.13
Meet more Muslims	**.84**	.18
Date Muslims	**.62**	.42
Variance (%)	38.91	28.51

Attachment A

Experimental manipulations used in Study 4. Distinctiveness and belonging threats were taken from Pickett et al. (2002), whilst continuity (McGregor et al., 2001; Shepherd et al., 2011) and efficacy (Whiston & Galinsky, 2008; Shepherd et al., 2011) were slightly adapted to match the wordings of these manipulations.

Belonging threat

Please take a moment and think of times when you felt very different from people. In other words, think of times and situations where you did not feel that you fit in with other people around you and that you "stuck out." Please write a brief description of two memories of such times.

Distinctiveness threat

Please take a moment and think of times when you felt overly similar to other people. In other words, think of times and situations where you felt that you were so much like other people around you that you did not have your own identity. Please write a brief description of two memories of such times.

Efficacy threat

Please take a moment and think of times when something happened that you did not feel competent and/or have any control over the situation. In other words, think of times in which you felt a complete lack of control or competency over what happened. Please write a brief description of two memories of such times.

Continuity threat

Please take a moment and think of how things currently are different from your past, and how things currently will be different in your future. In other words, think about times that show how unconnected your past, present and future are. Please write a brief description of two such instances.

Control group

Please take a moment and think of times when you were watching television and how you felt when watching television. In other words, think specifically about the emotions you felt when watching television and your experience of watching television. Please write a brief description of two such instances.

Attachment B

Experimental article of a symbolic threat to worldview used in Study 5.

BRITISH MUSLIMS: ISLAMIC VALUES SHOULD BE TAUGHT IN OUR SCHOOLS!

'Islamic-British' rule should reign supreme in schools

As more Muslims enter Britain, swelling densely populated cities to the brink of crisis, concerns loom over how <u>our</u> schools should be run.

Islam is now the second leading religion in Britain according to recent census data, and with the Muslim population growing faster than the overall population, census predictions cause fear that by 2050 Islam will dominate Britain.

There are currently over 140 Islamic Faith Schools in Britain, but with the Muslim population set to unsustainably outnumber these schools, British Muslims are now demanding that British schools implement a more 'representative' school curriculum that includes teaching Islamic history and values.

Under the new regime, all schools will provide a **MUSLIM ONLY** prayer room, whilst traditional nativity plays at Christmas will no longer occur because of the offensiveness to Muslims. Whilst school uniforms will still remain compulsory, Muslims may opt out on wearing them on religious grounds.

The core curriculum will be restructured to promote Islamic beliefs and values. Children will learn more about Islam in Religious Education, and History lessons will also place importance on Islamic history.

The fight to bring Islamic teaching to all British Schools is being driven by the Muslim Council of Britain (MCB). The MCB has been the voice for British Muslims since its formation in 1994 and currently has over 500 affiliated organisations, mosques and charities. It continues to contest British social, educational and legal policy that infringes upon Muslim beliefs. A recent survey suggested that 72% of British Muslims supported the MCB's challenges to these policies.

But as Britain succumbs to the rising Muslim population, this fight to win schools and children may potentially turn into a larger and more explosive issue. A recent

protest (pictured right) saw dozens of Muslims take to the streets of London to campaign against 'British decadence' and bring Sharia law to Britain.

Promoting the introduction of Sharia law in Britain, one follower explains: "In the past 50 years, the United Kingdom has transformed beyond recognition. What was once a predominantly Christian country has now been overwhelmed by a rising Muslim population, which seeks to preserve its Islamic identity and protect itself from the satanic values of the Britain. Those who have been affected by the British way of life need to be rehabilitated".
Under the brutal rules of Sharia law, many of British traditions and customs would be outlawed, and the so called "man-made laws" would be disregarded in favour of divine laws.

Whilst members of the House of Lords highlighted the dangers of Sharia law's 'tightening grip on our society', rumblings from inside the government cabinet may suggest that some of the MCB policies may not be entirely opposed. A source close to Parliament said that the Secretary of State for Education, The Rt Hon Nicky Morgan MP, was "ready to listen about how Islamic-British teaching may be implemented".

Whilst there may be cause for concern over the government's wavering stance on this issue, there is little doubt that any change to British policy would likely be met with opposition from British electorate. According to the British Social Attitudes (BSA) survey, in 2004, 48 per cent of Britons worried that an increase in the Muslim population would weaken Britain's national identity. By 2014, that had risen to 62 per cent.

A former councillor of Newham shared these public concerns of a rise of pro-Sharia campaigners saying that "this is the public tip of a hidden iceberg. I would like to think that the campaign is orchestrated by extremists, and is only supported by a small group of their followers; but I fear that it is not the case."

In Waltham Forest, North London, the home to thousands of British Muslims, there are already signs that the issue of Sharia law may be here to stay. 20,000 leaflets have been printed by Islamic activists that state "You are now entering a Sharia controlled zone. Islamic rules enforced". The great irony will undoubtedly be lost on those handing out the leaflets, as if Sharia law ever came to Britain, such public demonstrations would almost certainly be prohibited.

Control article used in Study 5

NEVER FEAR: THE GREAT BRITISH SUMMER IS FINALLY HERE!

Britons to enjoy extended sunny spell

Drenched Britons will finally be able to bid farewell to the grey skies and torrential downpours which have caused fears of a summer wash out as a tropical blast is set to bring sunshine and smiles back to the British shores.

Whilst many Britons will be disappointed by the early Summer weather so far, forecasters are predicting a blistering "heat surge" from the Continent at the start of next month that will likely send Britons flocking to the sandy beaches to finally enjoy the hot summer weather.

The latest long range forecasting models indicate scorching temperatures for much of July and August, with the mercury likely to approach a sizzling 32C (90F) before the end of the summer.

James Madden forecaster for Exacta Weather, said summer will soon kick off as high pressure builds over the Azores Islands. He said a dramatic surge in temperatures will bring the first lengthy hot spell of the summer with three weeks of sunshine and blue skies ahead.

He said: "From the start of early July we will see high pressure building in across the country to bring dry weather and prolonged periods of sunshine for many."

"As this scenario develops thanks to high pressure from the Azores, we are likely to experience our first prolonged and widespread spell of warm weather across the country, and just in time for the start of the meteorological summer.

"There is now a high chance and growing model consensus that we could have at least a two to three-week spell of warm weather from this developing scenario, and with temperatures ranging in the mid to high 20s for many parts of the country."

Experts are then suggesting that by August temperatures are expected to reach highs of 28C, possibly rising beyond 30C in certain parts of the South and South East of England.

However, Britons have been warned not to crack out the sun cream and head for the beach just yet though, with forecasters warning the next few days are still expected to be a little on the chilly side.

A cool breeze from the North could see the mercury dip to below the recorded average for the month even in parts of the south on Wednesday night although things will warm up by the weekend.

A Met Office spokesman said: "High pressure will bring plenty of dry and fine weather for most through Sunday, Monday and Tuesday with variable cloud amounts and sunny spells, but with cold nights bringing patchy frost.

"A band of cloud and rain on Sunday will make limited southward progress before gradually dying out, showers will follow into northern parts.

"High pressure should retain a good deal of influence across the UK with plenty of dry, and at times sunny weather.

"Amounts of rainfall should generally be below average for many places too."

The news of summer finally arriving should please those who want to enjoy one of the Great British past-times: the summer barbecue. B&Q, Homebase, Tesco and other leading UK supermarkets have all reported lower than average sales growth of barbecues and outdoor furniture.

"There is definitely barbecue potential there for the next couple of weeks" said a Met Office Spokesman. "After all the rain and then the sunshine the gardens may see some growth so it probably will be mow first and barbecue later."

Other high street retailers are also expecting a rebound in sales after a slow start to the summer with shoppers predicted to stock up on summer clothes.

"Clothing is expected to make a comeback this month after suffering a slow start in May. This appears to be due to consumers waiting for just the right moment before embarking on their pre-summer spending," said British Retail Consortium's chief executive, Helen Dickinson.

"The promise of good weather to come is going to encourage consumers to spend more on fashionable summer wear for the beach and outdoors".

Attachment D

Sentence unscrambling task that was used as the MS manipulation in Study 6. Participants either unscramble the 7 death-related sentences or the 7 pain-related sentences. All participants saw the 13 neutral sentences. Order of presentation was randomised across all participants.

MS manipulation

The following tasks assesses individual differences in pattern recognition. The following words can be used to create a grammatically correct sentence. Please place the words in the correct order to form a sentence. This task is being timed. Please continue once you have completed all the sentences. If you cannot think of a sentence from the words provided then feel free to leave the answer blank.

1. He dreamed that he **died** last night
2. They lowered the **coffin** into the ground
3. She placed flowers on the **grave**
4. The **funeral** was a gloomy event
5. The **corpse** laid cold on the slab
6. The pedestrian was **killed** immediately
7. The **cemetery** gave him the chills

1. The **toothache** kept getting worse
2. He **injured** his shoulder playing tennis
3. She **hurt** her ankle as she fell
4. He **burnt** himself doing the cooking
5. Going to the gym had left him in **pain**
6. His mum put a plaster on the **wound**
7. Playing football left him covered in **bruises**

1. She placed the items in the basket
2. He picked flowers from the garden
3. He put the letter in the mailbox
4. They watched television all night
5. She took a bath to relax
6. She made a note in her diary
7. He washed the car at the weekend
8. They went to watch a film at the cinema
9. She gave the money to the cashier
10. He played the piano flawlessly
11. She prepared for her next lesson
12. He rehearsed his lines all night
13. Normally he arrived on time

Attachment E

Control condition passage in Study seven.

"The electric light, an everyday convenience to modern lives, was not "invented" in the traditional sense in 1879 by Thomas Alva Edison, although he could be said to have created the first commercially practical incandescent light. He was neither the first nor the only person trying to invent an incandescent light bulb. In fact, some historians claim there were over 20 inventors of incandescent lamps prior to Edison's version. However, Edison is often credited with the invention because his version was able to outstrip the earlier versions because of a combination of three factors: an effective incandescent material, a higher vacuum than others were able to achieve and a high resistance that made power distribution from a centralized source economically viable."

Please describe in a maximum of three sentences why the lightbulb is one of the most important historical inventions.

Attachment F

Videos used in Study seven that formed the MS/TS manipulation

https://www.youtube.com/watch?v=sL1IJ-17H08-
Diana death news clip

https://www.youtube.com/watch?v=gwyqT7rcCYk
7/7 news clip

https://www.youtube.com/watch?v=2PYyEDl1bJk
Andy Murray wins Wimbledon