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Running Head: I LIKE MY BEER COLD, MY TV LOUD

“I like my beer cold, my TV loud, and my homosexuals flaming!”:

Preference for Stereotype Consistency as a

Function of a Person x Situation Interaction

by

PJ Sangalang, B.A. (Hons.)

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### Abstract

The study centers on the power of Right-Wing Authoritarianism (RWA) and Social Dominance Orientation (SDO) as predictors of prejudice against stereotypical and non-stereotypical homosexuals under the threat of death and the threat of uncertainty.

Right-wing authoritarianism (RWA) is an individual difference variable that measures the tendency for individuals to unquestionably follow those perceived to be authorities. Social Dominance Orientation (SDO) is an individual difference variable that measures the degree to which an individual prefers inequality among social groups. The RWA and SDO Scales are considered to be two of the strongest predictors of prejudice, such as prejudice against homosexuals. The study focuses on the unique predictive power of these two variables in predicting prejudice against homosexuals.

The study also examines the role of situational threat in prejudice, specifically the threat of death (mortality salience) and the threat of uncertainty (uncertainty salience). Competing predictions from theories involving the threat of death (Terror Management Theory) and the threat of uncertainty (Uncertainty Management Theory) are also tested. The preference for expected information in the form of stereotypes concerning male homosexuals (that is, a stereotypical or non-stereotypical homosexual) were tested.

The difference between the predictive power of RWA and SDO was examined by measuring how these variables predict liking of a stereotypical or non-stereotypical homosexual under the threat of death, the threat of uncertainty, or a control condition. Along with completing a measure for RWA and a measure for SDO, participants were asked to think of their own death, of their being uncertain or about watching television then were asked to read about a week in the life of either a stereotypical or non-stereotypical male



homosexual. Participants were then asked to evaluate the individual and his essay.

Based on the participants' evaluations, results from 180 heterosexual university students show that RWA and SDO are strong predictors for disliking of a stereotypical homosexual under the threat of uncertainty and disliking of a non-stereotypical homosexual under the threat of death. Furthermore, however, results show that RWA is a particularly strong predictor of disliking of a stereotypical homosexual under the threat of uncertainty, whereas SDO is an exceptionally strong predictor of disliking of the non-stereotypical homosexual under the threat of death. This further adds to the notion that RWA and SDO are indeed unique predictors of prejudice. Implications are also explored, including the fact that the study simultaneously examined the role of individual difference variables and situational threat variables, as well as exploratory analysis on Dominating Authoritarians.



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## Introduction



“I like my beer cold, my TV loud, and my homosexuals flaming!”: Preference for Stereotype  
Consistency as a Function of a Person x Situation Interaction

The quote in the title pertains to the reaction of perennial TV dad Homer Simpson on *The Simpsons* (“Homer Phobia”; original airdate: September 16, 1997). Homer suggests in a comical fashion that individuals generally prefer that with which they are familiar. In this episode, the family befriends collectibles store owner John, whom the family takes a liking to, particularly Homer. However, upon learning that John is a homosexual, Homer refuses to have anything to do with him, as John is not stereotypical enough for Homer’s expectations.

The above exposition concerning Homer’s attitude to John the homosexual—in fact, a homosexual Homer perceived as not acting like a prototypical homosexual—provides the backdrop to the present study. In fact, it is interesting to note Homer’s attitude to John compared to the other family members, who have no problem with John. Personality research in psychology would suggest that different people—with different personalities—may react differently to someone like John. Some may have a positive or neutral reaction to a non-stereotypical homosexual like John, while others (such as Homer) may have negative or prejudiced attitudes towards him. The question is, how are we able to predict this? Which personality difference variables might predict prejudice and the preference for stereotypical versus non-stereotypical group members?

In the past 15 years, two personality difference variables—Right-Wing Authoritarianism (Altemeyer, 1981, 1988, 1996) and Social Dominance Orientation (Pratto, Sidanius, Stallworth, Malle, 1994)—have been found to be particularly strong predictors of prejudice. In fact, when predicting prejudice against Blacks, homosexuals, and women with a variety of predictors, Altemeyer (1998) found that “*only two kinds of personality are*



*basically involved*: the social dominator and the right-wing authoritarian.” (p. 60; italics from original text)

One may think that these variables are identical, as they are both able to strongly predict the same phenomenon (i.e., prejudice). However, research has shown that these two constructs are indeed distinct measures of prejudice; in fact, each measure predicts attitudes toward homosexuals differently (Altemeyer, 2004). Whitley and Lee (2000) add that although both RWA and SDO predict attitudes toward homosexuals, the former is a superior predictor for this particular group than the latter.

The present study attempts to further illuminate the role of both RWA and SDO and each variable’s predictive power concerning attitudes toward out-group members, specifically, homosexuals. The introduction begins by reviewing the RWA and SDO constructs, several types of psychological threat (e.g., the threat of death and uncertainty), and the preference for information consistent with one’s beliefs.



## Right-Wing Authoritarianism

### *Introduction*

Interest in studying the individual difference variable authoritarianism began with looking at “the *potentially fascistic* individual, one whose structure is such as to render him particularly susceptible to anti-democratic propaganda” (Adorno, Frenkel-Brunswik, Levison, & Sanford, 1950, p. 1; italics in original). Adorno and colleagues saw authoritarianism as a pathology, and studied individuals and characteristics that embodied their concept of authoritarianism. Eventually, the F-scale (“F” standing for fascism) was developed to measure the personality trait. The measure was born from research aiming to explore anti-Semitism (prejudiced attitudes toward Jews), ethnocentrism (belief that one’s group is superior to others), the characteristics of the anti-democratic individual, and how certain group memberships may influence one’s opinions, attitudes, and values. The construct measured by the F-Scale is composed of 9 clusters, including measures of conventionalism (defined as adherence to conventional values), authoritarian submission (a submissive attitude towards moral authorities), authoritarian aggression (tendency to reject and punish people who violate social conventions), and destructiveness and cynicism (a generalized hostility measure), among others.

Although a full review of authoritarianism as defined by Adorno and colleagues is beyond the scope of this thesis, it is noteworthy that criticisms of the methods used to construct the F-scale have subsequently surfaced (Chapman & Campbell, 1957; Heaven, 1983; Jackson, Messick, & Solley, 1957; Quinn & Lichtenstein, 1965; Ray, 1979). For instance, Hyman and Sheatsley (1954), Duckitt (1983), and Ray (1990) have questioned the validity and reliability of the scale for measuring authoritarianism, along with its high



potential for acquiescence bias. Furthermore, Altemeyer (1981) examined the various clusters within the F-scale from 1970 to 1973, discovering that only three of the various attitudinal clusters—conventionalism, authoritarian submission, and authoritarian aggression—consistently covaried.

In response to criticisms of the original authoritarianism construct and the F-scale, Altemeyer developed the concept called right-wing authoritarianism (RWA; Altemeyer, 1981, 1988, 1996), which is an updated version of authoritarianism, measured by the Right-Wing Authoritarianism Scale (RWA Scale). RWA is a personality variable devised from the idea that some individuals require only minimal pressure to adhere to authorities while others need more. Specifically, the construct of RWA is composed of three different clusters: conventionalism, authoritarian submission, and authoritarian aggression. The measure itself has received high praise in general, with Pratto et al. (1994), proponents of Social Dominance Theory, stating that the RWA scale (compared to their Social Dominance Orientation scale), “is the only other internally reliable measure of authoritarianism that is close to the original conception of authoritarianism” (p. 745). Further details concerning the three clusters of RWA will now be discussed.

Conventionalism is defined as an acceptance and dedication to traditional norms in one’s society (Altemeyer, 1996). The traditional norms, at least in North America, usually stem from the common teachings of Judeo-Christian religions. Thus, the individual high in RWA strictly adheres to “God’s law” and abhors the suggestion of developing independent ideas of morality. The high RWA individuals’ adherence to the rules is not absolute (nor is it eternal): their ideas can change, but it still remains that individuals high in RWA will be less likely to change and are more likely to follow the rules established by authorities. Norms (in



the prescriptive and not descriptive sense; that is, “how people ought to act, not how they do”, Altemeyer, 1996, p. 12) endorsed by individuals high in RWA include traditional attitudes toward sex, gender roles, being respectful of one’s country, and being well-dressed and well-behaved. High RWA individuals also believe that social customs are not arbitrary and are tied to morality, believing that only one’s own group’s customs are correct and true. Individuals high in RWA are more likely to follow leaders in general, but are more apt to follow leaders who endorse traditional (e.g., religious) laws and cast aside leaders who do otherwise.

Authoritarian submission is defined as obedience to authorities perceived to be established and legitimate in one’s own society. Altemeyer (1996) states that “submission” implies that individuals high in RWA are generally accepting of (and subsequently comply to) the statements of those perceived to be in power, such as parents, elected governmental officials, and religious leaders. This stems from the belief that authorities know what is best, and have earned this right to be obeyed and respected. Conversely, criticism of those in authority is considered unacceptable and divisive, and leads to the destruction of society. Again, high RWA individuals’ submission to authorities is not entirely absolute, as some authority figures are seen as more respectable than others (i.e., some administrations are considered “good” whereas others are “bad”); nonetheless, those high in RWA are still more likely to follow and submit to authorities—whether liked or disliked—than those low in RWA.

According to the literature on RWA, authoritarian aggression (Altemeyer, 1996) involves intentionally causing harm to another person with the belief that the act of aggression is sanctioned by proper authorities. Although this does not mean that those high in



RWA will automatically become violent, the fact that an assault is perceived to be supported by higher authorities can lead to the dis-inhibition of an aggressive response. Punishment as a method of controlling others' behaviors is a staple of those high in RWA, advocating severe reprimands for criminals along with a propensity for physical punishment in general.

Unconventional individuals (those perceived to think and act differently from the norm) and members of minority groups act as the likeliest targets of high RWAs, with the RWA personality correlating positively with ethnic and racial prejudice. However, the influence of authority figures over those high in RWA leads to the potential that they can aggress toward any group that the authority figures condemn (Altemeyer, 1996).

Empirical validity testing on the three clusters/dimensions comprising RWA show that, indeed, individuals high in RWA tend to adhere to conventional behaviour, be more submissive to authorities, and tend to be hostile toward out-group members when it is perceived that the hostility is approved by authorities. To illustrate this, Altemeyer (1996) first showed the video of Stanley Milgram's obedience experiment (1974) to participants. In the infamous experiment, the participant was told by the experimenter (the authority figure) that he and another participant (a confederate) were participating in an experiment designed to study learning. The participant would always be the "Teacher" and the confederate would always be the "Learner". In the experiment, the confederate/Learner is placed in a different room and asked to remember pairs of words and to recall them in a memory task. The participant/Teacher would be asked by the experimenter to administer incrementally-increasing amounts of electric shock whenever the Learner would incorrectly respond. The true goal of the experiment was to determine how far people would go to follow the authority figure in his persistent instructions to the Teacher to increase the voltage of the shock when



the Learner would make a mistake. In the Altemeyer experiment, he found that when asked to assign a hundred “responsibility votes” on who was most to blame for the Learner receiving the shocks, those high in RWA were less likely to fault the experimenter (i.e., the authority figure) than the Teacher or Learner for the “shocks” induced to the Learner (the confederate who was supposedly receiving shocks each time he responds incorrectly). In terms of authoritarian aggression, Altemeyer (1996) notes that studies on RWA have predicted, for instance, the hypothetical length of prison terms prescribed for criminals; that is, longer prison terms were given by those higher in RWA compared to those lower in RWA. Follow-up questioning revealed that individuals higher in RWA believed the crimes out-lined in the study were more serious. They also perceived criminals as “repulsive and disgusting” (p. 22), found pleasure in punishing them, and also had more faith that punishment would rehabilitate the hypothetical criminals. Overall, individuals higher in RWA are more likely to be antagonistic to out-group members when they believe the antagonism is sanctioned by the authorities.

#### *Ethnocentrism and the Cognitive Behaviour of RWAs*

Individuals high in the personality trait RWA have a tendency to be more ethnocentric (believing one’s own ethnic group is superior to others); Altemeyer (1988) found that ethnocentrism correlated .45 with RWA. Wylie and Forrest (1992) obtained a correlation of .54 among voters in the province of Manitoba, and Duckitt (1992) reported similar coefficients of .53 and .69 among White South-Africans. “Compared with others, [high RWA individuals] dislike almost every group that is different—regardless of race, creed, or color” (Altemeyer, 1996, p. 26).

Those higher in RWA, in general, are likely to exhibit behaviour expected of those



who are most likely to follow perceived authority figures: that is, high RWAs generally believe what others have told them. This leads to a deficiency in critical thinking skills.

“Authoritarians have not spent much time examining evidence, thinking critically, reaching independent conclusions, and seeing whether their conclusions mesh with the other things they believe” (Altemeyer, 1996, p. 93). Wegmann (1992, as cited in Altemeyer, 1996) asked participants to read two essays concerning socialized medicine (one that supported it, and the other opposing it). RWA correlated negatively with critical thinking, with those high (vs. low) in RWA being less likely to accurately remember the material read as well as exhibiting more difficulty making correct inferences on a critical thinking test concerning the readings.

As mentioned, Altemeyer (1996) states that RWAs are not likely to have determined for themselves their ideals and views; essentially they listen to what the authorities in their lives tell them and need constant, consensual validation of their beliefs. Because this is the case, the beliefs of individuals high in RWA are established by those who consistently validate their beliefs, such as authority figures and in-group members.

This then explains the inherent ethnocentrism of high RWA individuals: they like those who share their beliefs and are less welcoming of those who do not. Those in the in-group (with whom are shared at least some beliefs) are trusted, yet those in the out-group (who have contrasting or different beliefs) are distrusted (Altemeyer, 1996). For instance, Duckitt and Farre (1994) found that RWA scores of White South African participants were highly-correlated with anti-Black prejudice. In fact, scores on the RWA Scale correlated .50 with scores on Altemeyer's (1988) measure of Belief in a Dangerous World, confirming that individuals with high RWA perceive the world as threatening and dangerous, further implying preference for the familiar (i.e., in-group members). In addition, Schaller, Park, and



Mueller (2003) found that participants who scored high on the Belief in a Dangerous World scale (Altemeyer, 1988) were more likely to activate stereotypes of Black individuals when in a darkened room. The authors conclude that “perceived vulnerability to danger seems to represent another important facet of authoritarianism” (p. 648).

Additionally, individuals high in RWA are highly intolerant of ambiguity. Adorno et al. (1950), in their original conception of authoritarianism, stated that with individuals high in authoritarianism, “there is no place for ambivalence or ambiguities. Every attempt is made to eliminate them, but they remain as potentials which might interfere at any time” (p. 480). In support of this notion, the RWA scale correlated .50 with Budner’s (1962) scale of Intolerance of Ambiguity (Watson et al., 2003). Theories regarding social categorization (Tajfel & Billig, 1974) add that one’s own social group (the in-group) can provide a familiar set of beliefs and values for an individual, which in turn reduces general feelings of ambiguity. Mullin and Hogg (1998) and Hodson and Sorrentino (2003) add that information provided by in-group members may be less criticized because of the fact that the message comes from an in-group member; in effect, the fact that the message comes from an in-group member is a heuristic cue about the strong validity of the message. It can thus be argued that, in essence, individuals higher in RWA will likely prefer others who share their beliefs (i.e., in-group members) versus those with different beliefs (i.e., out-group members) as these in-group members are familiar and therefore do not act in an unusual manner.

#### *Right-Wing Authoritarianism and Attitudes Toward Homosexuality*

Individuals high in RWA demonstrate negative attitudes toward homosexuality with their adherence to traditional social conventions (including gender roles) and their inherent ethnocentrism. Whitley and Aegisdotter (2000) suggest that those high in RWA perceive



homosexuals as challenging traditional sex roles and are considered an out-group compared to heterosexuals. Furthermore, the same authors suggest that some religious and political leaders (to whom those in RWA are more likely to submit) condemn homosexuals, furthering high RWAs' justification to be prejudiced against homosexuals.

Furthermore, high RWA individuals believe that "homosexuality is a sin and a perversion." (p. 11, Altemeyer, 1996). High RWA individuals have been found to be relatively prejudiced against homosexuals, showing less disapproval of gay-bashing (Altemeyer, 1996). Haddock, Zanna, and Esses (1993) also found that RWA negatively correlated with favourable attitudes toward homosexuals, and Altemeyer (1996) found that, in fact, scores on the RWA scale predicted attitudes toward homosexuality better than prejudice toward ethnic groups. Whitley and Lee (2000) report an average correlation of .52 between RWA and negative attitudes toward homosexuality as well.

### *Summary of Right-Wing Authoritarianism*

As a modern measure of Adorno et al.'s (1950) concept of authoritarianism with much stronger psychometric properties, Altemeyer's (1981, 1988, 1996) RWA construct is an individual difference variable comprised of an adherence to traditional social conventions, submission to established authorities, and a tendency to be aggressive against groups when sanctioned by authorities. Individuals higher in RWA believe the world is a dangerous place, are highly intolerant of ambiguity, have deficient critical thinking skills, and are typically more prejudiced against out-groups in general, and homosexuals in particular.



### Social Dominance Orientation

Social dominance theory (Pratto et al., 1994; Sidanius, 1993; Sidanius, Pratto, & Rabinowitz, 1994) suggests that humans are pre-disposed to form social hierarchies accomplished by developing belief systems that justify the dominance of some groups over others. One of the major factors driving this desire to create group-based hierarchies is one's social dominance orientation (SDO; Pratto et al., 1994). SDO is generally described as the degree to which one prefers inequality among social groups by endorsing social hierarchies; that is "the extent to which one desires that one's in-group dominate and be superior to out-groups." (Pratto et al., 1994, p. 742).

"Hierarchy legitimizing myths"—attitudes, beliefs, social policies, and the like that encourage support for the idea that social groups are not equal—can be adopted by individuals high in SDO to justify beliefs that there should be differences in status across groups. This is coupled with a zero-sum belief about competition suggesting that some groups should be dominant over others at the expense of the subordinate, subservient groups. These legitimizing myths include a) paternalistic myths which emphasize the need for dominant groups to take care of incapable subordinate groups, b) reciprocal myths which suggest that both dominant and subordinate groups are actually dependant on the other and each benefit from such arrangements to justify the status quo, and c) sacred myths, which assert a divine justification for the establishment of dominant and subordinate groups (Sidanius, 1993; Esses, Jackson, Dovidio, & Hodson, 2005).

Indeed, as measured by the Social Dominance Orientation Scale (SDO Scale; Pratto et al., 1994), SDO is positively correlated to legitimizing myths concerning support for racism, a tendency to be politically conservative, and opposition to spending on the poor,



demonstrating unique prediction for these attitudes over and above other predictors such as political-economic conservatism (Sidanius et al., 1994). Furthermore, in an examination of lay theories of the source of and possible solutions to prejudice, Hodson and Esses (2005) found that individuals high in SDO resist even teaching tolerance and do not believe that active social change can reduce prejudice, believing that prejudice itself is not possible to reduce and any attempt to do so is futile. Such beliefs concerning the inevitability of prejudice may, in fact, justify prejudicial attitudes for those high in SDO (Esses & Hodson, in press).

To justify negative attitudes toward out-groups, individuals high in SDO can also use stereotypes to legitimize the belief that one's in-group should be dominant over an out-group (Sidanius, 1993; Sidanius et al., 1994; Whitley, 1999). In effect, stereotypes act as another legitimizing myth that can serve to justify negative attitudes and actions. For instance, a negative belief (i.e., stereotype) concerning an ethnic group can serve as justification that the out-group is inherently inferior because of this perceived inherent flaw of the out-group—a flaw, which, in all likelihood, is believed to not exist in one's in-group. Following this premise, the high SDO individual can think, “Why should society expend precious resources to provide people with opportunities that they are inherently unfit to take advantage of?” (Whitley, 1999, p. 27). In effect, negative attitudes toward out-group members can originate from negative stereotypes, which are a type of a legitimizing myth.

To summarize, Social Dominance Theory suggests that people are pre-disposed to form social hierarchies. Individuals high in the individual difference characteristic SDO are more likely to endorse the belief that social groups are not equal, and are more likely to use legitimizing myths, such as stereotypes, to justify the position of dominance of certain groups



over others.

*Cognitive Behavior of Individuals High in Social Dominance Orientation*

SDO has been linked with tough-mindedness, a lack of empathy, and power motivation (Duckitt, Wagner, du Plessis, & Birum, 2002), as well of Altemeyer's (1998) Personal Power, Meanness and Dominance Scale, and his Exploitive Manipulative Amoral Dishonesty Scale. These findings led Duckitt et al. (2002) to suggest that individuals high in SDO see the world as a "competitive jungle"—in contrast to individuals high in RWA who consider the world as a "dangerous place". High SDOs believe that the world is populated by those who dominate and those who are dominated, activating the motivation to compete with other for resources. Sibley and Liu (2004) found that participants in New Zealand of European descent who were high in SDO were opposed to sharing resources (through affirmative action) with the Maori (the indigenous people of New Zealand) regardless of whether the participants themselves would be affected by the sharing of the particular resources. This negative reaction is presumably a result of the Maori being considered to be an out-group. Furthermore, although Esses, Hodson, and Dovidio (2003) found that high SDO individuals not only perceive immigrants as threat to access to tangible resources (such as jobs), but also for value and cultural dominance; re-analysis shows that realistic threat uniquely mediates the relationship between SDO and attitudes toward immigrants (Hodson, 2006).

Nationalism, patriotism and cultural elitism measures positively correlate with SDO as well (Whitley, 1999), further suggesting that individuals high in SDO show strong favoritism toward their in-group. Pratto et al. (1994) explain that SDO scores of males correlate with anti-female sexism. Similarly, according to the same authors, SDO also



correlates with support for chauvinist policies (that the United States should be dominant over other nations, for an American sample), law and order policies, and wars of dominance (but not humanitarian wars). Conversely, SDO is negatively correlated with hierarchy-attenuating policies including social welfare programs, gay rights, women's rights, and support for policies designed to reduce racism (Pratto et al., 1994). As can be seen, the cognitive behaviour of individuals high in SDO suggest their support for inequality among groups.

In summary, research suggests that individuals high in SDO see the world as a competitive jungle, wherein people either dominate or are dominated. High SDO individuals also show strong favoritism toward their in-group and opposition toward other groups, particularly competitive out-groups.

#### *Social Dominance Orientation and Attitudes Toward Homosexuality*

Whitley (1999) states that individuals high in SDO are predisposed to be prejudiced against out-group members. Regarding attitudes toward homosexuals specifically, a high SDO heterosexual typically dislikes a homosexual individual more than a low SDO heterosexual (Whitley, 1999). Esses et al. (2005) further speculate that as current debates regarding the legalization of same-sex marriages continue, homosexuals may increasingly be considered a threat in terms of values. To that effect, Whitley (1999) did find strong, negative affective responses to homosexuals by individuals high in SDO, although SDO did not predict liking for homosexuals to the same degree as RWA. The author suggests that those high in SDO indeed use legitimizing myths to justify prejudices against homosexuals. Overall, however, very little research on the relationship between SDO and prejudice against homosexuals specifically has been done.



### *Summary of Social Dominance Orientation*

Advocates of Social Dominance Theory suggest that individuals high in the individual difference variable Social Dominance Orientation have a general preference for inequality among social groups, supporting the placement of social groups in hierarchies. Individuals high in SDO use legitimizing myths (e.g., paternalizing myths, which suggest that some groups should act as a father figure over other groups to take care of them) to justify the belief that some groups should be more dominant than others. The belief that social groups are not equal stems from the belief that the world is a competitive jungle where groups are competing for resources, and out-groups are in a position to take resources away from one's in-group. Regarding attitudes toward homosexuals, SDO is a predictor of negative attitudes toward homosexuals, though to a lesser degree than is RWA.



### The Dominating Authoritarians

Individuals high in RWA and SDO exhibit different characteristics, as previously outlined. For instance, high RWA individuals tend to be religious, whereas those high in SDO are not (Altemeyer, 2004). In a more general sense, those high in RWA are more likely to follow (i.e., submit to) authorities, whereas high SDO individuals tend to want to lead (i.e., dominate). Therefore, there appears to be a certain incompatibility (at least, within an individual) between the two individual difference variables.

Though somewhat conceptually related, RWA and SDO each serve as unique and distinct predictors of prejudice. Indeed, a few studies (Hodson & Esses, 2005; Esses & Hodson, in press) found a significant positive correlation of RWA and SDO in the .40 range. However, correlations between scores of the two scales are only moderately correlated at around .20 across most studies (Altemeyer, 1998; Altemeyer, 2004; Esses et al., 2003; Jost, Glaser, Kruglanski, & Sulloway, 2003; Roccato & Ricolfi, 2005; Whitley, 1999), suggesting that RWA and SDO “may be motivated by somewhat different concerns, but they are both highly motivated ideologies” (Jost et al., 2003, p. 350).

Altemeyer (1998) outlines other key differences between RWA and SDO. In keeping with the idea that high RWA individuals are likely religious whereas high SDO individuals are not, those high in RWA are likely to follow the teachings of their religions, whereas it is unlikely that high SDOs will follow teachings and rules set by religious authorities (or any other individuals, for that matter). Additionally, high SDOs are also hedonistic, whereas high RWAs are not. Whereas high RWAs are conventional and adhere to traditions, individuals high in SDO are not necessarily traditional. High SDO individuals also tend to be men, whereas no evidence for a gender difference exists for RWA. Aggression by high RWAs and



high SDOs also seem to be motivated by different factors: whereas high RWAs may believe in a “dangerous world” (with this fear thereby activating aggression), high SDOs are more apt to think of the world as a “competitive jungle” (with desire to dominate motivating aggression). Additionally, whereas RWA is a strong predictor of attitudes toward homosexuals, SDO is particularly linked more to general gender inequality (Lippa & Arrad, 1999) and overall prejudice (Altemeyer, 1998) than is RWA. Altemeyer (1998) notes that high RWA individuals are also passively submissive to authorities and leaders, whereas high SDOs are not, leading him to liken RWA and SDO as “two sides of the same prejudice coin”, although “[they] hardly resemble peas in a pod” (Altemeyer, 1998, p. 61).

Interestingly then, this same inherent distinctiveness of RWA and SDO—in the sense that both are indeed independent and unique measures of prejudice, as shown by their modest correlation—suggests the possibility that individuals can be relatively high in *both* constructs. Indeed, Altemeyer states that people high in RWA may not wish to be with high SDO individuals in their lives because, for instance, high SDO individuals are not religious. However, this very idea that high RWA individuals have a tendency to trust and follow authorities (compared to those lower in RWA) means that the high SDO individual—who may be more apt to use whatever means necessary to “pass themselves off as true believers, donning sheep’s clothing to take over the flock” (Altemeyer, 2004, p. 427)—can influence the high RWA individual directly.

Altemeyer (2004) introduces evidence that an individual can indeed be high on both traits. Altemeyer (1998) found that when participants were asked to answer both the RWA and SDO scales based on how Adolph Hitler would answer, the data shows that Hitler was perceived to score highly on both scales. Recall that one of the clusters of RWA involves



authoritarian submission, such that high RWA individuals have a tendency to follow, without question, those perceived to be an authority figure. Simultaneously, a high RWA individual can perceive him or herself to *be* said authority figure whom others submit to—this desire to rule over others reflective of being a high SDO individual. The literature has under examined the distinct possibility that individuals can be both high in RWA and SDO.

Altemeyer (2004) operationalizes Dominating Authoritarians as those who score in the top quartiles of both the RWA and SDO scales. In accordance with the previous notion of the independence of the two measures, examination of his previous data led Altemeyer to discover that about 5 – 10% of his participants did indeed score in the top quartiles of *both* the RWA and SDO scales. Examination of their characteristics sheds light into two questions regarding these “Dominating Authoritarians”. The first involves whether Dominating Authoritarians are religious (like high RWAs) or not (like high SDOs). Dominating Authoritarians are, in fact, considered to be less religious than those who are only high in RWA, but significantly more than those who are only high in SDO (Altemeyer, 2004). The second point of inquiry concerns whether Dominating Authoritarians are more submissive (like high RWAs) or dominating (like high SDOs). Altemeyer (2004) found that Dominating Authoritarians discriminate highly based on religious grounds, which is similar to how a high RWA individual would act, and opposite to how a person high in SDO would; in fact, correlations with the Religious Fundamentalism Scale (Altemeyer & Hunsberger, 2004), which measures the adherence to rather extreme religious beliefs show that Dominating Authoritarians act like those high in RWA . With regards to whether Dominating Authoritarians tend to dominate (i.e., SDO) or submit (i.e., RWA), Altemeyer found that these individuals are more similar to those high in SDO in their desire to dominate, compared



to those high in RWA who do not have tendencies to want to do so.

The question remains, however, as to whether Dominating Authoritarians—because they happen to score highly on both scales—are indeed more prejudiced than those who are only high in RWA or SDO. As a concept, Dominating Authoritarianism is relatively unexplored. Research has examined the responses of the Dominating Authoritarians on the Manitoba Ethnocentrism Scale (Altemeyer, 1996), a measure of hostility toward homosexuals (Altemeyer, 1996), and measures of hostility toward women and toward French-Canadians (Altemeyer, 1996) compared to those of participants who scored highly only on either the RWA or SDO scale (Altemeyer, 2004). Compared to those high in only RWA or SDO, those who scored high on both—the Dominating Authoritarians—were found to be significantly more racist, sexist, and homophobic, leading Altemeyer to conclude that they are the most prejudiced group of individuals. Indeed, considering that the RWA and SDO Scales are the two best predictors of prejudice, it is plausible to think that high scores on both sales would reflect the highest levels of prejudice.



## Summary: Comparing and Contrasting Right-Wing Authoritarianism and Social Dominance

### Orientation

Although studies have found that the correlation between RWA and SDO are only low to moderate (i.e., .20 - .40), the two scales do correlate highly (SDO in particular) to other measures of prejudice (Altemeyer, 1998). In a March 1993 survey, it was found that RWA correlated .48 with the Manitoba Ethnocentrism Scale (which measures hostility of White Manitobans against other groups), whereas SDO correlated .71 with that scale. In that particular study, RWA and SDO correlated .38 with each other.

Although recent findings suggest that the two personality variables may indeed be more related than once assumed, RWA and SDO remain unique predictors of prejudice. Whereas studies have shown SDO to be a better predictor of prejudice in general than RWA, RWA is a stronger predictor of disliking of homosexuals than SDO, although other studies (Whitley, 1999) indeed show that SDO, in general, is also a good predictor of prejudice against homosexuals.

It is interesting to note that although the relations between RWA and SDO and other measures of prejudice have been thoroughly examined (as both are good predictors of prejudice), few studies have examined RWA or SDO jointly with reactions to manipulated threat. Individuals high in RWA dislike (i.e., are threatened by) that which is unconventional to them, and those high in SDO are threatened by other out-groups who may be perceived as competing for resources. It is plausible to believe, then, that placing those high in RWA and SDO in threatening situations would increase these individuals' prejudice against out-group members.

With regards to RWA, for instance, recall that those high in RWA have a belief that



the world is dangerous (Altemeyer, 1988). Therefore, threatening situations should increase prejudice against out-groups for those high in RWA. Duckitt (2006) adds that negative attitudes (i.e., prejudice) toward out-groups are mediated by the perceived threat that these out-groups pose. Concerning SDO, recall that those high in SDO perceive the world as a competitive jungle (Duckitt et al., 2002). Finally, Esses et al. (2003) found that the threat of out-group members taking precious resources do increase prejudice against these out-group members.

Is it also possible, however, that threatening situations can affect prejudice against out-group members—or perhaps preference for stereotype-consistent out-group members? The following section will now examine the idea that situations—much like individual difference variables like RWA and SDO—can affect prejudice levels. In particular, the next section focuses on the threat of one's own death and being uncertain on attitudes toward others. A review of the threat of death will now begin, followed by a review of the threat of being uncertain.



## The Threat of Death

Ernest Becker (1973) suggests that humans have an awareness of their own mortality, and that this realization of one's inevitable demise brings with it the potential for an overwhelming sense of fear. Terror Management Theory (TMT; Greenberg, Pyszczynski, & Solomon, 1986; Rosenblatt, Greenberg, Solomon, Pyszczynski, & Lyon, 1989) proposes that humans have a mechanism that helps us cope with our fear of death. The theory is built upon a foundation established by the existential and psychodynamic perspectives of psychology. According to the mortality salience (MS) hypothesis (Greenberg et al., 1986), to the extent that this psychological structure protects one from death-related anxiety, reminding one of the source of the anxiety should make the individual cling more to the source of protection from this anxiety, such as a cultural worldview. In other words, when a person is reminded of his or her own death, there is an increasing tendency for that person to hold onto their beliefs and ideas about their culture. Consequently, when one is reminded of one's future death, other people who support or uphold the same cultural worldviews (i.e., familiar others, such as in-group members) will be evaluated positively, whereas those whose beliefs contrast with one's worldview (either by being different or by being completely opposed to one's worldviews) will be evaluated more negatively.

According to the anxiety-buffer hypothesis, humans are highly motivated to find comfort and cushion against this feeling of impending personal doom by reverting to their culture—culture in the sense of their conceptions about the world. This cultural anxiety-buffer solution operates with some success because it is composed of a personalized, cultural worldview as well as the use of self-esteem (Greenberg et al., 1986; Greenberg, Solomon, & Pyszczynski, 1997). Cultural worldview is a fundamental set of ideas about the world, such



as beliefs of how the world should be. Cultural worldview operates by providing a subjective reality with meaning and a set of standards that can be used to attain a sense of meaning and personal value. Self-esteem, defined in TMT as realizing that one is living up to the standards prescribed by a cultural worldview, is the second component of the anxiety-buffer hypothesis. If a person is living up to the standards set by their cultural worldview, that individual's self-esteem is elevated. At the same time, they feel that they are part of a culture, that (theoretically) is eternal; culture will last longer than the individual, so latching onto that culture provides a relative sense of immortality. In fact, it has been shown that individuals with dispositionally-high self esteem, or whose self-esteem was experimentally raised, were less likely to defend their cultural worldview compared to those with lower levels of self-esteem (Arndt & Greenberg, 1999; Greenberg, Pyszczynski, Solomon, Pinel, Simon, & Jordan, 1993; Greenberg et al., 1992; Mikulincer & Florian, 2002). Hence, the cultural-anxiety buffer acts by giving individuals a sense of a shared, ordered culture, and living up to that standard lets individuals feel as though they are important members of their culture, therefore protecting individuals from thoughts of their inevitable demise as they become a part of that everlasting culture (Greenberg et al., 1997).

In a very general sense, studies of TMT often involve raising a participant's awareness of their own death (i.e., making mortality salient) and observing how the participant reacts to others who either endorse or oppose one's worldviews, compared to those for whom mortality is not made salient. The most common way to make mortality salient in an experimental setting is to ask an individual to "Please briefly describe the thoughts and feelings that the thought of your own death arouses in you" and to "Please write down, as specifically as you can, what you think will happen to you as you physically die"



(Rosenblatt et al., 1989, p. 682). Other methods involve showing video footage of fatal accidents (Rosenbloom, 2003), or more subtle manipulations such as word association tasks that prompt death-related words (Greenberg, Pyszczynski, Solomon, Simon, & Breus, 1994), performing surveys in the proximity of funeral homes (Pyszczynski et al., 1996), or subliminal priming of threatening stimuli (Arndt, Greenberg, Pyszczynski, & Solomon, 1997).

The effects of making one's mortality salient (i.e., a desire to cling to one's worldviews) have been found to be unique to thinking about death. Schimel et al. (1999) demonstrated that when individuals were asked to describe their thoughts and feelings as they imagined experiencing dental pain, participants did not exhibit the effects of thinking about one's death; that is, they did not show signs of clinging to their worldview. In effect, therefore, participants asked to think about dental pain acted as those in the control group. When comparing subliminal death primes and subliminal pain primes (by presenting the words *death* or *pain* on a computer screen while participants worked on a word relations task), Arndt, Greenberg, Solomon, Pyszczynski, and Simon (1997) concluded that only those Americans in the subliminal death prime condition showed increased defense of their worldview (i.e., exhibit pro-U.S. bias). Therefore, according to TMT research, the effects of a MS manipulation are limited to thoughts of death and are not evoked by manipulations of pain in general.

### *Cultural Worldview and Immortality*

Culture, according to TMT theorists, is an important component of the cultural-anxiety buffer. Furthermore, proponents of TMT literature perceive culture as a social creation, and it is imperative that individuals are dependent on others for the consensual



validation of the culture (Greenberg et al., 1997). When other people agree with one's particular worldview, it reinforces belief in that worldview by fundamentally validating that it is correct, enhancing one's faith that the entity they believe in is indeed eternal. Thus, according to TMT, validation of cultural worldview is dependent on whether others can support or undermine the worldview. If other people support the cultural worldview, the anxiety of one's physical death can be buffered (Greenberg et al., 1997). Conversely, individuals who question one's worldview or who present a competing worldview are perceived as interfering with the anxiety-buffer. In effect, the fact that others may be bringing up worldviews different from one's own questions the validity of one's own worldview.

Therefore, according to TMT, other individuals who share similar cultural worldviews with oneself are evaluated positively. As the MS hypothesis of TMT states, it follows then that reminding people of their mortality should make them more likely to respond positively to similar others, while responding negatively to dissimilar others.

Study 3 by Rosenblatt et al. (1989) gave participants the opportunity to reward an individual who provided the police with an important tip despite great personal risk in doing so (dubbed "the hero"). Prior to the experiment, mortality was made salient to half of the participants by asking them to write about the prospect of their death, whereas those in the control condition were not given this question to answer. When asked to assign a reward for the hero, who presumably shares the same values as the participants, those in the MS (vs. control) condition bequeathed a higher reward for the hero. In Study 1, municipal court judges were given a questionnaire package that included a written hypothetical situation where they would set bail for a convicted prostitute. The prostitute's values, in all likelihood, do not line up with those of the judges. Those judges in the MS condition set a significantly



higher bail than judges in the control condition. In essence, when mortality was made salient compared to the control group, the target individual who upheld cultural values that the participants deemed ideal (the hero in Study 3) was rewarded much more highly, whereas the individual who threatened their worldviews by having disparate worldviews (the prostitute in Study 1) was much more harshly punished.

Other studies have demonstrated that those who support (or at least, do not threaten) one's worldviews, compared to those with a differing worldview, will be liked more by those reminded of their own death. Study 1 by Greenberg et al. (1990) examined religious beliefs as a backdrop for cultural worldviews. Christian participants assessed an individual who was subtly introduced as either a Christian or a Jew. In support of TMT, Christians in the MS (versus control) condition were more likely to give positive ratings to the fellow Christian and more negative ratings to the Jewish individual, even though the two target individuals were in no way different from each other aside from religious affiliation. In Study 3, the authors assessed how Americans in an MS condition would react to a writer who either wrote an essay supporting or denouncing America. As predicted, those in the MS (vs. control) condition reacted more negatively to the anti-American essay, regardless of the supposed credentials of the writer (Harvard political professor or leader of the American Communist Party). The authors presumed the anti-American writer refuted the participants' worldview.

Based on TMT (and the outlined findings), it is reasonable to suggest that individuals could possibly aggress against those with different worldviews because these different ideas challenge what is believed to be the social consensus; the challenge, in effect, questions the worldview used to buffer their mortality-related anxiety (Greenberg et al., 1997).

Pyszczynski et al. (1996) asked individuals in a minority position on a certain subject in close



proximity to a funeral home (i.e., the MS condition) as opposed to father away from the funeral home (i.e., the control group) and found that these individuals tended to exaggerate support of that minority position, compared to those in the control group. This overestimation of social consensus seemingly shows that individuals who are reminded of their own death gravitate to their own cultural worldviews, and would prefer others believe the same views to further validate said worldviews believes.

*Prejudice and Stereotyping: Reactions to Individuals with Different Worldviews*

One way that individuals deal with threats toward their cultural worldview is to act negatively toward those supporting the threat, such as being hostile (as outlined) or derogating the alternative world view and its advocates. Harmon-Jones et al. (1997) and Greenberg et al. (1990) found that dissimilar others (in terms of nationality and religion) were more negatively evaluated in the MS condition versus the control condition. Strikingly, this occurs even when the participants are members of a “minimal group”, which involves arbitrarily assigning individuals to groups (Tajfel, Billig, Bundy, & Flament, 1971). Harmon-Jones, Greenberg, Solomon, and Simon (1996) demonstrated that when mortality is made salient (versus the control condition) participants were more favourable to those in their randomly-assigned in-group. From a TMT perspective, prejudice is, at least in part, the unavoidable result of perceived competition between cultural worldviews designed to protect an individual from the anxiety of death (Greenberg et al., 1997). Other ways to respond to worldview threats include convincing others to adopt a different worldview, accommodating segments of an alternative view, and annihilating others who hold a different worldview from themselves (Greenberg et al., 1997).

Making one’s mortality salient may also lead to more complex effects; participants do



not simply reject out-group members each time participants' worldview is rejected. Rather, it can depend on the "stereotype fit" of the individual; that is, whether the particular out-group member is consistent with stereotypes of members of that out-group (i.e., stereotypical) or inconsistent with the stereotypes (i.e., non-stereotypical). Study 3 of Schimel et al. (1999) found that White participants in the MS condition (versus control condition) preferred the stereotype-consistent Black individual (i.e., an out-group member who acted in a way that participants "expected" members of that out-group would act) over the stereotype-inconsistent Black individual (i.e., an out-group member who did not act in a way that participants "expected" members of that out-group would act). This particular finding reinforces the TMT idea of people protecting their cultural worldview in the face of being reminded of their own death: *Even if the stereotypes attributed to a member of a certain social group are negative, those out-group members demonstrating these familiar stereotypes are preferred over those exhibiting non-stereotypical characteristics, when people are reminded of their own mortality.* In other words, this study indicates that situational factors such as being reminded of one's own death can result in the preference for stereotype-consistent individuals and stereotype-consistent information, even for disliked out-groups.

The TMT studies reviewed so far have shown that individuals reminded of their mortality can react negatively toward those with opposing worldviews, for instance, by being derogatory toward the out-group. Study 5 from Schimel et al. (1999) examined the individual difference variable Need for Closure (Kruglanski, 1989; Kruglanski, Webster, & Klem, 1993) among participants who were also asked to think of their own death. Need for Closure is a measure of an individual's desire for a resolution, any resolution, to a question to avoid



ambiguity (Kruglanski, 1990). When asked to form a judgment, individuals high in Need for Closure (who prefer a quick resolution as opposed to an accurate one) “search less extensively for ‘external’ information prior to forming a judgment and...generate fewer hypotheses to account for available data.” (Kruglanski, 1996, p. 471). It stands to reason, therefore, that individuals high in Need for Closure particularly prefer familiar ideas over unfamiliar ones. Study 5 from Schimel et al. (1999) found that participants low in Need for Closure preferred stereotype-inconsistent male homosexuals whereas those with a high Need for Closure preferred the stereotype-consistent male homosexuals. Furthermore, individuals in the MS condition with high Need for Closure generally preferred the stereotype-consistent homosexual, whereas individuals with high Need for Closure in the control condition were more likely to prefer the stereotype-inconsistent gay man. In sum, the study shows that individuals can trigger both negative and positive stereotypes—stereotypes which reflect familiar beliefs about others—to out-group members to validate their worldview. The study shows the potential for examining individual differences within the terror management paradigm.<sup>1</sup>

A study involving individual difference variables in TMT was shown in Study 2 by Greenberg et al. (1990), which examined the individual difference variable authoritarianism (Adorno et al., 1950) using the controversial F-Scale (Adorno et al., 1950). Participants were placed in either a MS or control condition and were asked to rate an attitudinally-similar or an attitudinally-dissimilar other. The findings revealed that high authoritarians liked dissimilar others less in a MS (vs. Control) condition, whereas low authoritarians were not

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<sup>1</sup> Other individual difference variables examined in TMT literature include tolerance (Greenberg, Simon, Pyszczynski, Solomon, & Chatel, 1992), neuroticism and desire for control (Arndt & Solomon, 2003), depression (Greenberg, Solomon, Pyszczynski, 1991), and self-esteem (Arndt & Greenberg, 1999; Greenberg et al., 1992; Mikulincer & Florian, 2002). In these studies, it was found that individuals with high tolerance, low desire for control, lower levels of depression, or high self-esteem were less likely to defend their worldview under MS conditions when compared to those with the opposite end of these dimensions.



affected by the MS manipulation. High authoritarians are described as individuals who have “negative attitudes toward those who are different” (Greenberg et al., 1990, p. 314), and it seems that reminding these individuals about their own death accentuates these negative attitudes toward the dissimilar others, leading to less liking of the dissimilar others. It should be emphasized, however, that this particular study used the F-Scale, which, as mentioned in the section on RWA, has been found to suffer from high acquiescence and whose validity and reliability have been seriously questioned (Altemeyer, 1988, 1996). The role of contemporary forms of authoritarianism in TMT paradigms, therefore, remains unclear.

### *Summary of Terror Management Theory*

TMT states that although one might expect individuals to be paralyzed by knowing that their own death is inevitable, people generally have the capacity to cope with the knowledge of their own death. The MS hypothesis states that when reminded of their death, people manage this terror by using a cultural anxiety buffer, identifying with their cultural worldview, and living up to the standards set by that worldview. In doing so, people are able to achieve symbolic immortality and be a part of an everlasting entity. When individuals are threatened by the realization of their death, they prefer information that validates (i.e., is consistent with) their existing beliefs. According to TMT, when others do not share one’s beliefs—which equate to a threat to one’s own cultural worldview—these other individuals are viewed as challenging one’s “vehicle for immortality”. We react in a variety of ways in an attempt to restore its validity, which may, for instance, include derogation when evaluating others to re-establish our cultural worldview (Deschesne, Janssen, & van Knippenberg, 2000). However, we may also exhibit preference for familiar stereotypes when our cultural worldview is challenged. In other words, compared to a non-stereotypical



individual, we may prefer the stereotypical individuals, as they validate our expectations (i.e., cultural worldview). This may be especially true for individuals who are high in RWA, who are highly conventional and intolerant of ambiguity, and those high in SDO, particularly when out-group members violate expectations of their role status and hierarchy.

In summary, TMT states that the threat of death would lead individuals to prefer others who share similar beliefs, as those who have competing beliefs are perceived as a threat to their worldview. With regards to prejudice, an individual who has an incompatible set of beliefs to one's own (e.g., an out-group member) can be perceived as a threat (based on the distinction of consistent/inconsistent information), and will therefore be derogated. However, the threat of death is only one possible type of threat that may intensify prejudice towards others. In the following section, a different type of threat—the threat of uncertainty—will be examined, along with its possible effects on prejudice.



### The Threat of Uncertainty

Uncertainty, in a broad sense, stems from a general incompatibility between two ideas or the incompatibility between an idea and a behaviour (Kagan, 1972). Uncertainty itself is considered to be generally aversive, prompting Fiske and Taylor (1991) and Kagan (1972) to suggest that people's desire to decrease uncertainty and the negative feelings associated with uncertainty is a primary human motive (see also Mullin and Hogg, 1998). These aversive feelings may include fear, anxiety, shame or guilt. Humans are motivated to resolve the uncertain situation through accepting, changing, ignoring, or escaping from the discrepant event which makes the situation uncertain. If the situation is unresolved, fear and anxiety may be evoked.

Three theories concerning the threat of uncertainty will now be examined.

Uncertainty Management Theory, the theory of uncertainty orientation, and the theory of uncertainty reduction as motivation for social identification examine uncertainty from different angles, although all similarly focus on uncertainty as a type of threat.

#### *Uncertainty Management Theory*

Although McGregor, Zanna, Holmes, and Spencer (2001) have previously used uncertainty in an experimental fashion similar to mortality salience, Lind and Van den Bos, (2002) and Van den Bos and Lind (2002) furthered the use of both threats in an experimental setting by directly comparing the effects of mortality salience and uncertainty salience.

Uncertainty Management Theory (UMT; Lind & Van den Bos, 2002; Van den Bos & Lind, 2002) suggests that people have an inherent need to feel certain about their world and their role in it, and that being uncertain of these issues is uncomfortable and even threatening.

Feeling uncertain often motivates people to reduce this aversive feeling (Van den Bos &



Lind, 2002). According to Van den Bos, Poortvliet, Maas, Miedema, and Van den Ham (2005), “uncertainty deprives one of confidence in how to behave and what to expect from the physical and social environment within which one finds oneself” (p. 93). Exceptions to this rule have been found, however. Sorrentino and Roney (1986) found that some people, indeed, have a desire to experience novel events: these include activities that can be perceived as high risk, such as bungee jumping or parachuting (Van den Bos et al., 2005). Nonetheless, uncertainty even in these situations is usually controlled to an extent. Thus, people have a need to alleviate or control their uncertainty on a variety of issues and circumstances, from specific issues including job or financial security to more abstract areas such as one’s attitudes, beliefs, and feelings.

To experimentally make uncertainty salient, Van den Bos et al. (2002) asked participants in the uncertainty salient (UNC) condition to answer the following two questions: “Please briefly describe the thoughts and emotions that the thought of being uncertain arouses in you” and “Please write down, as specifically as you can, what you think physically will happen to you as you feel uncertain.” This method is similar to the method used by studies in TMT to increase mortality salience (Rosenblatt et al., 1989).

As TMT suggests that individuals cling tighter to their cultural worldview when reminded of their mortality, so too does UMT suggest that cultural norms and beliefs help to manage uncertainty. For instance, proponents of this latter theory—whose research background includes work on theories of justice and fairness—suggest that people become more concerned about procedural fairness when reminded of their being uncertain, with procedural fairness presumably being a part of participants’ cultural worldview; in other words, it is presumed that being treated fairly is a fundamental belief held by all people. Van



den Bos (2001) studied the influence of making uncertainty salient on perceived procedural fairness (again, which is considered part of everyone's worldview). Participants in one condition were asked their opinion as to how many lottery tickets for a cash prize they should receive relative to other participants as a reward, whereas participants in the other condition were not given the option to do so. Results show that participants who were also in the uncertainty salient condition were more likely to exhibit negative reactions when they were not given the opportunity to voice their opinion compared to participants in the control condition; in other words, when uncertainty was made salient, fairness (i.e., being able to voice their opinion, as those in one group did) presumably became more important, which presumably acts as a buffer against the negative feeling of uncertainty. In other words, participants favored fairness—a concept presumably part of their worldview—particularly when they were asked to think of their being uncertain.

In an experiment that showcases the different effects of making mortality or uncertainty salient, Study 3 by Van den Bos et al. (2005) utilized a 3 (condition: MS vs. Uncertainty Salient vs. control) x 2 (essay: positive vs. negative) design for their experiment. Participants in one Dutch university were placed in one of the three salience conditions. Participants were then asked to read a passage which describes their experience taking that one class, supposedly written by a student from a different Dutch university (an out-group member) who attended their own university for one class. Half of the participants in the experiment read a favorable article, praising the participant's school whereas the other half read an article condemning their experience. Although results showed the expected general negative reaction to the negative piece by participants in the MS condition, participants in the Uncertainty Salient condition reacted *three times* more negatively than those in the MS



condition. The study suggests that the effect of making one's uncertainty salient may in fact be more effective in inducing one to cling to familiar worldviews which asks one to think about their own death. As Van den Bos et al. (2005) mention, "the conclusion seems warranted that mortality salience is important in predicting people's reactions to these cultural issues but that uncertainty salience can be even more important" (p. 109).

Additionally, in another study, Van den Bos (2005) found that although a significant percent (around 24% - 50% across five studies) of participants in the MS condition thought about uncertainty, those in the UNC condition did not generally think about death. Van den Bos (2005) speculates that although thoughts of uncertainty do not activate thoughts of death, "an important component of mortality salience effects may be the activation of uncertainty-related thought" (pp. 102-103). Because activating thoughts of one's death can lead to thoughts of one's uncertainty but activating thoughts of uncertainty do not generally lead to thoughts of one's death, it may be the case that the fear of death—along with other similar fears—may belong under the concept of a more general concern with uncertainty.

Although UMT suggests that uncertainty is threatening, another theory posits that different people may not perceive the same degree of aversion from uncertain situations. The review of the threat of uncertainty now continues by examining the theory of uncertainty orientation.

### *Theory of Uncertainty Orientation*

In general, uncertainty is considered aversive and people tend to avoid feelings of uncertainty. However, according to the theory of uncertainty orientation (Sorrentino & Roney, 2000; Sorrentino & Short, 1986), every situation is characterized by a degree of certainty and uncertainty, with some individuals not perceiving uncertain situations as



aversive or as threatening as others. The theory states that under situations of uncertainty, uncertainty-oriented individuals (those low in authoritarianism and high in need for uncertainty) perceive the situation as positive, embracing the situation as a challenge to learn new information; the resolution of this uncertain situation is considered motivation for their thought and behaviour. On the other hand, certainty-oriented individuals prefer what is already known and perceive uncertain situations in a more negative manner and are more averse to them. Furthermore, certainty-oriented people tend to gravitate toward situations marked by certainty and familiarity. In essence, uncertainty-oriented individuals actively try to reduce uncertainty whereas certainty-oriented individuals tend to avoid uncertainty, preferring clarity instead (Hodson & Sorrentino, 2003).

Sorrentino and Hewitt (1984), in an experiment designed to determine how much people would prefer to know novel information about themselves, found that uncertainty-oriented participants (versus certainty-oriented participants) were more likely to want to know more new information about themselves, regardless of whether the new information would explain an ability in which they were low or high. This exhibits their tendency to approach uncertain situations, approaching the situation as a certain challenge with the intent to discover new information. On the other hand, certainty-oriented individuals, even when they were told that they were high in the ability, exhibited their tendency to avoid the unknown and preference for the familiar—even when this familiar information is negative.

It is important to note that the theory of uncertainty orientation does not propose that individuals prefer uncertainty to certainty. Uncertainty-oriented individuals tend to deal with uncertainty with the resolve to *actively reduce* the uncertain situation. Certainty-oriented individuals, on the other hand, tend to deal with uncertainty by *avoiding* the uncertain



situation and gravitate toward more certain situations (Hodson & Sorrentino, 2003). Thus, the theory of uncertainty orientation proposes that individuals do find uncertainty aversive and threatening, although the theory suggests that people may deal with uncertainty in different ways.

A third theory on uncertainty will now be examined. In contrast to UMT and the theory of uncertainty orientation, this third theory focuses on the more social aspects of reducing uncertainty.

#### *Uncertainty Reduction as Motivation for Social Identification*

Another view on uncertainty involves seeing uncertainty as having a primarily social origin. Mullin and Hogg (1998) and Jetten, Hogg, and Mullin (2000) found that under uncertain situations, participants in a minimal group paradigm showed more identification with their group, as well as increased discrimination towards out-group members. The authors presumed that this process of identifying with one's group is a means to reduce uncertainty.

These findings seem to mirror the TMT concept of using one's cultural worldview—which includes what one is familiar with—to buffer the effect of thinking about one's death. The theory of uncertainty reduction as motivation for social identification, similar to the other two theories on the threat of uncertainty mentioned, examines how the threat of uncertainty (as opposed to the threat of death in TMT) is highly uncomfortable. In contrast to the other two uncertainty theories mentioned, however, this particular theory suggests that to buffer this feeling, an individual uses one's membership in a group (i.e., surrounding oneself with that which is familiar). From this point of view, uncertainty is caused by people who do not know who they are and what their behaviour should be; in other words, uncertainty is



caused by not knowing about one's social world and one's place within it. Results from Hodson and Sorrentino (2001), however, suggest that these findings—that is, identifying with one's group reduces uncertainty—are typical only of certainty-oriented (not uncertainty-oriented) individuals, suggesting individual differences in reactions to uncertainty.

This theory, along with the other theories of uncertainty, generally state that uncertainty is aversive and highly uncomfortable and we use various means—embracing one's cultural worldview or identifying with a meaningful social group, for instance—to reduce uncertainty. As noted by the theory of uncertainty orientation, however, people may differ substantially in their tendencies to adopt such strategies, hinting that different types of individuals may indeed react to the threat of uncertainty differently.

#### Summary: The Threat of Death and Uncertainty

As outlined, studies have shown that when reminded of their own death, participants find these circumstances aversive. When threatened with their own mortality, participants have been shown to prefer those who share their cultural worldviews—that is, participants in a MS condition prefer information that is familiar to them to buffer against the threat of death. People are motivated to reduce the threats of death through a variety of methods, such as derogation of those who hold unfamiliar beliefs.

Similarly, people also find the threat of uncertainty aversive, and participants in experiments regarding the threat of uncertainty act similarly to those whose mortality has been threatened to reduce the aversion—interestingly, however, some research shows that uncertainty may in fact be more threatening than the threat of death. Additional theories concerning individual differences regarding how one deals with the threat of uncertainty (uncertainty orientation) and the possible social origins of the threat of uncertainty also exist.



However, these theories of uncertainty retain the idea that the threat of uncertainty—like the threat of death—is generally aversive, and people can use a variety of methods to reduce the effects of threat.



## A Paradox?: Preferring a Stereotypical Homosexual over a Non-Stereotypical Homosexual

Earlier studies in TMT (Greenberg et al., 1990; Rosenblatt et al., 1989) asked participants to evaluate out-group members. Compared to those in the control group, participants who were asked to think about their death before evaluating an out-group member expressed more negative evaluations toward the out-group member. Proponents of TMT presume that out-group members have different beliefs, which do not validate one's own beliefs. However, these experiments could be perceived as showing that individuals under mortality salience are merely preferring members of the individuals' in-group over those considered to be in the individuals' out-group.

Schimmel et al. (1999) were able to more effectively demonstrate the notion that White participants reminded of their own death preferred what is consistent to their worldview. In Study 3, the researchers asked participants to evaluate liking for a stereotype-consistent (i.e., stereotypical) Black individual and a stereotype-inconsistent (i.e., non-stereotypical) Black individual, who was dressed in a more typically White manner. Results show that preference for out-group members who are stereotype-consistent increases when individuals are reminded of their own death. Compared to participants in the control group, participants reminded of their own death more positively evaluated a stereotype-consistent Black individual than a stereotype-inconsistent Black individual.

These results may indeed seem counter-intuitive. Should it not be the case that the White participants in this study prefer the stereotype-inconsistent Black individual because he dresses and acts in ways that are presumably more familiar to the White participants—in essence, the stereotype-inconsistent Black individual is one who acts like themselves? In fact, however, these results *are* entirely consistent with TMT research. The White participants are



entering the experimental situation with ideas and beliefs (i.e., stereotypes) about Black individuals. When reminded of their own death, the participants, in response to threats to their worldview, exhibited a tendency to cling to the idea of the stereotypical Black individual (which is part of their worldview), because this conception was familiar. Conversely, the participants are not familiar with the non-stereotypical Black target individual; he does not fit their worldview. Consistent with TMT research, the target individual who did not fit the participants' worldview (i.e., was non-stereotypical) was evaluated more negatively than the stereotypical individual, even if both the Black target individuals were members of an out-group. Thus, although mortality salience may lead to dislike of out-group members generally (Greenberg et al., 1990; Rosenblatt et al., 1989), Schimel et al. (1999) show that mortality salience may also lead to preference for the more prototypical (i.e., stereotypical) out-group member more than the less prototypical (i.e., non-stereotypical) out-group member.



### Preference for Expected Information

If one were to refer back to the story of Homer and John touched upon at the beginning of the paper, one sees Homer was not upset at John simply because John is a homosexual (an out-group member) but also because John did not act in a manner consistent with Homer's expectations of homosexuals. In fact, Homer quips that the reason he does not like John is "not because John's gay, but because he's a sneak. He should at least have the good taste to mince around and let everyone know that he's that way." The quotation in the title of the paper can be understood to suggest Homer's preference for what is expected. In regards to both personal activities (e.g., drinking beer cold and watching TV loud) and the behaviour and characteristics of others (e.g., homosexuals as effeminate and outgoing), he prefers information consistent with his expectations over information that is inconsistent.

The literature reviewed so far hints as to people's preference for that which is familiar or expected. Individuals high in RWA were shown to be conventional, preferring that which is known. Those high in SDO use stereotypes (which is what is familiar to them) as a legitimizing myth to justify their views of social groups and social hierarchies. To combat the threat of death and uncertainty, people favour the familiar and reject that which is unfamiliar or unexpected. In essence, the reviewed fields of research have shown that people show preference for expected information as it is consistent with their views. For further insight regarding preference for information consistent with one's beliefs and ideas, this section will now introduce research in this area, primarily from a social cognition perspective.

Olson, Roese, and Zanna (1996) define expectancies as "beliefs about a future state of affairs" (p. 211). An expectancy, therefore, is a type of belief. For example, a fire that feels hot is consistent with our beliefs about fire; in other words, people have an idea of the



properties of fire and expect fires encountered in the future to have those properties.

Experiences that are not consistent with our expectancies can lead to aversive feelings such as anxiety (Mandler, 1975). Olson et al. (1996) suggest people want the world to be predictable and that unpredictability is unpleasant. Therefore, people prefer experiences and information consistent with their beliefs (i.e., expectancies). For instance, if one expects fire to be hot but it is not upon touch, questions, confusion, and generally aversive feelings become generated—beliefs about what might have or should have been are now brought into question (Turnbull, Miller, & McFarland, 1990).

The cognitive miser view of social cognition (Taylor, 1981) suggests that one reason people desire consistency is because people only have a limited capacity to process information about the world; that is, people prefer information that is consistent with what they know, in the interest of mental efficiency. Mental shortcuts—schemas—are utilized to simplify complex ideas. A schema is a structured, cognitive representation of a concept or stimulus (Fiske & Taylor, 1991). Although not necessarily accurate, a schema remains an efficient way to organize concepts. According to this cognitive miser view, the purpose of using schemas is to reduce the effort required to understand the world. Fiske and Taylor (1991) note that “categories and schemas allow us the comforting sense that we understand our world” (p. 97).

The social schema literature has considered different types of schemas. The person schema contains conceptions and ideas about specific individuals. On the other hand, a role schema is structured to organize knowledge concerning the expected behaviour associated with social roles (Hastie, 1981). An example of a role schema is the stereotype, as a stereotype arranges expectations about others who belong in other social categories (Fiske &



Taylor, 1991). Examples of stereotypes include beliefs about women being nurturing or homosexuals being effeminate. In a study by Allport and Postman (1954), participants viewed an illustration depicting black and white characters in a subway car scene. Although the character holding an open razor was white, White participants in a memory recall task frequently reported that the razor was being held by a Black man. It is presumed that the stereotype image of a violent black person instigated this error.

In addition to this view of the individual possibly ignoring inconsistent information, an emerging view regards the individual as having other motives for preferring consistent over inconsistent information. In this view, the person “might be best termed [as a] *motivated tactician*, a fully engaged thinker who has multiple strategies available and chooses among them based on goals, motives, and needs” (Fiske & Taylor, 1991, p. 13). For instance, instead of the person simply ignoring inconsistent information, a person may be motivated to distort it for the purposes of speed or maintaining self-esteem (Fiske & Taylor, 1991). Zanna and Olson (1982) note, for example, that individuals high in self-esteem can alter inconsistent information in order to keep it in line with their attitudes, in the interest of maintaining self-esteem.

Therefore, social cognition studies in general suggest preference for information consistent with beliefs. The current study will investigate consistent and inconsistent information as it pertains to stereotypes. Stereotypes can be defined as role schemas which organize beliefs concerning others who belong in different social groups. Because the RWA Scale and the SDO Scale are considered to be good predictors of prejudice against homosexuals the current study focuses on stereotypes concerning male homosexuals.

Madon (1997) and Schimel et al. (1999) suggest that the stereotypical homosexual



male is, among other characteristics, effeminate, talkative, considered a good listener, and has mostly female friends. As such, incoming information about individual members of this group will be classified as consistent or inconsistent with such characteristics. As the literature review on TMT and expectancies suggest, in most instances, encountering an out-group member that is stereotype-consistent is preferable, especially when mortality is salient.

In the current study, the phenomenon of interest is whether it is possible to predict whether people will like target individuals who are stereotype-consistent (i.e., stereotypical) over those who are stereotype-inconsistent (i.e., non-stereotypical), and in which situations certain people will prefer stereotype-consistent or stereotype-inconsistent targets. Specifically, the current study will attempt to approach this question by examining the two individual difference variables of interest—RWA and SDO—by comparing their predictive power for the liking of stereotypical and non-stereotypical homosexual targets as a function of two types of situational threats (mortality salience and uncertainty salience).



## Hypotheses

### *Main Effects: Individual Differences*

In keeping with results from past literature that find RWA as a very strong predictor of attitudes toward homosexuality, and that RWA is negatively correlated with positive attitudes toward homosexuals (Altemeyer, 1988, 1996), it is predicted that *those high in RWA will evaluate a homosexual target more negatively compared to those low in RWA*. High SDO individuals endorse the idea that social groups are unequal and some groups should be dominant against others. Because heterosexual individuals high in SDO consider homosexuals as members of an out-group (Pratto et al., 1994), it is also predicted that *those high in SDO will evaluate a homosexual target more negatively compared to those low in SDO*.

### *Main Effects: Situational Threat*

In light of findings on TMT, it is predicted that *when reminded of their own death, heterosexuals will more negatively evaluate a homosexual (i.e., out-group) target compared to heterosexuals not reminded of their own death*. This prediction is based primarily on the findings of Greenberg et al. (1999), which showed that Christian participants reminded of their own death evaluated the Jewish target (an out-group member) more negatively compared to other Christian participants in the control group.

Similarly, it is predicted that *heterosexual participants under conditions of uncertainty (compared to those in the control group) will evaluate the homosexual target more negatively*. It is presumed that the homosexual target is an out-group member who therefore does not share in their beliefs about the world.



### *Main Effects: Stereotype Congruency*

As reviewed, preference for the familiar can depend on the situation of the perceiver. Individuals reminded of death, for instance, prefer information consistent with their beliefs—that is, information that is familiar. The question, however, is “what will be considered familiar?” On the one hand, because the sample for the current study consists of undergraduate students, who have particularly more pro-homosexual attitudes than the general population (Ohlander, Batalove, & Treas, 2005), the sample in general may find the actions of a stereotypical homosexual to be familiar, and may thus prefer him.

Conversely, however, it is also possible that participants may perceive a male (regardless of his sexuality) acting as a male to be more familiar. In that case, participants may prefer the stereotype-inconsistent homosexual because the characteristics of the target (i.e., the stereotypically-male characteristics) may be seen as in-line with expectations of the male target.

Because both scenarios seem plausible, a *non-specific, non-directional hypothesis regarding stereotype congruency* was made. The stereotype-consistent male homosexual target may be preferred as his characteristics reflect those of the familiar homosexual. Similarly, the stereotype-inconsistent male homosexual target may be preferred as his characteristics reflect those of the familiar male.

### *Right-Wing Authoritarianism and Social Dominance Orientation as Relevant Predictors of Prejudice Against Stereotypic vs. Non-Stereotypic Homosexuals Under Threat*

Recall at the beginning of this paper that the purpose of the present study is to examine the unique predictive power of two of the strongest individual difference measures of prejudiced behaviour, RWA and SDO. It is hypothesized that RWA and SDO will be



significant predictors of prejudice against stereotypical or non-stereotypical homosexuals under particular conditions of mortality salience and uncertainty salience.

*Right-Wing Authoritarianism.* Altemeyer (1996) stated that RWA is highly negatively correlated toward attitudes toward homosexuals. Presumably, homosexuals that high RWA individuals encounter and are prejudiced against are the stereotypical homosexuals.

Additionally, individuals high in RWA are highly intolerant of ambiguity (Altemeyer, 1988, 1996). Therefore, compared to participants lower in RWA, making individuals high in RWA uncertain should make them particularly uncomfortable and therefore cling to their existing worldview. However, one might ask, should thinking about one's death—in essence, being in a mortality salience condition—not yield the same results? While TMT research suggests that asking individuals to think of their death should also lead high RWA individuals to cling to their existing beliefs, individuals high in RWA also happen to be highly religious; because most religions speak of a pleasant afterlife, it is possible that these particular individuals may be threatened by thoughts of death, but not as much as thoughts of their being uncertain.

*Social Dominance Orientation.* Although SDO is a good predictor of prejudice against homosexuals (presumably, stereotypical homosexuals), research has shown that SDO is better described as a strong predictor of prejudice in general. Individuals high in SDO are more apt to endorse the idea that social groups should be placed into a hierarchy. While the stereotypical homosexual (a member of the low-status homosexual group, as perceived by those high in SDO) may be construed as threatening, it is perhaps more likely that the high SDO individual will simply categorize the stereotypical homosexual as a member of the



“homosexual” social group. On the other hand, a non-stereotypical homosexual target individual—the individual that claims he is a homosexual but does not behave like a stereotypical homosexual—is less likely to easily fit into a particular social group and subsequently, may be perceived as someone who is not “staying in his low status group”. Consequently, an individual high in SDO may be threatened by this non-stereotypical homosexual, acting like the proverbial “wolf in sheep’s clothing”.

Although there has been very little research that has manipulated threat in individuals high in SDO, TMT suggests that individuals, when reminded of their own death, will cling to their cultural worldview by positively evaluating those who support their worldview, but not those who do not. Hodson (2006) found that those high in SDO were more threatened by more realistic threats as opposed to more symbolic threats. Additionally, research by Esses et al. (2003) show that those high in SDO oppose immigrants because immigrants are perceived as threats to access to essential resources, physical safety, and values. These particular threats—to resources, physical safety, and values—are akin to more realistic threats, which is similar to the threat of death. The threat of uncertainty, compared to the threat of death, can be perceived as a more abstract, symbolic type of threat. This may be especially true for individuals high in SDO, who believe that the groups should be placed in a hierarchy—for this to be possible, individuals must easily “fit” into these perceived social groups. Therefore, if their cultural worldview is challenged, high SDO individuals should prefer individuals who share or support their worldview.

The following section will outline the predicted interactions concerning the individual difference variables, threat, and stereotype fit.

It is further hypothesized that *RWA, compared to SDO, will be a better predictor of*



*prejudice against the stereotypical homosexual target under uncertainty salience. On the other hand, it is hypothesized that SDO, compared to RWA, will be a better predictor of prejudice against the non-stereotypical homosexual target under mortality salience.*

It is predicted that because of the association with intolerance toward ambiguity and high religiosity, *RWA will be a better predictor for disliking of the stereotypical homosexual target particularly when in the uncertainty condition than when in the mortality salience condition*, even though those high in RWA will also be rattled by an MS manipulation.

Additionally, it is predicted that because of the association with the preference for social hierarchies and wanting individuals to easily fit into their social categories and the association with the fear of realistic threat, *SDO will be a better predictor for disliking of the non-stereotypical homosexual target when in the mortality salience condition than when in the uncertainty condition.*

*Dominating Authoritarianism.* Previous research by Altemeyer (1998, 2004) that—particularly because of the independence between the two variables—high levels of SDO and RWA can co-exist in an individual. Altemeyer (2004) labeled individuals who score high on both scales as “Dominant Authoritarians”.

Because the Dominating Authoritarianism measure is composed of both the RWA and SDO Scales, it is predicted that the *Dominating Authoritarianism measure will be a strong predictor for disliking of the stereotypical homosexual when in the uncertainty condition than when in the mortality salience condition* (consistent with the prediction for RWA) and for disliking of the non-stereotypical homosexual target when in the mortality salience situation than when in the uncertainty condition (consistent with the prediction for SDO).



## Method



## Method

### *Participants*

One hundred eighty-nine first- and second-year Brock University psychology students were randomly assigned to one of the six experimental conditions (See Figure 1): 2 (Stereotype Fit: Stereotypical vs. Non-Stereotypical) x 3 (Threat: Mortality Salience vs. Uncertainty Salience vs. Control). Because nine participants indicated that they were either homosexual or bi-sexual, and because this study involved evaluating a homosexual person, these nine participants were removed from all analyses. The remaining sample was composed of 157 women and 23 men, was predominantly Caucasian (89.7%), and ages ranged from 17 to 51, with a mean of 20.76 years. Participants took an average of 38.93 minutes to complete the experiment.

Participants were recruited through the Department of Psychology website (<http://www.psyc.brocku.ca/research.htm>). The study was entitled “Emotions and Social Opinions” and was described as a study that “...looks at how we form opinions about each other” and that “[participants] will be asked to read a passage and fill out a questionnaire package”. The study could be used as one hour of participation for the students’ psychology classes for their involvement.

### *Materials*

Students were provided a standard consent form and were given a copy of the form signed by the researcher after signing it (See Appendix A). The one-page consent form provided a quick summary of the tasks, an outline of possible risks and benefits, assurance of confidentiality, and contact information.

Upon commencement of the experiment, participants were given preliminary verbal



*Figure 1. The Six Experimental Cells*

		Threat		
		Mortality Salience	Uncertainty Salience	Control
Stereotype Fit	Stereotypical			
	Non-Stereotypical			



instructions (See Appendix B). Participants were also told that this study would take approximately 45 minutes to complete. Participants were asked to complete two packages; the first was timed by the experimenter, and the second was to be completed at the participants' own pace. The first page of each of the two packages included a single sheet of paper with "Study 1" or "Study 2" written on it, respectively, to indicate the order in which the packages should be answered.

*Package 1 (Timed).* The first of two packages included the salience manipulation, the PANAS-X (Watson & Clark, 1991), and a word stem completion task.

Participants in the Mortality Salience (MS) condition were asked to answer the following two questions that have been used in previous TMT studies (e.g. Greenberg et al., 1990; Harmon-Jones et al., 1997; Schimel et al., 1999): 1) "Please briefly describe the thoughts and feelings that the thought of your own death arouses in you" and 2) "Please write down, as specifically as you can, what you think will happen to you as you physically die" (See Appendix C). As in Van den Bos (2001) and Van den Bos et al. (2005), participants in the Uncertainty Salience (UNC) condition were asked to 1) "Please briefly describe the thoughts and feelings that the thought of your being uncertain arouses in you" and 2) "Please write down, as specifically as you can, what you think will happen to you as you feel uncertain" (See Appendix D). As per the previous TMT work cited, individuals in the Control (CTRL) condition were asked parallel questions not regarding thoughts of death or uncertainty: 1) "Please briefly describe the thoughts and feelings that the thought of watching television arouses in you" and 2) "Please write down, as specifically as you can, what you think will happen to you as you watch television" (See Appendix E). Participants across all three threat conditions were given 2 and a half minutes to answer the first question and



another 2 and a half minutes to answer the second.

To check whether participants wrote about what the instructions in the previous section requested of them, participants were then asked to indicate whether they were thinking of 1) death, 2) uncertainty, or 3) watching television in the previous task. To further mask the salience manipulation from the participants, a fourth option, “listening to the radio” was also included (See Appendix F).

The PANAS-X (Watson & Clark, 1991) scale measures both positive and negative dimensions of affect, and has been included in numerous other TMT studies (e.g., Greenberg, Solomon, Pyszczynski, Schimel, 1999; Arndt, Allen, & Greenberg, 2001; Arndt, Greenberg, & Cook, 2002; Greenberg et al., 1990; Harmon-Jones et al., 1997; Landau, 2004). These studies have demonstrated that the effects of mortality salience are not due to increased negative affect. However, these other studies did not measure individual differences (such as RWA and SDO): For exploratory reasons, the role of affect (as measured by the PANAS-X) will be examined across the RWA and SDO spectra. The questionnaire asked participants to indicate, on a 5-point Likert scale, the extent that they have felt 60 emotions at the present time (i.e., while answering the PANAS-X). Those listed included “cheerful”, “strong”, “sad”, “nervous”, and “frightened” (See Appendix G).

Because the literature indicates that the effects of a MS manipulation occur only when there is a brief delay after the manipulation (Arndt et al., 1997b; Greenberg et al., 1994), participants were asked to complete a word-stem completion task after the PANAS-X measure as a filler task. In keeping with past research as well, potential answers to the word stem task were not related to death. The word stem completion task asked the participants to fill in the blanks with letters to form a word. Examples include M \_\_\_\_ D \_\_\_\_ (solution:



MODE or MADE), \_\_\_\_ \_\_\_\_ \_\_\_\_ \_\_\_\_ O W (solution: YELLOW, BILLOW, or FELLOW), and \_\_\_\_ U \_\_\_\_ \_\_\_\_ U \_\_\_\_ (solution: MUSEUM) (See Appendix H).

*Package 2 (Untimed).* As an overview, the second of the two packages included an instruction sheet, the essay passage to be evaluated by the participant, and the RWA scale (Altemeyer, 1996) and the Social Dominance Orientation scale (Pratto et al., 1994). For exploratory purposes, also included were the Rosenberg Self-Esteem scale (Rosenberg, 1965, 1986), the Attitudes Toward Gay Men scale (Herek, 1988), the Need for Closure scale (Kruglanski et al., 1993), the Personal Need for Structure scale (Neuberg & Newsom, 1993) the Religious Fundamentalism scale (Altemeyer & Hunsberger, 2004), and a revised, two-item version of the Liberalism-Conservatism Scale (Skitka, Mullen, Griffin, Hutchinson, & Chamberlin, 2002). A memory recall task, standard demographics sheet, and a suspicion check were also included.

The single-page instruction sheet was designed to introduce the participant to the second half of the study, and also asked participants to complete the package in the order presented. The instruction sheet also included an elaboration of the cover story, indicating that the researchers were interested in impression formation and that the participant has received a randomly-selected written passage to be evaluated. A short, point-form description of the supposed writer was included, the main purpose of which was to present the idea that the writer of the passage is a homosexual (See Appendix I).

Participants then read a self-description of an individual as a 20 year-old student at the university. The half-page-long account involves a homosexual male who self-discloses his homosexuality and describes a typical week in his life. Although participants were informed that each participant was to receive a unique passage from different writers, in



reality, there were only two different essays. One half of the participants read an account as written by a stereotypical (i.e., expectancy-consistent) homosexual while the other half were asked to read an account by a non-stereotypical (i.e., expectancy-inconsistent) homosexual. Based on Madon (1997) and Schimel et al. (1999), those in the stereotypical condition read about the stereotypical homosexual male individual who considers himself talkative and a good listener, has predominantly female friends, works at a salon, and is considering theatre as his major, among other attributes (See Appendix J). The description of the non-stereotypical homosexual male stated that he considers himself as not very talkative, has predominantly male friends, works at a car garage, and is considering business as his major (See Appendix K). The two passages were identical in form except for the activities and the interests listed.

A two-page evaluation form followed the essay. The evaluation form was composed of a total of seven questions based on the dependent measures used by Harber (1998). The questions asked participants to rate aspects of the writing (i.e., grammar, spelling), as well as liking of the writer (i.e., if the participants would like to get to know the person) along nine-point Likert scales. The first five questions focus on the mechanics and content of the essay itself. The next two questions were evaluations of the target individual himself. Additionally, following Schimel et al.'s (1999) questionnaire, participants were also asked to rate the applicability of twelve traits, such as "Hardworking" or "Hypocritical" (reverse scored), to the author of the essay on a nine-point scale. This questionnaire was included for exploratory and comparison purposes (See Appendix L).

Participants were then asked to complete Altemeyer's (1996) RWA Scale. The scale asked participants to indicate, on a 9-point Likert scale, the degree to which they agree or



disagree with 30 statements. The scale has been found to be reliable, with alpha scores over .80 (Altemeyer, 1996). Examples of the statements in the scale include, "Our country will be destroyed someday if we do not smash the perversions eating away at our moral fiber and traditional beliefs", and "Our country *needs* free thinkers to defy traditional ways, even if this upsets many people" (reverse-scored) (See Appendix M).

Upon completion of the RWA scale, participants were asked to complete the SDO scale (Pratto et al., 1994). The scale is composed of 16 statements, and participants are asked to indicate along a 7-point Likert scale how positive or negative they are to the statements. The scale has been found to have good internal reliability, with an alpha of .83 (Pratto et al., 1994). These statements include, "Some groups of people are simply inferior to other groups" and "Group equality should be our ideal" (reverse-scored) (See Appendix N).

The other questionnaires in the package were primarily included for exploratory purposes. The Rosenberg Self-Esteem Scale (Rosenberg, 1965) follows the SDO Scale. As outlined in Greenberg et al. (1992), self-esteem acts as a buffer to death-anxiety, and elevated levels of self-esteem leads to lowered desire to defend worldview (Harmon-Jones et al., 1997). The scale has a high test-retest reliability in the range of .82 to .88 (Rosenberg, 1986). The scale consists of 10 statements and participants were asked to indicate, on a 5-point Likert scale, the extent to which they agreed or disagreed with statements such as "I am able to do things as well as most other people" and "I certainly feel useless at times" (reverse-coded) (See Appendix O).

To measure attitudes toward homosexuals, a modified version of the Attitudes Toward Gay Men scale (Herek, 1988) asked participants to indicate, on a 9-point Likert scale, the degree to which they agreed or disagreed with 10 statements. The Attitudes Toward



Gay Men scale is one half of the Attitudes Toward Lesbians and Gay Men scale (Herek, 1988) and because this current study involves evaluation of a gay male, only this particular component was included. The male subset has a reliability of .83 (Herek, 1988). The items in the Attitudes Toward Gay Men Scale were slightly adjusted by modifying or deleting references to males specifically to appear non-gender-specific. For example, the item "If a man has homosexual feelings, he should do everything he can to overcome them" was altered to "If someone has homosexual feelings, he or she should do everything he or she can to overcome them". The 10 items on this new Heterosexual Attitudes Toward Homosexuals scale include, "The idea of homosexual marriages seems ridiculous to me" and "I would *not* be too upset if I learned that my son or daughter were a homosexual" (reverse-coded) (See Appendix P).

As previously mentioned, Need for Closure (Kruglanski, 1989) is described as the individual's desire to avoid feelings of ambiguity and confusion by finding any conclusion to a topic. Schimel et al. (1999) found that when mortality was salient, individuals high (vs. low) in need for closure preferred the stereotypical homosexual more than the non-stereotypical homosexual. For comparison purposes, therefore, the Need for Closure Scale was included in the proposed investigation. The Need for Closure Scale has a Cronbach's Alpha reliability of .84 (Kruglanski et al., 1993). The scale asked participants to indicate the degree of agreement with 42 statements on a 6-point Likert scale. Examples of these statements include, "I don't like situations that are uncertain" (reverse-coded) and "I enjoy having a clear and structured mode of life" (See Appendix Q).

As a concept related to Need for Closure, the 11-item measure Personal Need for Structure (Neuberg & Newsom, 1993) was also used. Participants were asked to indicate, on



a 6-point Likert Scale, their degree of agreement to questions such as, “It upsets me to go into a situation without knowing what I can expect from it” and “I find that a well-ordered life with regular hours makes my life tedious” (reverse-scored) (See Appendix R).

The Religious Fundamentalism Scale (Altemeyer & Hunsberger, 2004) asked participants to indicate the degree to which they agreed or disagreed to twelve statements on a 9-point Likert scale. Although individuals high in RWA, who are more apt to follow authorities than those low in RWA, are also more religious and are more likely to follow religious leaders, this measure of religiosity is distinct from RWA (Altemeyer, 1996; Watson et al., 2003). The scale examines adherence to rather extreme religious beliefs and is free of reference to any particular religion. The scale has been found to have Cronbach’s Alpha reliabilities of .85 to .90. The items include “To lead the best, most meaningful life, one must belong to one, true religion” and “It is more important to be a good person than to believe in God and the right religion” (reverse-coded). (Appendix S)

Additionally, two items from the Liberalism-Conservatism scale (Skitka et al., 2002) were used to overtly measure the political leaning of the participant. The complete scale measures one construct, with the composite score relating to typical attitudes of liberals and conservatives. The questionnaire asked participants to answer, on a 7-point Likert scale, “How liberal or conservative do you tend to be when it comes to social policy?” and “How liberal or conservative do you tend to be when it comes to economic policy?” Appended to the scale is a checklist that asks the participants to note the political party they support (See Appendix T).

Because the social cognition literature has supported a slight memory advantage for inconsistent information because inconsistent information tends to be notable (Rojahn &



Pettigrew, 1992; Stangor & McMillan, 1992), participants were asked to write down as many details about the essay and the writer as they could remember without turning back to the essay passage, for exploratory purposes (See Appendix U).

This second package was completed by a standard demographics sheet and a suspicion check. The demographics sheet asked participants to indicate their age, gender, sexual orientation, and ethnic background (See Appendix V). On the same page as the demographics sheet, a suspicion check inquired as to the participants' suspicion level concerning the manipulation. The suspicion check asked the participants to answer the questions "The main topic of this experiment was:" and "The hypothesis in this experiment was/is about:" in the space provided. The experiment later used a 4-point scale to assign values of "0" if it is evident that the participant did not know the true purpose of the experiment, a "1" if the participant indicated anything related to the true nature of the study, a "2" if the participant was within the topic area of the correct answer, and a "3" if the participants knew the true purpose to the experiment (See Appendix W).

A debriefing statement rounded out the experiment. This includes a written version (See Appendix X) and a verbal component (See Appendix Y).

*Procedure.* Participants were randomly assigned to experimental conditions in a 2 (Stereotype Fit: stereotypical vs. non-stereotypical) x 3 (Threat Condition: MS vs. UNC vs. control) between-groups design. The packages were pre-ordered before the first session began; that is, to ensure that each of the cells contained an equal  $n$ , the six conditions/packages were pre-ordered before the experiment began, although they were blindly and randomly assigned—the packages were arranged on the tables in no particular order and participants were free to choose where to sit. Participants completed the



experiment in groups ranging from one to eight individuals.

The participants entered the room and were asked to sit where there was a package on the table in front of them. When all the participants had arrived and signed the consent form, the experimenter introduced the study to each group verbally as a two-part study on social attitudes and impression formation; this introduction and set of instructions were read from a script. Participants were informed that the first part would be timed; the participants had 5 minutes to complete the first two pages, which included the threat manipulation. After 2 and a half minutes and 4 and a half minutes, participants were informed of the time remaining.

After 5 minutes, participants were asked to turn the page and complete the next three pages in 5 minutes. The first page included the manipulation check, followed by the PANAS-X scale (Watson & Clark, 1991) and the word-stem completion task. As with the previous section, participants were informed of the time remaining at the halfway mark and with 30 seconds left.

Because there was a set time limit, regardless of whether all participants are finished or not finished, participants were asked to turn the first package over after the two timed sections, and placed to the side. Participants were then instructed to begin the second package, complete the second package in order and to not turn back. Participants were also reminded that they would not be timed during completion of the second package.

The participants then completed Package 2 with all the measures in the same order as outlined in the Materials section. Upon completion of the package, participants were asked to turn over their package on their desk, while the experimenter noted their completion time. After all participants were finished, participants were debriefed verbally as a group and via a written sheet. Participants were asked to keep the purpose of the project confidential, thanked



for their time, and dismissed.

### *Design*

As a summary, the study is a 3 (Threat: Mortality Salience vs. Uncertainty vs. Control) x 2 (Stereotype Fit: Stereotypical vs. Non-Stereotypical) x Individual Differences (RWA and SDO) design. The key dependent variables are Target Evaluation (i.e., liking of the homosexual target) and Essay Evaluation (i.e., liking of the homosexual target's essay).



## Results



## Results

### *Overview of Analyses*

The following is an outline of the forthcoming analyses. First, a manipulation check was performed to determine the success of the threat and stereotype congruency manipulation. A factor analysis was then performed to determine the nature of the dependent measures (i.e., Target and Essay Evaluations). This is followed by a check on the main measures, including basic descriptives, reliabilities (i.e., internal consistencies), and correlations between the key variables. Afterwards, analyses of the 3-way interactions follow, proceeded by the supplemental analyses on exploratory measures.

#### *Threat Manipulation Check*

Analysis of the participants' written stories to the salience task (also referred to as "Threat Coding") were assessed by a rater blind to the conditions. A subset of the sample ( $n = 30$ ) was coded by a second rater. A fourth category ("Other") was created, which was used to indicate the extent to which the participant wrote of topics that did not fit into the other three conditions. For each of the three threat conditions (MS, UNC, TV [CTRL]) and the fourth category (Other), the responses were assigned a number from a scale of 0 to 10, with 0 indicating no mention of the topic to 10 indicating a high level of discussion about the topic.

Across the three main categories (MS, UNC, CTRL/TV), an average correlation coefficient of .90 was found across the MS ( $r = .91$ ), UNC ( $r = .80$ ), and CTRL/TV condition ( $r = .99$ ), indicating high agreement between the two coders.<sup>2</sup> Results from one-way Analyses of Variance (ANOVA) from Table 1 shows that, in general, participants in the MS condition wrote about death significantly more than those in the other two conditions,  $F(1,$

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<sup>2</sup> Concerning the "Other" condition, one of the coders scored all participants with a score of "0" whereas the other did not. Therefore, no correlation tests could be conducted with this variable to determine agreement due to lack of variance on this variable.



Table 1.

*Threat Manipulation Check.*

Thoughts	Assigned Written Topic (Manipulation)		
	Mortality Salience	Uncertainty Salience	Control
<i>Death</i>	<b>9.48</b>	.32	.13
<i>Uncertainty</i>	5.48	<b>9.22</b>	.22
<i>Television</i>	.16	.00	<b>9.63</b>

Note: *Note.* Scores ranged from 0 ("did not mention at all") to 10 ("wrote about this topic a lot"). *n* for each Experimental Group = 60.



177) = 1326.02,  $p < .001$ . Likewise, participants in the UNC condition wrote about uncertainty significantly more than participants in the other two conditions,  $F(2, 177) = 200.98$ ,  $p < .001$ . Finally, participants in the CTRL condition wrote about watching television significantly more than participants in the other two conditions,  $F(2, 177) = 2883.41$ ,  $p < .001$ . The Tukey HSD post-hoc test show that each group were rated as writing about their assigned topic more than writing about the other topics ( $ps < .001$  across all three groups), in support of the threat manipulations.

With regards to “Other”, results show that participants in the MS group were given a mean score of 1.90, those in the Uncertainty group were given 1.27 and those in the control group were given a score of 1.87. Results of the  $F$ -test ( $F(1, 178) = .903$ ,  $p > .05$ ) and the Tukey HSD post-hoc test ( $p > .05$ ) indicate that no one group talked about outside topics more than the others.

#### *Stereotype Fit Manipulation Check*

Analysis of the two versions of the essay (stereotypical and non-stereotypical) were performed to determine whether one essay did indeed describe the life of a stereotypical homosexual, and the other described that of a non-stereotypical homosexual. Participants in a pilot coding session were asked to read both versions and indicate how closely both essays described the life of a stereotypical homosexual male. The participants answered by indicating a number between 1 and 10, where “1” signifies the person as not exhibiting stereotypical male homosexual characteristics and “10” signifying that the person clearly exhibited stereotypical male homosexual characteristics. To counter for order effects, participants were given either the stereotypical version first and then the non-stereotypical version, or vice versa. Results show that the Stereotypical Essay garnered a mean score of



8.27 whereas the Non-Stereotypical received a mean score of 2.55. A t-test reveals that these two scores are indeed significantly different,  $t(10) = 17.20, p < .001$ . The manipulation is thus supported, with one essay clearly describing the perceived stereotypicality of Carl, and the other essay describing the perceived non-stereotypicality of the other version of Carl.

### *Factor Analysis of the Dependent Measures*

It was previously conceptualized that two factors would emerge regarding the dependent measure, based on the Harber (1998) measures of liking for the essay (Essay Evaluation) and liking of the target homosexual (Target Evaluation). A factor analysis was performed on the seven items that evaluated the essay (Items 1 to 5) and the target (Items 6 and 7). A Varimax factorial analysis revealed that two factors emerged with Initial Eigenvalues over 1, explaining a total of 62.2% of the variance. The Rotated Component Matrix Table is presented in Table 2.

As expected, two factors were found. Items 1 through 5 (Liking of the Essay) composed one factor, whereas Items 6 and 7 (Liking of the Target) composed another. Heretofore, separate analyses will be conducted using two different dependent measures.

### *Descriptive Statistics*

Table 3 showcases the means and standard deviations of the predictors and dependent variables.

### *Reliabilities and Correlations*

Table 4 presents the Cronbach's Alpha reliabilities of the key measures, as well as the correlations between the variables. RWA was significantly correlated with all other predictors except for the Rosenberg Self-Esteem Scale and the PANAS-X Scale. RWA and SDO were significantly and positively correlated,  $r = .45, p < .001$ , and RWA was



Table 2.

*Factor Analysis Indicating Two Distinct Factors of the Dependent Variables*

	Component	
	1	2
Item 4	<b>.861</b>	.189
Item 3	<b>.834</b>	.077
Item 2	<b>.808</b>	-.038
Item 5	<b>.612</b>	-.004
Item 1	<b>.549</b>	.090
Item 7	.052	<b>.881</b>
Item 6	.081	<b>.869</b>

Note: Principal Component Analysis (Varimax Rotation). Rotation converged in 3 iterations. Items 1 through 5 were hypothesized to measure liking for the Essay. Items 6 and 7 were hypothesized to measure liking for the Target.



Table 3.

*Means and Standard Deviations of Predictors and Dependent Variables*

	<i>Mean</i>	<i>SD</i>
Right-Wing Authoritarianism (-4 to 4)	-1.16	1.26
Social Dominance Orientation (1 to 7)	2.36	0.83
Self-Esteem (1 to 5)	3.80	0.76
Heterosexual Attitude Toward Homosexuals (1 to 9)	3.23	2.13
Need for Closure (1 to 6)	3.77	0.48
Personal Need for Structure (-3 to 3)	0.49	1.10
Religious Fundamentalism (-4 to 4)	-1.02	2.04
Liberal-Conservatism Scale (1 to 7)	3.65	1.29
Positive and Negative Affect Scale (1 to 5)	2.48	0.46
Target Ratings (1 to 9)	5.79	1.84
Essay Ratings (1 to 9)	4.76	1.25

Note: Numbers in parentheses indicates the possible range of the scale of the variable; the Dominating Authoritarianism variable is not included, as the variable is based on z-scores;  $n = 180$



Table 4.

*Intercorrelations and Reliability Scores of Key Variables*

Var.	1	2	3	4	5	6	7	8	9	10	11	12
1. RWA	.93	.45***	.85***	-.02	.76***	.29***	.21**	.74***	.27***	.02	-.31***	-.06
2. SDO		.85	.85***	.02	.39***	.18*	.03	.24**	.05	-.01	-.34***	-.00
3. DA			.93	.00	.68***	.27***	.14	.58***	.19*	.01	-.38***	-.04
4. SE				.88	.06	-.05	-.19*	.03	.02	-.46***	-.13	-.03
5. HATH					.94	.16*	.07	.68***	.25**	-.04	-.46***	-.05
6. NFC						.83	.76***	.18*	.03	-.02	.04	.03
7. PNS							.86	.15*	.03	.13	.07	-.03
8. FUND								.94	.23**	.02	-.20**	-.08
9. Lib-Con									.76	.03	-.09	-.04
10. PANAS-X										.91	-.01	-.08
11. Target											.76	.16*
12. Essay												.71

Note: RWA = Right-wing Authoritarianism; SDO = Social Dominance Orientation; DA = Dominating Authoritarianism; SE = Self-Esteem; HATH = Heterosexual Attitude Toward Homosexuality; NFC = Personal Need for Closure; PNS = Personal Need for Structure; FUND = Religious Fundamentalism; Lib-Con = Liberal-Conservatism Scale; PANAS = Positive and Negative Affect Scale; Target = Evaluation of the Author; Essay = Evaluation of the Essay; \*  $p < .05$  \*\*  $p < .01$  \*\*\*  $p < .001$ ;  $n = 180$



significantly correlated with more of the other predictors than was SDO. SDO was also significantly positively correlated with the Heterosexual Attitudes Toward Homosexuals, Need for Closure, and Religious Fundamentalism Scales, and negatively significantly correlated with Target Evaluation.

Altemeyer (1998) considered "Dominating Authoritarians" as individuals who scored in the upper quartiles of both the RWA and SDO Scales. In order to examine correlations involving Dominating Authoritarianism, the following was performed in the current study: Because statistical power is lost when data is split into quartiles (as performed by Altemeyer), analysis of Dominating Authoritarianism as a continuous variable was used to increase power in the present study. A predictor variable, "DA" was created by standardizing the total scores for each variable (RWA and SDO), then computing a mean score for each participant, where high scores reflect high scores on the Dominating Authoritarianism measure<sup>3</sup>. Because RWA and SDO comprise the Dominating Authoritarianism measure, RWA and SDO was significantly positively correlated with the Dominating Authoritarianism,

Compared to Essay Evaluation, Target Evaluation was correlated with more predictors. In fact, Essay Evaluation did not correlate with any of the predictors. Target Evaluation, on the other hand, significantly correlated with RWA, SDO, Homosexual Attitude Toward Homosexuality, and Religious Fundamentalism.

Dominating Authoritarianism was significantly correlated with all other variables except for Self-Esteem, Personal Need for Structure, the PANAS-X, and Essay Evaluation.

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<sup>3</sup> Comparing Altemeyer's method of determining Dominating Authoritarians to the method used in this paper, an additional 25 (for a total of 46, or 25.5% of the overall sample) participants were considered Dominating Authoritarians were found by the paper's method which would not be considered Dominating Authoritarians using Altemeyer's method.



The Target and Essay Evaluations (i.e., ratings of the homosexual author and the essay itself, respectively) showed a small but significant correlation at .16 with each other, and showed satisfactory reliability scores of .71 and .79, respectively. The Target ratings show more significant correlations with other variables (five) than do the Essay ratings (zero). The reliability scores of the predictors of interest ranged from .76 (Liberalism-Conservatism Scale) to .95 (Religious Fundamentalism), which were also deemed satisfactory.

### *Tests of Hypotheses*

Regressions involving RWA were examined first, followed by analyses involving SDO. Multiple regressions involving both categorical (Stereotype Fit, Threat) and continuous variables (RWA) were performed to determine the significance of any three-way interactions involving the threat manipulation, the stereotype-fit manipulation, and RWA. Likewise, a similar set of multiple regression analyses involving the two categorical variables (Stereotype Fit and Threat) and SDO as a continuous variable were performed to determine the significance of any three-way interactions involving the threat manipulation, the stereotype-fit manipulation, and SDO. As recommended by Aiken and West (1991), each of the continuous (individual difference) variables were centered before performing the regressions. A total score of the continuous variable, where all the means of all the individual items on the scale, was calculated. The grand mean of these total scores for the entire sample was then calculated. Afterward, to create a centered variable, this grand mean was subtracted from the total score for each participant, achieving a new mean score of zero for the new centered variable. In accordance with Gardner and Esses (2002), the categorical variables (Threat and Stereotype) were effect coded. Two threat vectors were created for the three threat



conditions, and one stereotype-fit vector was created for the two stereotype-fit conditions; the three categories in the threat manipulation (MS, UNC, and CTRL) were assigned 1, 0, and -1 and the two stereotype conditions (stereotypical and non-stereotypical) were assigned 1 and -1. The interaction terms were computed as product terms of the independent variables.

The main effects and product terms were then entered in SPSS [Student Version] Version 13 and run through a multiple regression syntax, with RWA, Threat, Stereotype Fit, and the two- and three-way interactions entered simultaneously in one analysis, and SDO, Threat, Stereotype Fit, and the two- and three-way interactions entered simultaneously in another, similar analysis. To calculate the variance contributed (the  $R^2$ ) by each main effect and each interaction term, the following process was performed: A total  $R^2$  for the DV (either Target Evaluation or Essay Evaluation), which included all the main effects and interactions entered simultaneously, was calculated. Afterwards, the main effect or interaction of interest was removed from the other regression equations generated to achieve an  $R^2$  score without that main effect or interaction of interest. This  $R^2$  value was then subtracted from the total  $R^2$  score to determine the amount of unique variance this main effect or interaction contributed. The effects for all main and interaction effects were examined for both the target and essay evaluations in separate analyses.

The  $R^2$  of each main effect and interaction was then used to compute the  $F$  score (value) for each effect, which was calculated by taking the quotient of the  $R^2$  of the main effect or interaction by the number of vectors of that same main effect or interaction (the numerator) and dividing that by the total degrees of freedom (the denominator). For example, in the case of the main effect of the individual difference variables and the stereotype-fit manipulation, the number of vectors is 1. Because there are three levels of the threat variable



(mortality salience, uncertainty salience, and the control group), the number of vectors of the main effect of salience and each interaction which involves the threat manipulation (i.e.,  $RWA \times$  Salience,  $Salience \times$  Stereotype,  $RWA \times$  Salience  $\times$  Stereotype) is two, as opposed to one, vector. The total degrees of freedom was calculated by subtracting 1 and the total degrees of freedom from number of participants in the sample,  $n$ .

The  $p$ -value was calculated by utilizing the online tool developed by Dr. Allen Chang of the Department of Obstetrics and Gynaecology at the University of Hong Kong ([http://department.obg.cuhk.edu.hk/researchsupport/F\\_Test.asp](http://department.obg.cuhk.edu.hk/researchsupport/F_Test.asp)).<sup>4</sup>

The results of the regressions for each of the key predictors are shown in Table 5 (for RWA) and Table 7 (for SDO). The regressions are created for the measures of liking the target and the essay.

The process performed for these analyses is expanded upon, with all formulas, in Appendix Z.

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<sup>4</sup> To test the viability of the online tool, results from an  $F$  Values table found in Cohen, Cohen, West, and Aiken's (2003, p. 648) statistics textbook were compared to  $F$  value calculations based on the online tool. The table shows that with a numerator of 1 and a denominator of 150, an  $F$  value of 3.90 is required to achieve statistical significance at the .05 level. Inputting these same numbers (numerator, denominator,  $F$  value) into the online tool yields a significance score of .0501. Further tests (eg., using 13, 1000, and 1.73 as the numerator, denominator, and  $F$  value, respectively) yield the same outcomes across both platforms. Therefore, use of the online tool was deemed satisfactory, as results were comparable to those found in Cohen et al. (2003).



Table 5.

*Summary of the Right-Wing Authoritarianism x Threat (Mortality Salience vs. Uncertainty Salience vs. Control) x Stereotype Fit (Stereotypical vs. Non-Stereotypical) Interaction Pattern (DVs: Target and Essay Evaluations)*

	<i>F</i>	<i>df</i>	<i>p</i>
<b>DV: Target Evaluation</b>			
<i>RWA</i>	14.44	1, 169	<b>&lt;.001</b>
<i>Threat</i>	1.80	2, 169	0.169
<i>Stereotype-Fit</i>	1.47	1, 169	0.226
<i>RWA x Threat</i>	0.71	2, 169	0.495
<i>RWA x Stereotype Fit</i>	0.28	1, 169	0.594
<i>Threat x Stereotype-Fit</i>	1.36	2, 169	0.260
<i>RWA x Threat x Stereotype-Fit</i>	9.54	2, 169	<b>&lt;.001</b>
<b>DV: Essay Evaluation</b>			
<i>RWA</i>	0.13	1, 169	0.719
<i>Threat</i>	0.15	2, 169	0.861
<i>Stereotype-Fit</i>	0.17	1, 169	0.681
<i>RWA x Threat</i>	1.50	2, 169	0.226
<i>RWA x Stereotype Fit</i>	0.72	1, 169	0.397
<i>Threat x Stereotype-Fit</i>	0.06	2, 169	0.942
<i>RWA x Threat x Stereotype-Fit</i>	1.72	2, 169	0.182

Note: RWA = Right-Wing Authoritarianism; Numbers in boldface type represent significant effects. *n* = 180



### *Principal Analyses: Right-Wing Authoritarianism*

#### *Regression analyses testing 3-way interaction pattern*

Results from Table 5 show that there is a significant main effect for RWA on the Target Evaluation ratings. In addition to the significant negative correlation between RWA and Target Evaluation found in Table 4 ( $r = -.31, p < .001$ ), the data suggests that increases in RWA is associated with decreased liking of the homosexual Target. There is also a significant three-way interaction for the Target Evaluation, as predicted ( $p < .001$ ). No other main effects or interactions for the Target Evaluation were significant. No main effects or interactions for the Essay Evaluation were significant.<sup>5</sup>

The three-way interaction are next de-constructed to examine the relations between RWA and the two sets of dependent variables (the Target and Essay evaluations) within each of the six possible Threat by Stereotype-Fit experimental cells (Stereotypical-MS, Stereotypical-UNC, Stereotypical-CTRL, Non-Stereotypical-MS, Non-Stereotypical-UNC, Non-Stereotypical-CTRL) in order to test the hypotheses.

#### *Within-Cell Correlations*

The results of these Within-Cell Correlations regarding RWA as a predictor are presented in Table 6. The table demonstrates that RWA was a significant predictor of liking of the homosexual target in the Stereotypical-UNC, Non-Stereotypical-MS, and Non-Stereotypical-CTRL cells.

In other words, increases in RWA are associated with decreased liking of the homosexual target who acted like the stereotypical male homosexual—in keeping with most

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<sup>5</sup> Two items on the RWA scale referred to homosexuals specifically, which may lead to these items unduly influencing the overall RWA measure in this context. The RWA Scale and the new RWA Scale with the items removed correlated .995 ( $p < .001$ ). Regression analyses performed using this new RWA scale did not significantly change significance results. Therefore, all analyses involving the RWA Scale involved using the complete version.



Table 6.

*Within-Cell Correlations between Right-Wing Authoritarianism and the Dependent Variables*

	<i>r</i>	<i>p</i>
<b>DV: Target Evaluation</b>		
Stereotypical		
Mortality Salient	-.05	.809
Uncertainty Salient	<b>-.70</b>	<b>.000</b>
Control	-.21	.267
Non-Stereotypical		
Mortality Salient	<b>-.49</b>	<b>.006</b>
Uncertainty Salient	.29	.119
Control	<b>-.49</b>	<b>.006</b>
<b>DV: Essay Evaluation</b>		
Stereotypical		
Mortality Salient	.24	.210
Uncertainty Salient	<b>-.36</b>	<b>.048</b>
Control	.13	.481
Non-Stereotypical		
Mortality Salient	-.27	.149
Uncertainty Salient	-.09	.635
Control	.02	.911

Note: RWA = Right-Wing Authoritarianism;  $n = 180$ ; Numbers in boldface type represent significant effects.  $n$  per cell = 30



accounts of individuals high in RWA—when under the threat of uncertainty,  $r = -.70$ ,  $p < .001$ , but not under the other two experimental threat conditions (mortality salience and the control group). Additionally, the data shows that increases in RWA are also associated with decreased liking of the atypical homosexual target when participants were under the threat of death,  $r = -.49$ ,  $p = .006$ , or were in the control group,  $r = -.49$ ,  $p = .006$ , but not under the threat of uncertainty.

The results also demonstrate that RWA was a significant predictor of the target's essay, yet only in the Stereotypical-UNC cell,  $r = -.36$ ,  $p = .048$ . Thus, concerning the measure of liking of the essay itself, increases in RWA are associated with decreases in liking of the stereotypical homosexual target's essay when under the threat of uncertainty. This particular finding is in keeping with the evaluation of the Target, wherein RWA was a significant predictor of liking of the stereotypical target when participants are under the threat of uncertainty.

### *Summary*

The results of the Within-Cell correlations suggest that in the *uncertain* threat condition, increases in RWA were associated with decreased liking of the *stereotypical* target and the *stereotypical* target's essay. This is entirely in keeping with the research in RWA, suggesting that individuals high in RWA dislike both ambiguity/uncertainty and homosexuals. Uncertain situations are, by definition, highly ambiguous, in that one is in a situation where the circumstances are unknown. Although in general, people prefer certainty to uncertainty (Sorrentino & Roney, 1990), some individuals—particularly high RWA individuals—greatly prefer certainty and the familiar and greatly dislike uncertainty (Altemeyer, 1996). Therefore, placing them in highly uncertain situations is uncomfortable



and threatening, heightening their dislike homosexuals, a much disliked group.

In the *mortality salience* condition, however, increases in RWA were associated with decreased liking of the *non-stereotypical* homosexual target, in keeping with Schimel et al. (1999)'s findings that individuals dislike a non-stereotypical target when in a MS condition. In the present study, participants higher in RWA exhibited less liking of the non-stereotypic (i.e., expectancy incongruent) homosexual particularly when thoughts of death were salient.



### *Principal Analyses: Social Dominance Orientation*

#### *Regression analyses testing 3-way interaction pattern*

As seen in Table 7, SDO is a significant predictor of liking for the homosexual target. In keeping with the significant negative correlation between SDO and Target Evaluation from Table 4 ( $r = -.34, p < .001$ ), the results suggest that, like RWA, increases in SDO are associated with decreased liking of the homosexual Target. A significant three-way interaction was found for Target Evaluation,  $p = .003$ , as well as a marginally-significant three-way interaction Essay Evaluation,  $p = .092$ . Outside of a marginal two interaction of Stereotype Fit and Threat with regards to Target Evaluation ( $p = .066$ ), no other main effects or interactions for the Target and Essay Evaluations were significant.

#### *Within-Cell Correlations*

The results of the de-construction of the three-way interactions involving SDO are found in Table 8. The results indicate that SDO was a significant predictor of liking of the target in the Stereotypical-UNC and Non-Stereotypical-MS cells; these are two of the three cells in which RWA was found to be a significant predictor.

Essentially, increases in SDO are associated with decreased liking of the stereotypical homosexual target when under the threat of uncertainty, but not in the other two experimental threat conditions (death and the control condition). The data also show that increases in SDO are associated in particular with decreased liking of the atypical homosexual target when participants were under the threat of death ( $r = -.80, p < .001$ ), but not in the other experimental threat two conditions.

The results also show SDO was a marginally significant predictor in liking of the



Table 7.

*Summary of the Social Dominance Orientation x Threat (Mortality Salience, Uncertainty Salience, Control) x Stereotype Fit (Stereotypical, Non-Stereotypical) Interaction Pattern (DVs: Target and Essay Evaluations)*

	<i>F</i>	<i>df</i>	<i>p</i>
<b>DV: Target</b>			
<i>SDO</i>	12.85	1, 169	<b>&lt;.001</b>
<i>Threat</i>	2.04	2, 169	0.133
<i>Stereotype-Fit</i>	0.67	1, 169	0.414
<i>SDO x Threat</i>	1.89	2, 169	0.154
<i>SDO x Stereotype-Fit</i>	0.45	1, 169	0.503
<i>Threat x Stereotype-Fit</i>	2.76	2, 169	0.066
<i>SDO x Threat x Stereotype-Fit</i>	6.02	2, 169	<b>0.003</b>
<b>DV: Essay</b>			
<i>SDO</i>	0.19	1, 169	0.663
<i>Threat</i>	0.46	2, 169	0.632
<i>Stereotype-Fit</i>	0.47	1, 169	0.494
<i>SDO x Threat</i>	0.19	2, 169	0.827
<i>SDO x Stereotype-Fit</i>	0.32	1, 169	0.572
<i>Threat x Stereotype-Fit</i>	0.14	2, 169	0.870
<i>SDO x Threat x Stereotype-Fit</i>	2.42	2, 169	0.092

Note: SDO = Social Dominance Orientation; Numbers in boldface type represent significant effects. *n* = 180



Table 8.

*Within-Cell Correlations between Social Dominance Orientation and the Dependent Variables*

	<i>r</i>	<i>p</i>
<b>DV: Target Evaluation</b>		
Stereotypical		
Mortality Salient	-.18	.334
Uncertainty Salient	<b>-.55</b>	<b>.002</b>
Control	-.27	.154
Non-Stereotypical		
Mortality Salient	<b>-.80</b>	<b>.000</b>
Uncertainty Salient	-.16	.391
Control	-.08	.687
<b>DV: Essay Evaluation</b>		
Stereotypical		
Mortality Salient	.17	.374
Uncertainty Salient	-.25	.180
Control	-.03	.879
Non-Stereotypical		
Mortality Salient	-.36	.054
Uncertainty Salient	.17	.363
Control	.34	.065

Note: SDO = Social Dominance Orientation; MS = Mortality Salience; UNC = Uncertainty Salience; CTRL = Control Group; n = 180; Numbers in boldface type represent significant effects; n per cell = 30



essay in the Non-Stereotypical-MS condition, such that SDO is negatively correlated with liking of the essay. Conversely, SDO was a marginally significant predictor of liking of the essay in the Non-Stereotypical-Control conditions, with SDO being positively correlated with liking of the essay. The difference between the correlations is significantly different ( $z = 2.69, p < .01$ ). In other words, SDO was marginally significant in predicting liking of the non-stereotypical homosexual target's essay when participants were under the threat of death (a negative relation) or were in the control condition (a positive relation), but not when participants were under the threat of uncertainty.

### *Summary*

Like RWA, the results suggest that in the *uncertain* threat condition, increases in SDO were associated with decreased liking of the *stereotypical* target. Similarly to the findings regarding RWA as well, under the *mortality salience* condition, increases in SDO were associated with decreased liking of the *non-stereotypical* homosexual target. Unlike RWA, which is a significant predictor of liking of the stereotypical target's essay when under the threat of uncertainty, SDO was a predictor of liking of the non-stereotypical homosexual target's essay under the mortality salient and control conditions, although these results were only marginally significant.



*Principal Analyses: Summary*

The results of the within-cell correlations suggest that RWA and SDO are indeed theoretically distinct from each other, as they predict liking of both the target and essay in different situations: RWA was a significant predictor of liking of the target in the Non-Stereotypical-Control cell and liking of the essay in the Stereotypical-UNC cell, whereas SDO was not. Conversely, SDO was a marginally significant predictor of liking of the essay in the Non-Stereotypical-MS and Non-Stereotypical-Control cells, whereas RWA is not.

However, RWA and SDO were both significant predictors of liking in two cells in particular. *For the liking of the target, RWA and SDO were both significant predictors in the Stereotypical-UNC and Non-Stereotypical-MS cells.* The next analyses performed were intended to examine the unique influence of each predictor in these two cells in particular, with each individual difference variable statistically controlling for the other. Thus, within these two key experimental cells, SDO and RWA were entered simultaneously to predict the two key dependent variables. Results are shown in Table 9.



Table 9.

*Summary of the Unique Effects of RWA and SDO in the Various Situations*

	$\beta$	$t$	$p$
<b>DV: Target Evaluation</b>			
<i>Non-Stereotypical-MS</i>			
RWA	0.05	0.35	0.733
SDO	<b>-0.83</b>	<b>-5.47</b>	<b>&lt;.001</b>
<i>Stereotypical-UNC</i>			
RWA	<b>-0.59</b>	<b>-3.45</b>	<b>0.002</b>
SDO	-0.18	-1.02	0.319

Note: RWA = Right-Wing Authoritarianism; SDO = Social Dominance Orientation; MS = Mortality Salience; UNC = Uncertainty Salience; Numbers in boldface type represent significant effects



*The Unique Effects of Right-Wing Authoritarianism and Social Dominance Orientation*

Table 9 illustrates that in the *Non-Stereotypical-MS* condition, SDO is a unique predictor of liking of the homosexual target,  $\beta = -0.83, p < .001$ , and RWA is not,  $\beta = 0.05, p = 0.733$ . That is, when reminded of one's own mortality, decreased liking of the non-stereotypical homosexual (one who proclaims that he is a homosexual but does not act like the stereotypical homosexual) was uniquely predicted by increases in an individual's level of SDO, but not RWA,  $\beta = -.083, p < .001$ .

On the other hand, the data presented in the lower panel of Table 9 also suggest that in the *Stereotypical-UNC* condition, RWA is a unique predictor,  $\beta = -0.59, p = .002$ , and SDO is not,  $\beta = -0.18, p = 0.319$ . That is, when uncertainty was made salient, decreased liking of the stereotypical homosexual (the individual who announces that he is homosexual and acts in a stereotypical manner) was uniquely predicted by increasing levels of RWA, not SDO. Previous research (Altemeyer, 1998) has suggested that although RWA and SDO may be related they are also distinct measures. The results of these analyses further support this finding, as RWA and SDO uniquely predict in different threat and stereotype-congruent conditions in ways that are consistent with past theorizing suggesting that those high in RWA are particularly concerned with threats of ambiguity/uncertainty and (prototypical) homosexuals (Altemeyer, 1988, 1996) and that SDOs may be particularly threatened by realistic, tangible threats (Esses, Dovidio, Jackson, & Armstrong, 2001; Esses et al., 2003; Sibley & Liu, 2004) and with non-stereotypical homosexuals.

*Other Cells where Significant Correlations between Target, Essay Evaluations and RWA, SDO are found*

The unique effects of RWA and SDO were examined in two key cells (Non-



Stereotypical-MS and Stereotypical-UNC, both for Target Evaluation) to determine whether RWA or SDO was a better predictor of liking of the target in these two cells (Table 9). Those two cells were selected because they were the only two cells in which RWA and SDO significantly correlated to liking of the Target or the Essay, as shown in Tables 6 (RWA) and 8 (SDO).

However, Tables 6 and 8 also showed that RWA and SDO were significant or marginal predictors in four other cells: RWA was significantly negatively correlated to liking of the target in the Non-Stereotypical-Control condition and significantly negatively correlated to liking of the essay in the Stereotypical-UNC condition (Table 6). SDO was marginally significantly correlated to liking of the essay in the Non-Stereotypical-MS and Non-Stereotypical-Control conditions (Table 8). Similar to the analyses of the two key cells shown in Table 9, analyses were performed within these four cells to determine whether RWA or SDO was a better predictor than the other in each cell. The results are shown in Table 10.

Analyses involving the Target Evaluation showed that RWA is a marginally significant main effect in the Non-Stereotypical-Control condition,  $\beta = .322, p = 0.089$ . This was unsurprising, as only RWA was a significant predictor in this cell. Similarly, analyses involving Essay Evaluation as the dependent variable showed marginally significant positive correlation between SDO and liking of the essay in the Non-Stereotypical-Control cell, with SDO being positively correlated with Essay Evaluation ( $\beta = 0.40, p = 0.051$ ), whereas RWA was not significant. Again, this is also unsurprising, as Within-Cell Correlations (from Table 8) revealed that only SDO was significant.

None of the other two cells (UNC-Stereotypical, MS-Non-Stereotypical) suggested



Table 10.

*Summary of the Unique Effects of Right-Wing Authoritarianism and Social Dominance Orientation in the Non-Critical Cells*

	$\beta$	$t$	$P$
<b>DV: Target Evaluation</b>			
<i>Non-Stereotypical-CTRL</i>			
RWA	.32	1.77	0.089
SDO	-.21	-1.16	0.258
<b>DV: Essay Evaluation</b>			
<i>Non-Stereotypical-MS</i>			
RWA	-0.07	-0.28	.783
SDO	-0.31	-1.32	.200
<i>Stereotypical-UNC</i>			
RWA	-.34	-1.48	.152
SDO	-.04	-.170	.866
<i>Non-Stereotypical-CTRL</i>			
RWA	-1.48	-0.75	.459
SDO	0.40	2.05	.051

Note: RWA = Right-Wing Authoritarianism; SDO = Social Dominance Orientation; MS = Mortality Salience; UNC = Uncertainty Salience; CTRL = Control/TV; Numbers in boldface type represent marginal significant effects ( $p < .10$ ).



unique effects of either SDO and RWA. Because these cells did not show significant correlations with both RWA and SDO, the unique effects of these two predictor variables were not examined in the main analyses.



*Principal Analyses: The “Dominating Authoritarians”*

*Regression analyses testing 3-way interaction pattern*

The previous analyses examined the differences between the RWA and SDO constructs. The proceeding set of analyses will now examine the combined predictive power of RWA and SDO by investigating the analysis involving the Dominating Authoritarians.

As examined previously, Altemeyer (2004) labelled individuals who scored in the upper quartiles of both the RWA and SDO Scales as the “Double-Highs” or “Dominating Authoritarians”. Compared to individuals who score high on only the RWA or SDO Scale, Altemeyer considered Dominating Authoritarians to be the most prejudiced group, accounting for 5 – 10% of his respondents. Of the 180 participants in the current study, 21 (11.67%) are dominating authoritarians, as defined by Altemeyer (2004).

The current study also examines the Dominating Authoritarians by performing regression analyses and Within-Cell correlations similar to that of the two key predictor variables, RWA and SDO. Results of the multiple regression analysis involving Dominating Authoritarianism are exhibited in Table 11. A significant main effect for Dominating Authoritarianism ( $p < .001$ ), along with a significant three-way interaction involving Dominating Authoritarianism, Stereotype Fit and Threat ( $p < .001$ ) were found on the Target Evaluation ratings. A significant three-way interaction was also found on the Essay



Table 11.

*Summary of the Dominating Authoritarian Measure x Threat (Mortality Salience, Uncertainty Salience, Control) x Stereotype Fit (Stereotypical, Non-Stereotypical) Interaction Pattern (DVs: Target and Essay Evaluations)*

	<i>F</i>	<i>df</i>	<i>p</i>
<b>DV: Target Evaluation</b>			
<i>DA</i>	<b>22.29</b>	1, 169	<b>&lt;.001</b>
<i>Threat</i>	2.42	2, 169	0.092
<i>Stereotype Fit</i>	1.18	1, 169	0.279
<i>DA x Threat</i>	0.27	2, 169	0.760
<i>DA x Stereotype Fit</i>	0.28	1, 169	0.757
<i>Threat x Stereotype Fit</i>	2.12	2, 169	0.122
<i>DA x Threat x Stereotype Fit</i>	<b>11.55</b>	2, 169	<b>&lt;.001</b>
<b>DV: Essay Evaluation</b>			
<i>DA</i>	0.14	1, 169	0.711
<i>Threat</i>	0.12	2, 169	0.885
<i>Stereotype Fit</i>	0.29	1, 169	0.589
<i>DA x Threat</i>	0.83	2, 169	0.438
<i>DA x Stereotype Fit</i>	0.00	1, 169	0.949
<i>Threat x Stereotype Fit</i>	0.02	2, 169	0.977
<i>DA x Threat x Stereotype Fit</i>	<b>3.10</b>	2, 169	<b>0.048</b>

Note: DA = Dominating Authoritarians; Numbers in boldface type represent significant effects; *n* = 169



Evaluation ratings ( $p < .05$ ), however, indicating that the Dominating Authoritarianism variable not only acts similarly to RWA and SDO, but in fact showed better predictive power in that a significant three-way interaction for Essay Evaluation was found.

Results of the Within-Cell Correlations for the Dominating Authoritarian variable are shown in Table 12. Because the Dominating Authoritarianism measure is comprised of RWA and SDO, it is not surprising that the measure is a very strong significant predictor of liking of the target homosexual in the Stereotypical-UNC ( $r = -.69, p < .001$ ) and Non-Stereotypical-MS ( $r = -.71, p < .001$ ) situations (such that Dominating Authoritarianism is negatively correlated with liking of the target in these two cells)—the same two situations where RWA and SDO are similarly particularly strong predictors. However, the same table shows that the measure is also a marginally significant predictor of liking of the essay in these same two cells such that Dominating Authoritarianism is marginally significantly negatively correlated with liking of the essay (Stereotypical-UNC:  $r = -.34, p = 0.062$ ; Non-Stereotypical-MS:  $r = -.35, p = 0.062$ ). The Dominating Authoritarian variable thus not only acted similarly to both the RWA and SDO variables, but in fact seemed to further clarify the strong predictive power of the two variables for prejudice against homosexuals, particularly because the variable is significant in the same cells as RWA and SDO for the Target Evaluation, as well as mirroring these results for the Essay Evaluation.

As previously mentioned, Altemeyer (2004) also found that Dominating Authoritarians were more religious than those high in SDO, yet less so than those high in RWA. Correlational data from the current study supports this notion, as RWA is most highly correlated to the Religious Fundamentalism Scale ( $r = .74, p < .001$ ), followed by the Dominating Authoritarianism variable ( $r = .58, p < .001$ ) and SDO ( $r = .24, p < .01$ ). With



Table 12.

*Within-Cell Correlations between the Dominating Authoritarians Measure and the Dependent Variables*

	<i>r</i>	<i>p</i>
<b>DV: Target Evaluation</b>		
Stereotypical		
Mortality Salient	-.13	0.483
Uncertainty Salient	<b>-.69</b>	<b>&lt;.001</b>
Control	-.31	0.091
Non-Stereotypical		
Mortality Salient	<b>-.71</b>	<b>&lt;.001</b>
Uncertainty Salient	.06	0.743
Control	-.35	0.060
<b>DV: Essay Evaluation</b>		
Stereotypical		
Mortality Salient	.24	0.201
Uncertainty Salient	-.34	0.065
Control	.07	0.706
Non-Stereotypical		
Mortality Salient	-.35	0.062
Uncertainty Salient	.07	0.727
Control	.21	0.270

Note:  $n = 180$ ; Numbers in boldface type represent significant effects;  $n$  per cell = 30



regards to attitudes toward homosexuals, Dominating Authoritarianism is significantly positively correlated with the Heterosexual Attitudes Toward Homosexuals Scale,  $r = .68, p < .001$ . In comparison, RWA is again more highly correlated with the Heterosexual Attitudes Toward Homosexuals Scale,  $r = .76, p < .001$ , and SDO correlates the lowest ( $r = .39, p < .001$ ).

To determine whether Dominating Authoritarians are, in fact, the most prejudiced group against the target homosexual, as Altemeyer (2004) states, the correlations between SDO, and Dominating Authoritarianism with the Target Evaluation were compared within the two cells of interest (Stereotypical-UNC and Non-Stereotypical-MS). In the Stereotypical-UNC cell, in which RWA was found to be a better predictor of prejudice compared to SDO (see Table 9), RWA is a similarly strong predictor of liking of the target ( $r = -.70, p < .001$ ) than the Dominating Authoritarianism measure ( $r = -.69, p < .000$ ). Similarly, in the Non-Stereotypical-MS cell, in which SDO was found to be a better predictor of prejudice compared to RWA (see Table 9), SDO remains a slightly stronger predictor of liking of the target ( $r = -.80, p < .001$ ) than the Dominating Authoritarianism measure ( $r = -.71, p < .000$ ).



### *Supplemental Analyses*

#### *The Heterosexual Attitudes Toward Homosexuals Scale*

Results of the multiple regression analysis involving the Heterosexual Attitude Toward Homosexuality Scale as an independent variable are shown in Table 13. A significant main effect for the Heterosexual Attitude Toward Homosexuality Scale ( $F(1, 169) = 27.86, p < .001$ ) and a significant three-way interaction ( $F(2, 169) = 4.02, p = .05$ ) were found on the Target Evaluation ratings. No main effects or interactions for the Heterosexual Attitude Toward Homosexuality Scale were significant on the Essay evaluation ratings. The significant three-way interaction involving the Target Evaluation will now be explored.

Results of the Within-Cell correlations analyses are shown in Table 14. The pattern of results concerning the liking of the target shows that the Homosexual Attitude Toward Homosexuality Scale is significantly negatively correlated to liking of the target individual in the same two situations as RWA and SDO predict: the Stereotypical-UNC and Non-Stereotypical-MS conditions. Additionally, the Homosexual Attitude Toward Homosexuality Scale is also significantly negatively correlated to liking of both the stereotypical and non-stereotypical homosexual when participants are in the control condition, as one may expect. Furthermore, the Heterosexual Attitudes Toward Homosexuals Scale is significantly negatively correlated to liking of the *essay* in the Stereotypical-UNC condition,  $r = -.36, p = 0.052$ .

#### *The Heterosexual Attitudes Toward Homosexuals Scale as a Covariate*

Partial correlations were subsequently performed on the two cells in which RWA and SDO were both significant predictors of liking of the target (Non-Stereotypical-MS and



Table 13.

*Summary of the Heterosexual Attitudes Toward Homosexuals x Threat (Mortality Salience, Uncertainty Salience, Control) x Stereotype Fit (Stereotypical, Non-Stereotypical) Interaction Pattern (DVs: Target and Essay Evaluations)*

	<i>F</i>	<i>df</i>	<i>p</i>
<b>DV: Target</b>			
<b>Evaluation</b>			
<i>HATH</i>	27.86	1, 169	<b>&lt;.001</b>
<i>Threat</i>	1.46	2, 169	0.229
<i>Stereotype-Fit</i>	1.12	1, 169	0.292
<i>HATH x Threat</i>	0.36	2, 169	0.700
<i>HATH x Stereotype Fit</i>	0.12	1, 169	0.736
<i>Threat x Stereotype-Fit</i>	1.37	2, 169	0.256
<i>HATH x Threat x Stereotype-Fit</i>	4.02	2, 169	<b>0.020</b>
<b>DV: Essay</b>			
<b>Evaluation</b>			
<i>HATH</i>	0.05	1, 169	0.817
<i>Threat</i>	0.44	2, 169	0.644
<i>Stereotype-Fit</i>	0.11	1, 169	0.743
<i>HATH x Threat</i>	2.65	2, 169	0.073
<i>HATH x Stereotype Fit</i>	0.12	1, 169	0.727
<i>Threat x Stereotype-Fit</i>	0.03	2, 169	0.967
<i>HATH x Threat x Stereotype-Fit</i>	2.99	2, 169	<b>0.050</b>

Note: HATH = Heterosexual Attitudes Toward Homosexuality Scale; Numbers in boldface type represent significant effects; *n* = 180



Table 14.

*Within-Cell Correlations between the Heterosexual Attitudes Toward Homosexuals Scale and the Dependent Variables*

	<i>r</i>	<i>p</i>
<b>DV: Target Evaluation</b>		
Stereotypical		
Mortality Salient	-.14	0.460
Uncertainty Salient	<b>-.65</b>	<b>&lt;.001</b>
Control	<b>-.41</b>	<b>0.024</b>
Non-Stereotypical		
Mortality Salient	<b>-.65</b>	<b>&lt;.001</b>
Uncertainty Salient	-.28	0.139
Control	<b>-.59</b>	<b>0.001</b>
<b>DV: Essay Evaluation</b>		
Stereotypical		
Mortality Salient	.26	0.211
Uncertainty Salient	<b>-.47</b>	<b>0.009</b>
Control	.16	0.399
Non-Stereotypical		
Mortality Salient	-.36	0.052
Uncertainty Salient	-.05	0.795
Control	.21	0.262

Note:  $n = 180$ ; Numbers in boldface type represent significant effects;  $n$  per cell = 30



Stereotypical-UNC), as found in Table 9. This test, which covaried the effects of the Heterosexual Attitudes Toward Homosexual Scale by Hierarchical Regression, was performed to determine whether RWA and SDO were still significant predictors of attitudes toward the homosexual target when the participants' attitude toward homosexuals were considered (i.e., covaried). Step 1 reveals that Heterosexual Attitudes Toward Homosexuals Scale was a significant predictor of liking of the Target in both the Non-Stereotypical ( $F(1, 28) = 20.66, p < .001$ ) and Stereotypical-UNC cells ( $F(1, 28) = 20.53, p < .001$ ).

Analyses indicate that, as expected, SDO remains a significant predictor of (and is negatively correlated with) attitudes toward the homosexual target in the Non-Stereotypical-MS cell,  $\beta = -.65, t(27) = -4.59, p < .001$ . Similarly, RWA remains a significant predictor of (and is negatively correlated with) attitudes toward the homosexual target in the Stereotypical-UNC cell,  $\beta = -.52, t(27) = -2.19, p < .05$ . Therefore, SDO and RWA remain significant predictors of liking of the target in the cells in which they strongly predict liking of the target (the Non-Stereotypical-MS cell for SDO and the Stereotypical-UNC cell for RWA). This suggests a strength in both individual difference measures, as the results indicate that even when attitudes toward homosexuals are considered, those high in RWA and those high in SDO still dislike the homosexual target in the predicted conditions.

#### *The Religious Fundamentalism Scale*

Results of the multiple regression analysis involving the Religious Fundamentalism Scale are shown in Table 15. A significant three-way interaction ( $F(2, 169) = 6.04, p = .003$ ) was found on the Target Evaluation ratings. No other main effects or interactions were found to be significant on both the Target and Essay Evaluation ratings.

Results of the Within-cell correlations analyses are shown in Table 16. The pattern of



Table 15.

*Summary of the Religious Fundamentalism x Threat (Mortality Salience, Uncertainty Salience, Control) x Stereotype Fit (Stereotypical, Non-Stereotypical) Interaction Pattern (DVs: Target and Essay Evaluations)*

	<i>F</i>	<i>df</i>	<i>p</i>
<b>DV: Target Evaluation</b>			
<i>FUND</i>	2.45	1, 169	0.120
<i>Threat</i>	1.12	2, 169	0.328
<i>Stereotype-Fit</i>	0.83	1, 169	0.363
<i>FUND x Threat</i>	0.05	2, 169	0.954
<i>FUND x Stereotype Fit</i>	0.91	1, 169	0.342
<i>Threat x Stereotype-Fit</i>	1.23	2, 169	0.295
<i>FUND x Threat x Stereotype-Fit</i>	<b>6.04</b>	2, 169	<b>0.003</b>
<b>DV: Essay Evaluation</b>			
<i>FUND</i>	1.59	1, 169	0.209
<i>Threat</i>	0.67	2, 169	0.514
<i>Stereotype-Fit</i>	0.21	1, 169	0.647
<i>FUND x Threat</i>	0.43	2, 169	0.653
<i>FUND x Stereotype Fit</i>	0.72	1, 169	0.398
<i>Threat x Stereotype-Fit</i>	0.23	2, 169	0.792
<i>FUND x Threat x Stereotype-Fit</i>	1.36	2, 169	0.259

Note: FUND = Religious Fundamentalism Scale; Numbers in boldface type represent significant effects; *n* = 180



Table 16.

*Within-Cell Correlations between the Religious Fundamentalism Scale and the Dependent Variables*

	<i>r</i>	<i>p</i>
<b>DV: Target Evaluation</b>		
Stereotypical		
Mortality Salient	.07	0.702
Uncertainty Salient	<b>-.54</b>	<b>0.002</b>
Control	-.23	0.217
Non-Stereotypical		
Mortality Salient	<b>-.35</b>	<b>0.062</b>
Uncertainty Salient	.23	0.225
Control	-.22	0.235
<b>DV: Essay Evaluation</b>		
Stereotypical		
Mortality Salient	.03	0.889
Uncertainty Salient	<b>-.42</b>	<b>0.022</b>
Control	-.00	0.984
Non-Stereotypical		
Mortality Salient	-.21	0.276
Uncertainty Salient	-.09	0.647
Control	.02	0.905

Note:  $n = 180$ ; Numbers in boldface type represent significant effects;  $n$  per cell = 30



results concerning the liking of the target shows that the Religious Fundamentalism Scale is significantly negatively correlated to liking of the target individual in the same two situations as RWA and SDO were significantly correlated: the Stereotypical-UNC and Non-Stereotypical-MS conditions. Additionally, Religious Fundamentalism is also significantly negatively correlated to liking of the essay in the Non-Stereotypical-MS cell. In no other cells did Religious Fundamentalism correlate significantly with liking of the Target or Essay.

In summary, results of the Within-Cell correlations show that Religious Fundamentalism was significantly negatively correlated in the Stereotypical-UNC and Non-Stereotypical-MS cells—these being the same two cells where RWA and SDO was also significantly negatively correlated.

#### *The Religious Fundamentalism Scale as a Covariate*

Table 5 shows that RWA is a significant predictor of attitudes toward the homosexual Target,  $F(1, 169) = 14.44, p < .001$ . However, because individuals high in RWA are also highly religious (Altemeyer, 1988, 1996), and there is a strong positive correlation between RWA and Religious Fundamentalism ( $r = .74, p < .001$ ), analyses were also run to determine if RWA remains a significant predictor of attitudes toward homosexuals after covarying religious fundamentalism from the equation. Because the current study found a significant positive correlation between SDO and Religious Fundamentalism ( $r = .24, p < .01$ ), similar analyses were also performed for SDO.

Partial correlations were performed on the two conditions in which RWA and SDO were both significant predictors in liking of the target (Non-Stereotypical-MS and Stereotypical-UNC), as found in Table 9. Much like how the Heterosexual Attitudes Toward Homosexuals Scale was covaried from RWA and SDO in the previous section, this test



covaried the effects of the Religious Fundamentalism Scale to determine whether RWA and SDO were still significant predictors of attitudes toward the homosexual target when the participants' scores on the Religious Fundamentalism Scale were considered. Step 1 reveals that the Religious Fundamentalism Scale was only a marginally significant predictor of liking of the Target in the Non-Stereotypical-MS cell,  $F(1, 28) = 3.78, p = .062$ . In the Stereotypical-UNC cell, however, the Religious Fundamentalism Scale was a significant predictor ( $F(1, 28) = 11.23, p < .01$ ).

SDO remains a significant predictor of attitudes toward the homosexual target even when Religious Fundamentalism is covaried out in the Non-Stereotypical-MS cell,  $\beta = -.83, t(27) = -6.28, p < .001$ . Similarly, RWA remains a significant predictor even when Religious Fundamentalism is covaried out in the Stereotypical-UNC cell  $\beta = -.80, t(27) = 3.38, p < .01$ . Thus, SDO remains a significant predictor in the cell in which it was considered to be a better predictor over RWA (as seen in Table 9) even when religious fundamentalism was covaried. Likewise, RWA remains a significant predictor in the cell in which it was considered to be a predictor over SDO even when religious fundamentalism was considered.

These results further showcase the predictive strength of RWA and SDO with regards to liking of the homosexual target. Even when the Religious Fundamentalism Scale was covaried out, the two individual difference variables remain significant predictors in the cells in which they have shown to be strong and unique predictors.



## Discussion



## Discussion

The principal results of the study illustrate further differences between two individual difference variables considered to be the best predictors of prejudice. In the current study, it was found that RWA is a particularly strong predictor of disliking of a stereotypical homosexual target under the threat of uncertainty, whereas SDO was found to be a particularly strong predictor of disliking of a non-stereotypical homosexual target under the threat of death.

A significant three-way interaction of RWA, Threat, and Stereotype Fit as well as a significant three-way interaction of SDO, Threat, and Stereotype Fit were found. To determine the nature of these significant three-way interactions (one involving RWA and the other involving SDO), the three-way interactions were de-constructed to observe correlations between the two key predictor variables and the two dependent measures (Target and Essay Evaluation) in the six different experimental cells (Stereotypical-MS, Stereotypical-UNC, Stereotypical-Control, Non-Stereotypical-MS, Non-Stereotypical-UNC, and Non-Stereotypical-Control). In two theoretically-interesting cells in particular (Stereotypical-UNC and Non-Stereotypical-MS), both RWA and SDO were both significantly negatively correlated to liking of the homosexual target such that increases in RWA and SDO were related to less liking of the target. Because of this, regression analyses were then performed to test which of the two were better at predicting prejudice against the homosexual target under these particular threat and stereotype fit cells.

### *The Unique Effects of Right-Wing Authoritarianism*

The results of the within-cell correlations show that RWA, compared to SDO, is a better predictor of liking of a stereotypical homosexual when participants are in the



uncertainty threat condition (see Table 9). This is supported by the RWA literature that suggests that high RWA individuals do not like homosexuals to begin with. Therefore, presenting these same individuals with a target that is the stereotypical homosexual (as done in this study) is likely to lead to negative evaluations of the target. Additionally, individuals high in RWA are highly intolerant of ambiguity (Altemeyer, 1996) and, thus, uncertainty as well (Sorrentino & Roney, 2000), which similarly leads to negative evaluations of the target homosexual. Therefore, as expected, asking individuals placed under the threat of uncertainty who already do not like homosexuals to evaluate a stereotypical homosexual target led them to rate that target more negatively.

Furthermore, with regards to the uncertainty threat condition, Jost et al.'s (2003) integrative model of political conservatism as motivated social cognition suggests that environmental stimuli (such as threat) are associated with certain Social-Cognitive Motives, which are then related to Political Conservatism. According to the model, presenting uncertainty (i.e., an environmental threat) can lead to certain epistemic motives, which predict political conservatism. These epistemic motives include uncertainty avoidance and intolerance of ambiguity. An interesting parallel thus occurs with the findings in the current study. Super-imposing the Jost et al. model onto the current study, it can be the case that the threat of uncertainty which is related to epistemic motives that include intolerance of ambiguity (an essential characteristic of RWA), which is then related toward attitudes to homosexuals of a conservative and unaccepting nature. In essence, it can be said that for individuals high in RWA, attitudes toward stereotypical homosexuals is heightened by feelings of uncertainty—as shown by the results of this study. Thus, according to the Jost et al. model, the threat of uncertainty can lead individuals (in this case, those high in RWA) to



express further dislike for [stereotypical] homosexuals.

### *The Unique Effects of Social Dominance Orientation*

Within-cell correlations show that SDO, compared to RWA, is a better predictor of liking of a non-stereotypical homosexual when participants are in the mortality salience condition (see Table 9). With regards to dislike of the non-stereotypical homosexual, SDO literature suggests that individuals high in SDO believe that social groups are not equal and should be placed in a hierarchy, with some groups being more dominant over others (Sidanius, 1993). This idea seems to presume that members of social groups are homogeneous, have similar, identifiable characteristics, and are easily categorized into their respective groupings; that is, individuals high in SDO are likely to have specific beliefs about how out-group members look and act to be able to place them in social groups (which are then preferably arranged in a hierarchy). Those high in SDO strongly believe that people should fit into different social categories, more so when individuals appear to be “escaping” their low-status groups (e.g., homosexuals).

Therefore, it follows that high SDO individuals will not like out-group members who do not easily fit into these perceived out-groups, as they defy certain stereotypes that high SDO individuals hold of members of these groups. In the current study, the specified out-group members are homosexuals. Although SDO is negatively correlated with liking of homosexuals, it is also possible that to high SDO heterosexuals in the present study, the stereotypical homosexual male can at least be relegated to his low status position because he can be easily categorized as a “homosexual male”—the same may not be true for the non-stereotypical homosexual male. This atypical homosexual male—who regards himself as a homosexual but does not act like the stereotypical homosexual—cannot easily fit into the



“homosexual male” social group. In all likelihood, this would frustrate—and perhaps, threaten—individuals high in SDO: After all, high SDO individuals strongly believe in placing social groups into a hierarchy. Therefore, how can one arrange other people (particularly those perceived as being low-status group members) into social groups if supposed members of these groups are not “fitting neatly” into their respective social groups?

Similarly, research shows that individuals high in SDO are particularly threatened by more realistic (as opposed to more “symbolic”) types of threat, such as the potential loss of resources (Hodson, 2006). In addition, those high in SDO see the world as a “competitive jungle” (Duckitt et al., 2002), where resources are scarce and one must do what it takes to keep prized resources to him or herself. In essence then, a non-stereotypical homosexual already constitutes a threat to the high SDO individual; exposing that high SDO individual to the non-stereotypical homosexual under the threat of their own death—which those high in SDO find particularly threatening—would lead them to increased disliking of that non-stereotypical homosexual.

The data (Table 9) reflects these negative attitudes of high SDO individuals toward non-stereotypical homosexuals when under the threat of death: when presented with a non-stereotypical homosexual (i.e., the non-fitting, wolf-in-sheep’s-clothing homosexual) under the realistic threat of death, SDO becomes an exceptionally strong predictor. SDO significantly negatively correlates with liking of the non-stereotypical homosexual target in the MS condition at  $r = -.80$ : that is, 64% of the variance in liking of the homosexual target is explained solely by SDO in this particular experimental cell. This number is even more impressive considering that SDO is not a significant predictor of liking of the stereotypical homosexual target under the threat of death ( $p = .334$ ), nor is it a significant predictor of



liking of the non-stereotypical homosexual target in the control condition ( $p = .687$ ).

Therefore, individuals high in SDO can be expected to dislike an individual who does not seem to fit into the pre-conceived stereotypes of out-group members, although this was only when participants were under the threat of death.

And indeed, with regards to the threat of death, the Jost et al. (2003) model also suggests that fear and threat (as defined by Jost et al., 2003) as environmental stimuli are related to ideological motives (such as group-based dominance), which are then related to Political Conservatism. The finding of the current study concerning SDO can also be presented as parallel to the Jost et al. model: that is, fear and threat (in this case, the threat of one's own death) are associated with the need to believe in group-based dominance (e.g., SDO), which is associated with conservatism (e.g., with disliking of the homosexual target).

Additional inspection of the correlation between SDO and the essay evaluation (Table 8) exhibits additional support for the idea that threat is particularly important in the predictive power of SDO as it pertains to attitudes toward homosexuals. Table 8 shows that two marginally-significant effects of SDO in the non-stereotypical condition for Essay Evaluation exist: one for mortality salience and another in the control group. As demonstrated in the table, SDO is marginally *positively* correlated with liking of the homosexual target's essay ( $r = .34, p = .065$ ) in the control condition. However, in the MS condition, SDO is marginally and *negatively* correlated with liking of the homosexual target's essay ( $r = -.36, p = .054$ ). Comparison of the two correlation coefficients show that the two scores are significantly different. Thus, it can be said that individuals high in SDO, in fact, at least show *liking* for the non-stereotypical homosexual's essay, but when under the threat of their own mortality,



strongly dislike the same essay.

These same results shown in Table 8 concerning the essay evaluation are also supported by TMT research. Schimel et al. (1999) found that, compared to participants not reminded of their death, those reminded of their death preferred a stereotypical African-American to a non-stereotypical African-American. In the current study, high SDO participants reminded of their own death also preferred a stereotypical male homosexual. TMT research would suggest that non-stereotypical individuals were negatively evaluated because when reminded of their death, non-stereotypical homosexuals challenged the worldview of high SDO participants regarding how homosexuals should represent themselves.

#### *Summary of the Unique Effects*

Again, it must be re-iterated that RWA predicted liking of the stereotypical homosexual (in the UNC condition) better than SDO whereas SDO predicted liking of the non-stereotypical homosexual (in the MS condition) better than RWA. Therefore, the possibility remains that high RWA individuals and high SDO individuals may dislike homosexuals for different reasons: it would seem that those high in RWA dislike *stereotypical* homosexuals (particularly under the threat of uncertainty) because high RWA individuals are conventional and adhere to traditional customs; those high in SDO dislike *non-stereotypical* homosexuals (particularly under the threat of death) because the non-stereotypical homosexual is perceived as not “fitting in” with the social groups (and, by extension, how social groups are arranged in a hierarchy).

*The Prejudice of Dominating Authoritarians.* The current study also features the examination of those whom Altemeyer (2004) describes as the most prejudiced group of



people: the Dominating Authoritarians. Indeed, the current study is, in fact, one of the few studies in which the Dominating Authoritarians are featured. Table 12 shows the results of the within-cell correlations for the Dominating Authoritarians. Because the Dominating Authoritarianism measure is comprised of RWA and SDO, it is unsurprising that the measure is a significant predictor of liking of the target homosexual in the Stereotypical-UNC and Non-Stereotypical-MS—the same two situations where RWA and SDO are significant predictors. Dominating Authoritarianism was also a marginally significant predictor for liking of the essay in the Stereotypical-UNC and Non-Stereotypical-MS conditions as well, with this pattern mirroring the findings with the target variable. Thus, the pattern of findings concerning Dominating Authoritarianism was similar to those of RWA and SDO.

Additionally, as found by Altemeyer (2004), the current study also shows that Dominating Authoritarians act more similarly to those high in RWA than those high in SDO with regards to religious beliefs, as measured by the Religious Fundamentalism Scale.

The Dominating Authoritarianism variable is essentially the combination of RWA and SDO. The Dominating Authoritarianism variable is significant in the same two conditions where RWA and SDO are both significant predictors of liking in the target and [marginally] the essay; this solidifies and clarifies the notion that the Stereotypical-UNC and Non-Stereotypical-MS conditions are the two in which RWA and SDO are significant predictors of the Target Evaluation.

However, are Dominant Authoritarians more prejudiced than individuals solely high in RWA or SDO, as Altemeyer (2004) suggests? The results of the current study seem to suggest no. In the Stereotypical-UNC cell, RWA and the Dominating Authoritarianism variable are similarly strong predictors of liking of the Target. Similarly, in the Non-



Stereotypical-MS cell, SDO is a slightly stronger predictor of liking of the target than the Dominating Authoritarianism variable. This is in contrast to Altemeyer's (2004) findings that "persons who score highly in both [RWA and SDO Scales] get an extra helping of racism, sexism, homophobia, etc., and appear to be the most prejudiced group investigators have found" (p. 431).

What could possibly account for the seemingly conflicting results between Altemeyer's (2004) and the current study's findings? There are a few differences between the studies which may explain the contrasting findings between the two studies. Additionally, the differences themselves may offer possible explanations. First, although the Altemeyer (2004) and the current study similarly found that 5 – 10% of participants can be categorized as Dominating Authoritarians (as identified by Altemeyer), Altemeyer gathered his data from a pool of nearly 4000 participants and 2600 parents over the past few years whereas the sample for the current study involves selecting the Dominating Authoritarians from a pool of 180 participants. This suggests that Altemeyer worked with a significantly larger sample of Dominating Authoritarians. In addition, his sample is composed primarily of students from southern Manitoba university, whereas the sample from the current study consists of participants from a southern Ontario university.

Second, Altemeyer identified Dominating Authoritarians by identifying individuals who scored in the top quartile of both the RWA and SDO Scales. Although the current study used this method as well, this was only used as a comparison to Altemeyer's findings that 5 – 10% of participants were indeed Dominating Authoritarians (and indeed, 8.89% of participants in the current study can be classified as Dominating Authoritarians). The current study treated Dominating Authoritarianism as a continuous variable as opposed to a



categorical variable using standardized scores.

Concerning comparing the Dominating Authoritarianism measure with other measures, Altemeyer used a different measure of attitudes toward homosexuals (referred to as a measure of “hostility towards homosexuals”) to examine the relationship between Dominating Authoritarianism and attitudes toward homosexuals. The current study used the Heterosexual Attitudes Toward Homosexuals Scale. In the Altemeyer study, Dominating Authoritarians were more prejudiced against homosexuals than high RWAs and high SDOs. Recall that both the Altemeyer study and the current study examined the correlation between Dominating Authoritarianism and the Religious Fundamentalism Scale as well. As a consequence, in this particular case, results across both studies were comparable. With the differing measures of attitudes toward homosexuals, however, non-comparable results across studies are more understandable.

Although the current study does not find definitive evidence of Dominating Authoritarians being more prejudiced, as found by Altemeyer (2004), it is important to note that the literature involving Dominating Authoritarianism is quite bare at the moment. Only in one other study was Dominating Authoritarianism examined. Cohrs, Kielmann, Maes, and Moschner (2005) found that although RWA and (to a lesser extent) SDO were significant predictors of attitudes toward restriction of civil liberties and surveillance measures (in a post 9/11 environment), Dominating Authoritarianism did not significantly predict attitudes toward these two dependent measures. This seemingly conflicting finding, however, does not necessarily negate Altemeyer’s claims entirely. Again, the fact that examination of Dominating Authoritarianism is essentially in its infancy suggests that more studies involving individuals high in both RWA and SDO are necessary. Future work could include



experiments directly targeting Dominating Authoritarians, as well as determining whether Dominating Authoritarians is a good predictor of prejudice against other groups. Continued work on Dominating Authoritarianism is important. As Altemeyer observes, “We have seen [Dominating Authoritarians] before, to our sorrow. We might be wise to develop an understanding of their psychological makeup” (p. 445).

### *The Non-Significant Effects of Stereotype Fit and Threat*

With regards to other main effects, Threat and Stereotype Fit proved less powerful in predicting liking for the homosexual target. No significant main effects for Threat were found on Target Evaluation (Table 5 and Table 7), suggesting that participants’ liking of the target did not differ under the threat of death, uncertainty, or under the lack of threat (i.e., control group). These non-significant effects of Threat and Stereotype Fit are contrary to the TMT and UMT literature, which suggest that participants in either of the mortality or uncertainty threat conditions, versus participants in the control condition, should be prompted to express more disliking for the outgroup homosexual target. In the current study, no differences were found in the evaluation of the homosexual targets across the three Threat conditions when one fails to consider individual differences in RWA and SDO.

The question, therefore, is why was this the case? Why were there no main effects for Threat and Stereotype Fit, when the literature suggests that participants in the mortality salience (and uncertainty salience) conditions should have clearly preferred the stereotypical over the non-stereotypical Carl? The following will now outline perceived differences between the current study and other TMT studies.

The majority of TMT studies involve comparing the reactions of participants in the mortality salience condition to in-group members (i.e., an individual who adheres to a



worldview similar to that of the sample) versus out-group members (i.e., an individual who adheres to a worldview different from that of the sample). In most cases, therefore, all participants in an experiment clearly assess an in-group and an out-group target individual.

The current study, therefore, is unique in that it is one of the few studies (which includes Schimel et al., 1999) involving TMT that involves two targets who are *both* out-group members. In this case, all the heterosexual participants in the current study were asked to evaluate homosexuals. The format of past studies does remain intact, however, as evaluations by participants involving a stereotypical and non-stereotypical homosexual were examined. Nonetheless, the current study exhibits a different level of complexity from other studies, as it uses what are essentially with its use of two different out-group members: both target individuals—whether stereotypical or non-stereotypical—are considered out-group members to the heterosexual participants. However, it must be noted that the Schimel et al. study (which found an effect for Threat on liking of the homosexual) used a similar definition of the control and experimental target individuals as the current study, as the study used a stereotypical homosexual as the in-group member and non-stereotypical homosexual as the out-group member.

Additionally, it must also be noted that at the design stages of the current study, it was intended that an additional target—a heterosexual individual—be added along with the stereotypical and non-stereotypical homosexual targets. However, to prevent the design from being overly complex, this additional target was ultimately removed from the design.

A more important difference between this study and most TMT studies involves the use of individual difference measures. As mentioned, only a few studies in TMT measured individual differences (see first footnote, page 37). It is interesting to note that one of the



studies found that negative evaluations of an attitudinally-dissimilar other resulted from a mortality salience manipulation only when authoritarianism (as defined by Adorno et al., 1950) was considered (Greenberg et al., 1990). As a study more similar to the current one, however, perhaps Study 5 by Schimel et al. (1999) provides a better comparison. Schimel et al. found that participants showed more liking of the stereotype-consistent homosexual target than the stereotype-inconsistent target under the mortality salience condition *only when the individual difference variable Need for Closure was considered*. Similarly then, the current study found that negative evaluations of the out-group target members resulted not only from considering the threat manipulation but also the individual difference variables RWA and SDO as well. Therefore, although it may seem that the findings of the current study—that is, that no differences in liking of the targets were found when only the threat conditions were examined—appear as an anomaly across TMT studies, the fact that Study 5 by Schimel et al. found parallel results suggest otherwise, and encourages that more TMT studies involving individual differences be performed.

With regards to Stereotype Fit in particular, non-significant main effects for Stereotype Fit were also found (Table 5 and Table 7), suggesting that participants did not differ in liking the stereotypical and non-stereotypical homosexual target overall. As mentioned in the hypotheses, however, no direction regarding Stereotype Fit was predicted. Nonetheless, it is interesting to explore a possible reason as to why no differences were found in how participants liked the two versions of Carl Hamm.

Recall that the current study presented a written description of a typical week of Carl (for both the stereotypical and non-stereotypical version). The written description includes Carl's interests and hints (both subtle and overt) about his personality. It is possible, then,



that participants were more apt to evaluate Carl the Person and not necessarily Carl the Homosexual. As opposed to liking or disliking Carl because he is a homosexual, some participants may like (or dislike) stereotypical Carl because the participant shares (or does not share) Carl's interest in theater and his taste in movies (for example) whereas some participants may like (or dislike) non-stereotypical Carl because the participant shares (or does not share) Carl's interest in rugby and his taste in music (again, for example). Even if it is the case that some participants focused on Carl the person as opposed to the fact that Carl is a homosexual, this may be interpreted as being more positive than negative: one may deduce that (again, at least for some participants) Carl was not simply categorized as a homosexual and judged based on that fact. If one looks at it that particular way, it is encouraging to think that participants can look at Carl Hamm and evaluate Carl Hamm the Person, as opposed to Carl Hamm the Homosexual.

Regardless, these non-significant findings in the data concerning the main effects of Threat and Stereotype Fit do outline an important fact: it is important to consider individual difference variables (i.e., RWA and SDO). Contrary to most TMT research, only when RWA and SDO were considered were differences in how participants evaluated the target individuals found.

*Right-Wing Authoritarianism and Social Dominance Orientation Predicting Liking of the Target Driven More by Attitudes Toward Homosexuals and Religious Fundamentalism*

Because interaction effects between Threat and Stereotype Fit were only qualified when individual differences were considered (and the fact that RWA and SDO exhibit strong main effects in liking of the individual), RWA and SDO are considered strong predictive variables. Recall, however, that concerning prejudice against homosexuals, RWA and SDO



are found to be good predictors. Additionally, RWA and SDO are highly correlated with the Heterosexual Attitudes Toward Homosexuals Scale. It is important to note as well that individuals high in RWA have a tendency to be highly religious, as well as the fact that both RWA and SDO in the current study are also significantly correlated with the Religious Fundamentalism Scale. Is it possible, then, that RWA and SDO are only strong predictors of liking of the homosexual target because of their attitudes toward homosexuals or religious fundamentalism?

Two analyses aimed to determine whether certain aspects of RWA and SDO (e.g., attitudes toward homosexuals and religious fundamentalism) accounted for the predictive power of RWA and SDO on liking of the homosexual target were performed; that is, separate covariate analyses taking into account the effect of the Heterosexual Attitudes Toward Homosexuals Scale and Religious Fundamentalism from RWA and SDO (in the particular cells where RWA and SDO were shown to be strong predictors of liking of the target—that is, the Stereotypical-UNC and Non-Stereotypical-MS cells, respectively) were performed.

Results show that both RWA and SDO remain significant predictors of liking of the homosexual target when taking into account their attitudes toward homosexuals. Similarly, RWA and SDO remain significant predictors of liking of the homosexual target when taking into account religious fundamentalism.

This suggests, then, that even when their negative attitudes toward homosexuals and religious fundamentalism are considered, those high in RWA and those high in SDO still dislike homosexuals. Examining the results, however, should help clarify as to why this is the case. Recall that RWA is a significant predictor of attitudes toward a stereotypical homosexual under the threat of uncertainty and that SDO is a significant predictor of



attitudes toward a non-stereotypical homosexual under the threat of death. For those high in RWA, a [stereotypical] homosexual is considered an out-group member, who may be considered threatening simply because of that fact. When under the threat of uncertainty, therefore, which those high in RWA find particularly threatening, this out-group member can be perceived in a more threatening light, and will therefore be evaluated negatively.

With regards to those high in SDO, who prefer that people be easily categorized into social groups, which are then categorized hierarchically, a non-stereotypical homosexual does not fit easily into their pre-determined social groups. This individual—who proclaims that he essentially belongs in a certain group but does not act like a member of that group—is considered threatening. When under the realistic threat of death, which those high in SDO find particularly threatening, this non-stereotypical out-group member is also perceived in an even more threatening light.

What is important to note is that in these two explanations involving the prejudice of high RWAs and high SDOs, there was no indication that the out-group member is a homosexual specifically: Individuals high in RWA and individuals high in SDO may show dislike for the homosexual target for reasons other than the fact that he is a homosexual. It could very well be the case that high RWAs simply consider the homosexual as an out-group member and that is cause enough to dislike him. For those high in SDO, a non-stereotypical out-group member can be perceived as threatening because that out-group member shatters their beliefs about the characteristics of people in those social groups. Couple the idea of a threatening out-group member with the threat of uncertainty or death and one can see why high RWAs' and high SDOs' attitudes toward homosexuals and religious fundamentalism would not solely drive their prejudice against the target.



### *Implications*

The present study further establishes the differences between two important variables in prejudice research, RWA and SDO, along with adding to literature on attitudes toward homosexuals, Terror Management Theory, and the various theories on uncertainty.

The current study found further support for the idea that RWA and SDO, though both strong predictors of prejudice, are indeed unique constructs. Although the study found moderately strong correlations between RWA and SDO, Altemeyer (1998) notes that most studies find more modest correlations between the two variables. Meta-analyses performed by Rocatto and Ricolfi (2005) found that among their adult samples, countries characterized by high ideological contrast (that is, a clear divide between left and right-wing politics exists) such as Germany, Belgium, and Australia, show higher correlations for RWA and SDO, whereas countries characterized with lower ideological contrast such as Canada, the United States, and South Africa, exhibit lower correlations between RWA and SDO. Nonetheless, the significant correlation found in this study is not without precedence for a Canadian sample, as Hodson and Esses (2005) found a similar correlation between RWA and SDO in their Canadian sample ( $r = .41$ ) (see also Esses & Hodson, in press).

The significant main effects of RWA and SDO indicates further evidence that these two personality variables are indeed strong predictors of attitudes toward homosexuals. Significant negative correlations between the two variables and the Heterosexual Attitudes Toward Homosexuals Scale show that increases in RWA and SDO are associated with decreases in liking of homosexuals. Furthermore, significant negative correlations between RWA and Target Evaluation (in the Stereotypical-UNC cell) and between SDO and Target Evaluation (in the Non-Stereotypical-MS cell) show that increases in RWA and SDO are



associated with decreases in liking of the target homosexual in the study. Thus, this outcome further cements the findings concerning RWA and SDO in terms of their predictive power of liking of homosexuals.

The main finding of the current study, however, shows that although RWA and SDO are strong predictors of evaluations of homosexuals, the two variables are indeed different as well, as each is a unique predictor of prejudice against homosexual targets in different conditions: RWA was a unique predictor of liking of the stereotypical homosexual target when under the threat of uncertainty whereas SDO was a unique predictor of liking of the non-stereotypical homosexual target when under the threat of death.

These findings once again showcase the predictive power of RWA with regards to prejudice towards homosexuals. The study also establishes, however, that SDO can be as strong a predictor of liking of homosexuals. As the study shows, RWA and SDO are equally strong predictors of prejudice towards homosexuals, depending on the conditions. Previous research (Whitley, 1999) has shown that SDO, while a good predictor of general prejudice, is not as good a predictor of prejudice towards homosexuals as RWA. The current study shows otherwise, however, indicating that SDO can be as good a predictor of prejudice against homosexuals as RWA when considering the interactive effects of situational threat and stereotypic fit of out-group targets. However, the finding that neither Threat nor Stereotype Fit were significant main effects is indeed contrary to threat research, particularly TMT. As outlined, the current study therefore suggests that considering individual difference variables in TMT research is important.

Regarding TMT, however, the current study is one of many recent studies which have TMT as one of its foci. Considering the current geo-political climate, it is not surprising that



terror- and death-related research have shown a surge in the past few years. For instance, a search for articles through PsycINFO that include the term “terror management theory” as a keyword shows that up to the year 2000, 69 articles involving this topic were published. However, a search from 2001 (noting the terrorist attacks on September 11, 2001) to the end of 2005 alone show 127 articles published concerning TMT. The study of threatening situations on individuals is thus important in the current global climate and as well as the foreseeable future.

### *Limitations and Future Research*

#### *Homosexuals as the Target Group*

The study focused on prejudice against homosexuals. However, it also useful to measure prejudice against other groups, such as ethnic minority and religious groups. For instance, the recent controversies surrounding illegal immigrants in the United States (as seen on news broadcasts from CNN and FoxNews; <http://www.cnn.com/2006/POLITICS/05/20/radio.addresses.ap/index.html>) exhibit the need to study attitudes toward groups such as immigrants. Homosexuals as the target group for the current study were chosen for a variety of reasons. First, to compare the predictive abilities of RWA and SDO, the group that participants were to evaluate had to be a group that both RWA and SDO predicted prejudice against. Second, debates concerning the rights of homosexuals (for example, the right to get legally married) are currently at the forefront of the news (<http://www.cbc.ca/news/background/samesexrights/>), indicating the importance of the topic of studying prejudice against homosexuals. The third reason is for practical purposes; the design of the study is inspired by the design of some studies from Schimel et al. (1999), which measured prejudice against stereotypical and non-stereotypical homosexuals.



Using the homosexuals as the target group was important for this particular study, as it further clarified the predictive abilities of RWA and SDO.

Furthermore, recall that when attitudes toward homosexuals were covaried from RWA and SDO, RWA and SDO remained significant predictors of liking of the target. It was hypothesized that RWA and SDO, in the Stereotypical-UNC and Non-Stereotypical-MS cells, respectively, were threatened by the homosexual target for reasons other than the fact that he was a homosexual. Future studies can examine this hypothesis using immigrants (again, as an example): after covarying a measure for prejudice against immigrants, do RWA and SDO predict liking of a stereotypical and non-stereotypical immigrant—and perhaps a non-immigrant (i.e., non out-group member)—under different threat conditions? Overall then, prejudice against other out-groups such as immigrants are also important to study, and future research should examine reactions to these group.

*The Non-Significant Main Effects of Stereotype Fit and Threat: Exploring Other Methods*

The study was unable to show significant main effects for the Stereotype Fit and Threat manipulations in multiple regression analyses (which also involved RWA and SDO as main effects). Although RWA and SDO main effects were found using the essay to describe the homosexual, perhaps a different medium is necessary for the Stereotype Fit and Threat manipulations to show significant main effects. Instead of providing only a written description of the homosexual target, which the participants used to evaluate the target, perhaps a picture or a video of the target individual could also be added to the package as well. Although homosexual stereotypic-congruent statements such as “I talk a lot” were included in the essay, perhaps a video of the participant’s rambling responses to questions to subtly introduce the point may improve the manipulation. Only when the Need for Closure



was a predictor variable (with the Target Evaluation as the DV) was a main effect of threat significant, as well as a two-way interaction involving Need for Closure and Stereotype Fit. Further investigation of the predictor variable Need for Closure may yield further clarification of these results.

Although the manipulation check showed that participants in the different threat conditions were coded as writing about death, being uncertain, or watching television, there are other ways to place participants under the threat of death or uncertainty. Although directly asking participants to write about their death may be the most practical and most commonly used way to prompt thoughts of death, other methods in the literature were also used. As mentioned, Pyszczynski et al. (1996) interviewed participants in the MS condition in the proximity of a funeral home. The same suggestion also applies for the uncertainty manipulation. Perhaps actually placing participants in this condition in an uncertain situation would prove as effective as asking participants to write about being uncertain, although again, the manipulation check did support the manipulations.

### *The Dominating Authoritarians*

The current study also found evidence of the existence of “Double Highs” or “Dominating Authoritarians” (Altemeyer, 2004). Only in one other known study (Cohrs et al., 2005) was the concept of the Dominating Authoritarian examined. Additionally, work on Dominating Authoritarianism is fairly recent, as Altemeyer’s pioneering work in 2004 only confirmed and examined the basic characteristics of the Dominating Authoritarians. The fact that Altemeyer suggests that Dominating Authoritarians are considered the most prejudiced group indicates the importance of continuing research concerning Dominating Authoritarianism. Future research should help determine the differences between Dominating



Authoritarians and those who are high only in RWA or SDO to examine the idea that the Dominating Authoritarians are indeed prejudice over and above the mere combination of being high RWA and high SDO.

*Mortality Salience vs. Uncertainty Salience: Which is more Threatening*

It remains possible that, as Van den Bos (2005) states, people may not be afraid of death so much as they are afraid of the *uncertainty* of death. Participants in the MS condition who were coded as writing about death as well as uncertainty often wrote of being afraid of not knowing what will happen after they die; wrote one participant, “When I think of my own death I am filled with thoughts of confusion and fear. I am uncertain as to where I will go in the afterlife”.

It is indeed possible that it is not so much death that participants are afraid of, but the uncertainty that follows death. It could be the case that the idea of death is under the umbrella of a generalized uncertainty; that is, perhaps as Van den Bos et al. (2005) posit, death is only one example of a specific situation, out of many, where uncertainty is the root of the fear. Indeed, examination of the results of Table 1 suggest that in the current study, participants asked to think of their own death also thought about uncertainty, whereas those asked to think about uncertainty did not think of death. Results do indicate, then, that uncertainty seems to be the actual underlying threat of the threat of death, in support of Van den Bos et al. (2005) and as opposed to TMT.

This is made even more theoretically possible by observing other threatening situations which may be comparable to the death; comparable in the sense that these other situations involve uncertainty in different aspects of life in different intensities. These other uncertain situations may include uncertainty involving an impending examination, about



one's personal relationship, or about one's job status. It is important that the threat of uncertainty brought upon by the thoughts of one's own death be compared to other situations of uncertainty, which should lead to further refinement of using threatening situations in psychological experiments.



## Conclusion

The study hoped to answer the question of how we can best predict how one may react to out-group members. In particular, how do we predict if we are to act with disapproval and rejection upon meeting a non-stereotypical homosexual individual, as Homer did upon meeting John?

The Right-Wing Authoritarianism and Social Dominance Orientation Scales are two of the best predictors of prejudice social psychologists have today. Individuals who score high on the RWA Scale tend to have different characteristics from those who score high on the SDO scales, thus, the two scales are considered to be independent and unique predictors. The current study further highlighted important differences in the predictive power of these two variables by comparing how well each variable predicts prejudice against a stereotypical and non-stereotypical homosexual when under either the threat of one's mortality or the threat of being uncertain.

Results show that RWA is a better predictor of liking of a stereotypical homosexual target when under the threat of uncertainty, whereas SDO is a better predictor of liking a non-stereotypical homosexual target when under the threat of one's mortality. The current study also examined the Dominating Authoritarians, defined as those who score high on both the RWA and SDO scales, as well as studying the role that attitudes toward homosexuals and religious fundamentalism may have in predicting attitudes toward homosexuals. Perhaps the study's most important contribution, however, is the fact that it considered both individual differences and situational differences in determining how people would react in different situations, as participants showed different reactions depending on how they measured in the two key scales as well as the situational threat presented to them.



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## Appendix A: Consent Form

**Brock University: Participants Informed Consent Statement**Research Project Title: Emotions and Social Opinions Study

Principal Investigator:  
PJ Sangalang  
MA Student, Psychology Department

Supervisor:  
Dr. Gordon Hodson  
Brock University Professor

[ps04cw@brocku.ca](mailto:ps04cw@brocku.ca) 905-688-5550 ext. 3714  
5550 ext. 5127

[hodson@brocku.ca](mailto:hodson@brocku.ca) 906-688-

**PURPOSE:** You are being invited to participate in an experiment. The general purpose of this research is to investigate how people form impressions of others.

**INFORMATION:** If you decide to participate you will be asked to answer a couple of self-reflection questions before reading a self-description written by a person, answer a few questions regarding the self-description, and complete a questionnaire package. This task will take about one hour. After reading the consent form you will be asked to sign both copies of the consent for: one will be handed to the researcher and one you will keep for your own records. Once you have signed the consent form you will be given two sets of paper packages, that will be completed one after the other. From this point on, no talking will be allowed. If you do have any questions, during the study, please raise your hand. After the packages have been completed, the researcher will provide you with a debriefing form explaining the specific purpose of the study. The study will be facilitated by PJ Sangalang.

**RISKS:** You will be asked your opinions on topics such as self-esteem, relationships, and other questions of a personal nature; some people may find some of these questions uncomfortable, but you are free to *not* answer questions that may make you feel uncomfortable. Furthermore, if at the end of this study, you feel the need to talk with someone, contact information will be listed on your debriefing form, which will be provided to you at the end of the experiment.

**BENEFITS:** This research advances educational information in psychology, particularly in human behaviour and the field of social psychology, as it advances the knowledge base regarding the relations between variables such as self-esteem, relationships, and other topics involved in the study. The information from this study will also aid with the completion of the researcher's Masters Degree. If you are a Psych 1F90 student, this study can count as part of your research participation for the course. As a participant, you will also gain experience concerning how research in social psychology is conducted, and you will become an active member of the research community at Brock University as you learn the intricacies of social psychological research.

**CONFIDENTIALITY:** Your name will only be associated with this consent form. There will be no way of knowing exactly how you answered in this study, as will you not be asked any specific identification questions. Please note that by signing the consent form you agree not to share any names or identifiable information you heard throughout this study in order to maintain the confidentiality of the other participants. All consent forms and data will be kept in a locked room at all times and destroyed 5 years after publication. Only the researchers, PJ Sangalang and Dr. Gordon Hodson, will have access to this anonymous data. Any quotes or information gathered from this research used in writing a report or publishable article will be anonymous.

**CONTACT:** If you have questions at any time about the study or the procedures, you may contact the researcher, PJ Sangalang, at Brock University in the Psychology Department, and



through email at [ps04cw@brocku.ca](mailto:ps04cw@brocku.ca), or his supervisor, Dr. Gordon Hodson, also at the Brock University Psychology Department, and through e-mail at [ghodson@brocku.ca](mailto:ghodson@brocku.ca). If you feel uncomfortable after participating in this research study and wish to speak with a counselor please contact: Brock University Counselling Services, ST 400, ext. 3240. This project has been reviewed and received ethics clearance through the Office of Research Ethics Board (File # 05-014). If you have any pertinent questions regarding your rights as a participant, please contact the Research Ethics Officer at [reb@brocku.ca](mailto:reb@brocku.ca), 905-688-5550 ext. 3035.

**PARTICIPATION:** Your participation in this study is voluntary; you may decline to participate at any time without consequences to yourself by informing the researcher of this decision. If you withdraw from the study before data collection is completed your data will be omitted from analysis upon your request. You have the right to not respond any question(s) you choose.

**FEEDBACK AND PUBLICATION:** The results from this study will be incorporated into a Masters Degree thesis and may be used in any journal articles, presentations, or books published. The results of this research study will be available to participants approximately one year from now.

Once completed, would you like to receive a copy of the results (**circle**)? **YES NO**

Please provide an email address where the results can be sent (note: because your study packages are anonymous, we cannot give individual results, only overall results):

### CONSENT

I have read and understand the above information. I have received a copy of this form. I understand that I may ask questions in the future. I freely agree to participate in this study.

I also understand that if I do not wish to complete this study, I am free to leave without penalty.

Participant's signature: \_\_\_\_\_ Date: \_\_\_\_\_

Investigator's signature: \_\_\_\_\_ Date: \_\_\_\_\_

Please keep a copy of this consent form for your records.



## Appendix B: Verbal Instructions for Package 1

First, thank you for participating. This study will take about 45 minutes to an hour.

What you have in front of you are two packages. Please do not turn them over yet.

Notice that one package is designated as "Package 1" and the other as "Package 2". The first package concerns the first part of this experiment.

Once I ask you to begin answering Package 1, I will ask you to please keep silent throughout the entire experiment. If you have questions, raise your hand.

When I ask you to turn over Package 1, you have five minutes to answer the first two pages. I will let you know when you have two-and-a-half minutes left, and when you have 30 seconds left. After five minutes, I will ask you to stop. I will then ask you to complete the next three pages; you have five minutes to complete those three pages. I will let you know when you have a minute-and-a-half left and when you have 30 seconds left. After five minutes, I will ask you to stop, regardless of whether you are done or not. At that point I will ask you to turn the first package over and begin the second package. The second package is not timed, so you can complete it at your own pace.

Any questions? (*if there are no questions, continue*) Again, you have five minutes to complete the first two pages and I will ask you to stop. You then have five minutes to complete the next three. Please turn over Package 1 and begin. Time begins now.

End time script after Control/MS/UCS task:

Time is up, please stop writing, but do not turn your page. (*wait until everyone stops*)

You may turn over to the next page now.

End time script for Manipulation Check, PANAS-X and Word Completion:

Time is up, please stop writing. Turn your package over; I will collect them in a bit.

Now, take to Package Number 2 and begin.



## Appendix C: Mortality Salience Manipulation

1) Please briefly describe the thoughts and feelings that the thought of your own death arouses in you.

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.



2) Please write down, as specifically as you can, what will happen to you as you physically die.

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There is no text or other markings on the paper.

Stop and wait for instructions.



## Appendix D: Uncertainty Salience Manipulation

1) Please briefly describe the thoughts and feelings that the thought of being uncertain arouses in you.

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.



2) Please write down, as specifically as you can, what you think will happen to you as you feel uncertain.

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

Stop and wait for instructions.



## Appendix E: Control Group Manipulation

1) Please briefly describe the thoughts and feelings that the thought of watching television arouses in you.

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.



2) Please write down, as specifically as you can, what you think will happen to you as you watch television.

[illegible]

Stop and wait for instructions.



## Appendix F: Threat Assignment Check

Please place a checkmark on the box beside the item if you were thinking of it as you were writing your answers to the questions in the last two pages.

- ☐ Listening to the Radio
- ☐ Being uncertain
- ☐ Watching Television
- ☐ Being dead



## Appendix G: PANAS-X Scale

This scale consists of a number of words and phrases that describe different feelings and emotions. Read each item and then mark the appropriate answer in the space next to that word. Indicate to what extent you feel this way right now. Use the following scale to record your answers.

	1 very slightly or not at all	2 a little	3 moderately	4 quite a bit	5 extremely
_____ cheerful		_____ sad		_____ active	_____ angry at self
_____ disgusted		_____ calm		_____ guilty	_____ enthusiastic
_____ attentive		_____ afraid		_____ joyful	_____ downhearted
_____ bashful		_____ tired		_____ nervous	_____ sheepish
_____ sluggish		_____ amazed		_____ lonely	_____ distressed
_____ daring		_____ shaky		_____ sleepy	_____ blameworthy
_____ surprised		_____ happy		_____ excited	_____ determined
_____ strong		_____ timid		_____ hostile	_____ frightened
_____ scornful		_____ alone		_____ proud	_____ astonished
_____ relaxed		_____ alert		_____ jittery	_____ interested
_____ irritable		_____ upset		_____ lively	_____ loathing
_____ delighted		_____ angry		_____ ashamed	_____ confident
_____ inspired		_____ bold		_____ at ease	_____ energetic
_____ fearless		_____ blue		_____ scared	_____ concentrating
_____ disgusted with self		_____ shy		_____ drowsy	_____ dissatisfied with self



## Appendix H: Word Completion Task

Please fill in the blanks with letters to create *one* word.

Ex. P H O N E

Ex. T A S K (or L A R K)

1) B A \_\_\_\_

2) R O \_\_\_\_

3) M \_\_\_\_ D \_\_\_\_

4) R \_\_\_\_ G

5) L I \_\_\_\_

6) E \_\_\_\_ G \_\_\_\_

7) D \_\_\_\_ S \_\_\_\_

8) \_\_\_\_ P \_\_\_\_ N

9) W \_\_\_\_ E

10) K \_\_\_\_ B

11) F L \_\_\_\_

12) W \_\_\_\_ N \_\_\_\_

13) \_\_\_\_ R D

14) \_\_\_\_ I R \_\_\_\_

15) Y \_\_\_\_ W

16) V I \_\_\_\_

17) \_\_\_\_ L E

18) \_\_\_\_ N \_\_\_\_ I \_\_\_\_

19) N \_\_\_\_ W \_\_\_\_

20) \_\_\_\_ N \_\_\_\_ A \_\_\_\_

Stop and wait for instructions.



## Appendix I: Package 2 Written Instructions

Instructions

This second part of the study is not timed.

In this second part, we are interested in people's impression of others. Please proceed through this package in the order presented and do not go back after finishing each set of questions.

Over the summer, students at Brock University volunteered to write a response to the following instruction: *"Please indicate a typical week in your life in the space below."*

You will now read a randomly chosen response from a volunteer in that previous study; each participant in the current study will receive an essay from a different individual. On the following page, you will be reading that essay. The passage is typed to ensure anonymity of the author, but the passage has not been edited in any way.

After reading the passage, you will be asked for your opinions about the passage on the on the next two pages, before completing a series of questionnaires to finish the package.

Please turn to the next page and begin.



## Appendix J: Stereotypical Homosexual Essay

*Please indicate a typical week in your life in the space below.*

My name is Carl Hamm\*. I'm 20 years old and I go to Brock University. In terms of my week, they usually vary. I mean, their's not really one schedule or anything like that that I stick to. I'm taking one class this summer though, in Drama 3P51. I mean, I'm still able to take that job at the hairdressers at the Pen that my friend Rachel got me. I actually have a lot of girl friends, that I guess is kinda common for a gay guy like me ☺. I'm also taking pottery class soon, that runs six weeks. These classes run on Mondays and Wednesdays, so I can still do my volunteering at The Humane Society on Tuesdays. I remember one time, while watching one of the cats I was taking care of, I got scratched on my temple, leaving me with this scar!!! It looks pretty yucky actually. For fun, I like to watch TV and like shows like The O.C. or Desperate Housewives. Me and my boyfriend like to eat out, though I haven't found a really good vegetarian restaurant like they have at home. I'm wondering if we should bring Kirk along one time, because he's been having a hard time lately with his boyfriend (Doug). Last week, I wanted us to talk about it so we had lunch downtown. In terms of my personality, my friends say I talk a lot! Oh and I'm exited to see Sisterhood of the Traveling Pants and would love to go to the Sarah McLachlan concert when I go home.

*\*. Names have been changed for privacy purposes*



## Appendix K: Non-Stereotypical Homosexual Essay

*Please indicate a typical week in your life in the space below.*

My name is Carl Hamm\*. I'm 20 years old and I go to Brock University. In terms of my week, they usually vary. I mean, their's not really one schedule or anything like that that I stick to. I'm taking one class this summer though, in Business Management 3P82. I mean, I'm still able to take that job at the garage that my buddy Rich got me. I actually have a lot of guy friends, that I guess is kinda uncommon for a gay guy like me. I'm also taking karate class soon, that runs six weeks. These classes run on Mondays and Wednesdays, so I can still play football on Tuesdays. I remember one time, during rugby in high school, I got a cleat on my temple, leaving me with this scar. It looks pretty cool, actually. For fun, I like to watch TV and like shows like C.S.I. or 24. Me and my boyfriend like to eat out, though I haven't found a really good steakhouse like they have at home. I'm wondering if we should bring Kirk along one time, because he's been having a hard time lately with his boyfriend (Doug). Last week, I wanted to distract him so we went to the Jays game. In terms of my personality, my friends say I'm too quiet. Oh and I'm exited to see War of the Worlds and would love to go to the 50 Cent concert when I go home.

*\*. Names have been changed for privacy purposes*



## Appendix L: Evaluation Sheet

Please evaluate the following aspects of the essay and indicate your response by circling the number corresponding to your answer on the scale provided.

## 1) Spelling:

1	2	3	4	5	6	7	8	9
Poor				Average				Excellent

## 2) Grammar/structure/format:

1	2	3	4	5	6	7	8	9
Poor				Average				Excellent

## 3) Content:

1	2	3	4	5	6	7	8	9
Poor				Average				Excellent

## 4) Overall Quality:

1	2	3	4	5	6	7	8	9
Poor				Average				Excellent

Please read each statement below and indicate your response by circling the number corresponding to your answer on the scale provided.

## 5) The author stayed on topic (i.e., did not stray from the question asked).

1	2	3	4	5	6	7	8	9
Disagree Strongly				Neutral				Agree Strongly

## 6) The author seems like someone I would not like.

1	2	3	4	5	6	7	8	9
Disagree Strongly				Neutral				Agree Strongly

## 7) I would be interested in getting to know the author who wrote this passage.

1	2	3	4	5	6	7	8	9
Disagree Strongly				Neutral				Agree Strongly



Please read each trait below and indicate your level of agreement as to the applicability of the trait to the essay author.

### 8) Intelligent

1	2	3	4	5	6	7	8	9
Disagree Strongly				Neutral				Agree Strongly

9) Conceited

1	2	3	4	5	6	7	8	9
Disagree Strongly				Neutral				Agree Strongly

10) Nice

1	2	3	4	5	6	7	8	9
Disagree Strongly				Neutral				Agree Strongly

11) Arrogant

1	2	3	4	5	6	7	8	9
Disagree Strongly				Neutral				Agree Strongly

## 12) Anti-social

1	2	3	4	5	6	7	8	9
Disagree Strongly				Neutral				Agree Strongly

### 13) Trust-worthy

1	2	3	4	5	6	7	8	9
Disagree Strongly				Neutral				Agree Strongly

#### 14) Hostile

1	2	3	4	5	6	7	8	9
Disagree Strongly				Neutral				Agree Strongly



### 15) Hardworking

1	2	3	4	5	6	7	8	9
Disagree Strongly				Neutral				Agree Strongly

### 16) Hypocritical

1	2	3	4	5	6	7	8	9
Disagree Strongly				Neutral				Agree Strongly

17) Friendly

1	2	3	4	5	6	7	8	9
Disagree Strongly				Neutral				Agree Strongly

### 18) Free-loader

1	2	3	4	5	6	7	8	9
Disagree Strongly				Neutral				Agree Strongly

### 19) Productive

1	2	3	4	5	6	7	8	9
Disagree Strongly				Neutral				Agree Strongly



## Appendix M: Right-Wing Authoritarianism Scale

This survey examines opinions toward a variety of social issues. You will probably find that you agree with some of the statements, and disagree with others, to varying extents. Please indicate your reaction to each statement by circling the appropriate number.

- 3 strongly disagree

0 neutral

+2 moderately agree

+2 moderately agree

+3 strongly agree

+4 very strongly agree

Very  
Strongly  
Agree

- |    |  |    |    |    |    |   |    |    |    |    |
|----|--|----|----|----|----|---|----|----|----|----|
| 1. | Our country desperately needs a mighty leader who will do what has to be done to destroy the radical new ways and sinfulness that are ruining us.                    | -4 | -3 | -2 | -1 | 0 | +1 | +2 | +3 | +4 |
| 2. | Gays and lesbians are just as healthy and moral as anybody else.   | -4 | -3 | -2 | -1 | 0 | +1 | +2 | +3 | +4 |
| 3. | Our country will be great if we honor the ways of our forefathers, do what authorities tell us to do, and get rid of the “rotten apples” who are ruining everything. | -4 | -3 | -2 | -1 | 0 | +1 | +2 | +3 | +4 |
| 4. | Atheists and others who have rebelled against the established religions are no doubt every bit as good and virtuous as those who attend church regularly.            | -4 | -3 | -2 | -1 | 0 | +1 | +2 | +3 | +4 |
| 5. | The real keys to the “good life” are obedience, discipline, and sticking to the straight and narrow.   | -4 | -3 | -2 | -1 | 0 | +1 | +2 | +3 | +4 |
| 6. | A lot of our rules regarding modesty and sexual behaviour are just customs that are not necessarily better or holier than those that other people follow.            | -4 | -3 | -2 | -1 | 0 | +1 | +2 | +3 | +4 |
| 7. | There are many radical, immoral people in our country today who are trying to ruin it for their godless purposes, whom the authorities should put out of action.     | -4 | -3 | -2 | -1 | 0 | +1 | +2 | +3 | +4 |



-4 very strongly disagree		0 neutral		+1 slightly agree		+2 moderately agree		+3 strongly agree		+4 very strongly agree	
-3 strongly disagree											
-2 moderately disagree											
-1 slightly disagree											
		<i>Very Strongly Disagree</i>								<i>Very Strongly Agree</i>	
		-4	-3	-2	-1	0	+1	+2	+3	+4	
8.	It is always better to trust the judgment of the proper authorities in government and religion than to listen to the noisy rabble-rousers in our society who are trying to create doubt in people's minds.										
9.	There is absolutely nothing wrong with nudist camps.	-4	-3	-2	-1	0	+1	+2	+3	+4	
10.	There is no "ONE right way" to live life; everybody has to create their own way.	-4	-3	-2	-1	0	+1	+2	+3	+4	
11.	Our country will be destroyed someday if we do not smash the perversions eating away at our moral fiber and traditional beliefs	-4	-3	-2	-1	0	+1	+2	+3	+4	
12.	Homosexuals and feminists should be praised for being brave enough to defy "traditional family values".	-4	-3	-2	-1	0	+1	+2	+3	+4	
13.	The situation in our country is getting so serious, the strongest methods would be justified if they eliminated the troublemakers and got us back on our true path.	-4	-3	-2	-1	0	+1	+2	+3	+4	
14.	It may be considered old-fashioned by some, but having a normal, proper appearance is still the mark of a gentleman and, especially, a lady.	-4	-3	-2	-1	0	+1	+2	+3	+4	
15.	Everyone should have their own lifestyle, religious beliefs, and sexual preferences, even if it makes them different from everybody else.	-4	-3	-2	-1	0	+1	+2	+3	+4	



		-4 very strongly disagree			0 neutral			+1 slightly agree			+2 moderately agree			+3 strongly agree			+4 very strongly agree		
</																			



		-4 very strongly disagree			-3 strongly disagree			-2 moderately disagree			-1 slightly disagree			0 neutral			+1 slightly agree			+2 moderately agree			+3 strongly agree			+4 very strongly agree					
														Very Strongly Disagree															Very Strongly Agree		
24.	What our country really <i>needs</i> , instead of more “civil rights” is a good, stiff dose of law and order.	-4	-3	-2	-1	0	+1	+2	+3	+4																					
25.	Some of the best people in our country are those who are challenging the government, criticizing religion, and ignoring the “normal way” things are supposed to be done.	-4	-3	-2	-1	0	+1	+2	+3	+4																					
26.	Obedience and respect for authority are the most important virtues children should learn.	-4	-3	-2	-1	0	+1	+2	+3	+4																					
27.	Nobody should stick to the straight and narrow.” Instead, people should break loose and try out lots of different ideas and experiences.	-4	-3	-2	-1	0	+1	+2	+3	+4																					
28.	Once the government gives us the “go ahead”, it will be the duty of every patriotic citizen to help stomp out the rot that is our poisoning our country from within.	-4	-3	-2	-1	0	+1	+2	+3	+4																					
29.	We should treat protesters and radicals with open arms and open minds, because new ideas are the lifeblood of progressive change.	-4	-3	-2	-1	0	+1	+2	+3	+4																					
30.	The facts on crime, sexual immorality, and the recent public disorders all show that we have to crack down harder on deviant groups and trouble makers if we are going to save our moral standards and preserve law and order.	-4	-3	-2	-1	0	+1	+2	+3	+4																					







## Appendix O: Rosenberg Self-Esteem Scale

Below are a series of statements with that you may either agree or disagree. For each statement, please indicate the degree of your agreement or disagreement by writing in a number ranging from 1 (disagree very much) to 5 (agree very much) on the line next to it.

Disagree	1	2	3	4	5	Agree very
very much						much

- 
1. At times I think I am no good at all. \_\_\_\_\_
  2. I take a positive view of myself. \_\_\_\_\_
  3. All in all, I am inclined to feel that I am a failure. \_\_\_\_\_
  4. I wish I could have more respect for myself. \_\_\_\_\_
  5. I am able to do things as well as most other people. \_\_\_\_\_
  6. I feel that I am a person of worth, at least on an equal plane with others. \_\_\_\_\_
  7. On the whole, I am satisfied with myself. \_\_\_\_\_
  8. I feel I do not have much to be proud of. \_\_\_\_\_
  9. I feel that I have a number of good qualities. \_\_\_\_\_
  10. I certainly feel useless at times. \_\_\_\_\_



## Appendix P: Heterosexual Attitudes Toward Homosexuals Scale

For each statement below, please indicate the degree of your agreement or disagreement by writing in a number from 1 to 9 on the line next to it.

1	2	3	4	5	6	7	8	9
Strongly Disagree								Strongly Agree

1. \_\_\_\_\_ Homosexual men should be allowed to adopt children the same as heterosexual couples.
2. \_\_\_\_\_ I think male homosexuals are disgusting.
3. \_\_\_\_\_ Male homosexuals should *not* be allowed to teach school.
4. \_\_\_\_\_ Male homosexuality is a perversion.
5. \_\_\_\_\_ Just as in other species, homosexuality is a natural expression of sexuality in human men.
6. \_\_\_\_\_ If a man has homosexual feelings, they should do what they can to overcome them.
7. \_\_\_\_\_ I would *not* be too upset if I learned that my son were a homosexual.
8. \_\_\_\_\_ Homosexual behavior between two men of the same sex is just wrong.
9. \_\_\_\_\_ The idea of male homosexual marriages seems ridiculous to me.
10. \_\_\_\_\_ Male homosexuality is just a different kind of lifestyle; it should *not* be condemned.



## Appendix Q: Need for Closure Scale

For each statement, please indicate the degree of your agreement or disagreement by writing in a number from 1 to 6, where 1 = Completely Disagree and 6 = Completely Agree, on the line next to it. Please remember that there are no right or wrong answers, and that your first responses are usually the most accurate.

1	2	3	4	5	6
Completely Disagree					Completely Agree
1.	_____	I think that having clear rules and order at work is essential for success.			
2.	_____	Even after I've made up my mind about something, I am always eager to consider a different opinion.			
3.	_____	I don't like situations that are uncertain.			
4.	_____	I dislike questions that could be answered in many different ways.			
5.	_____	I <i>like</i> to have friends who are unpredictable.			
6.	_____	I find that a well ordered life with regular hours suits my temperament.			
7.	_____	When dining out, I like to go to places where I have been before so that I know what to expect.			
8.	_____	I feel uncomfortable when I don't understand the reason why an event occurred in my life.			
9.	_____	I feel irritated when one person disagrees with what everyone else in a group believes.			
10.	_____	I hate to change my plans at the last minute.			
11.	_____	I don't like to go into a situation without knowing what I can expect from it.			
12.	_____	When I go shopping, I have difficulty deciding exactly what it is that I want.			
13.	_____	When faced with a problem I usually see the one best solution very quickly.			
14.	_____	When I am confused about an important issue, I feel very upset.			
15.	_____	I tend to put off making important decisions until the last possible moment.			



- |     | 1                      | 2   | 3 | 4 | 5 | 6                   |
|-----|------------------------|---|---|---|---|---------------------|
|     | Completely<br>Disagree |   |   |   |   | Completely<br>Agree |
| 16. | _____                  | I usually make important decisions quickly and confidently.   |   |   |   |                     |
| 17. | _____                  | I would describe myself as indecisive.  |   |   |   |                     |
| 18. | _____                  | I think it is fun to change plans at the last moment.   |   |   |   |                     |
| 19. | _____                  | I enjoy the uncertainty of going into a new situation without knowing what might happen.                        |   |   |   |                     |
| 20. | _____                  | My personal space is usually messy and disorganized.  |   |   |   |                     |
| 21. | _____                  | In most social conflicts, I can easily see which side is right and which side is wrong.                         |   |   |   |                     |
| 22. | _____                  | I tend to struggle with most decisions.   |   |   |   |                     |
| 23. | _____                  | I believe that orderliness and organization are among the most important characteristics of a good student.     |   |   |   |                     |
| 24. | _____                  | When considering conflict situations, I can usually see how both sides could be right.                          |   |   |   |                     |
| 25. | _____                  | I don't like to be with people who are capable of unexpected actions.   |   |   |   |                     |
| 26. | _____                  | I prefer to socialize with familiar friends because I know what to expect from them.                            |   |   |   |                     |
| 27. | _____                  | I think that I would learn <i>best</i> in a class that <i>lacks</i> clearly stated objectives and requirements. |   |   |   |                     |
| 28. | _____                  | When thinking about a problem, I consider as many different opinions on the issue as possible.                  |   |   |   |                     |
| 29. | _____                  | I like to know what people are thinking all the time.   |   |   |   |                     |
| 30. | _____                  | I dislike it when a person's statement could mean many different things.  |   |   |   |                     |
| 31. | _____                  | It's annoying to listen to someone who cannot seem to make up his or her mind.                                  |   |   |   |                     |
| 32. | _____                  | I find that establishing a consistent routine enables me to enjoy life more.                                    |   |   |   |                     |



- |     | 1                      | 2  | 3 | 4 | 5 | 6                   |
|-----|------------------------|--|---|---|---|---------------------|
|     | Completely<br>Disagree |  |   |   |   | Completely<br>Agree |
| 33. | _____                  | I enjoy having a clear and structured mode of life.                                      |   |   |   |                     |
| 34. | _____                  | I <i>prefer</i> interacting with people whose opinions are very different from my own.   |   |   |   |                     |
| 35. | _____                  | I like to have a place for everything and everything in its place.                       |   |   |   |                     |
| 36. | _____                  | I feel uncomfortable when someone's meaning or intention is unclear to me.               |   |   |   |                     |
| 37. | _____                  | When trying to solve a problem I often see so many possible options that it's confusing. |   |   |   |                     |
| 38. | _____                  | I always see many possible solutions to problems I face.                                 |   |   |   |                     |
| 39. | _____                  | I'd rather know bad news than stay in a state of uncertainty.                            |   |   |   |                     |
| 40. | _____                  | I do not usually consult many different opinions before forming my own view.             |   |   |   |                     |
| 41. | _____                  | I dislike unpredictable situations.  |   |   |   |                     |
| 42. | _____                  | I <i>dislike</i> routine aspects of my studies.  |   |   |   |                     |



## Appendix R: Personal Need for Structure Scale

Please circle the response that best describes you.

1. It upsets me to go into a situation without knowing what I can expect from it.

Strongly Disagree	Moderately Disagree	Slightly Disagree	Slightly Agree	Moderately Agree	Strongly Agree
-3	-2	-1	+1	+2	+3

2. I'm not bothered by things that interrupt my daily routine.

Strongly Disagree	Moderately Disagree	Slightly Disagree	Slightly Agree	Moderately Agree	Strongly Agree
-3	-2	-1	+1	+2	+3

3. I enjoy having a clear and structured mode of life.

Strongly Disagree	Moderately Disagree	Slightly Disagree	Slightly Agree	Moderately Agree	Strongly Agree
-3	-2	-1	+1	+2	+3

4. I like to have a place for everything and everything in its place.

Strongly Disagree	Moderately Disagree	Slightly Disagree	Slightly Agree	Moderately Agree	Strongly Agree
-3	-2	-1	+1	+2	+3

5. I find that a well-ordered life with regular hours makes my life tedious.

Strongly Disagree	Moderately Disagree	Slightly Disagree	Slightly Agree	Moderately Agree	Strongly Agree
-3	-2	-1	+1	+2	+3



6. I don't like situations that are uncertain.

Strongly Disagree	Moderately Disagree	Slightly Disagree	Slightly Agree	Moderately Agree	Strongly Agree
-3	-2	-1	+1	+2	+3

7. I hate to change my plans at the last minute.

Strongly Disagree	Moderately Disagree	Slightly Disagree	Slightly Agree	Moderately Agree	Strongly Agree
-3	-2	-1	+1	+2	+3

8. I hate to be with people who are unpredictable.

Strongly Disagree	Moderately Disagree	Slightly Disagree	Slightly Agree	Moderately Agree	Strongly Agree
-3	-2	-1	+1	+2	+3

9. I find that a consistent routine enables me to enjoy life more.

Strongly Disagree	Moderately Disagree	Slightly Disagree	Slightly Agree	Moderately Agree	Strongly Agree
-3	-2	-1	+1	+2	+3

10. I enjoy the exhilaration of being in unpredictable situations.

Strongly Disagree	Moderately Disagree	Slightly Disagree	Slightly Agree	Moderately Agree	Strongly Agree
-3	-2	-1	+1	+2	+3

11. I become uncomfortable when the rules in a situation are not clear.

Strongly Disagree	Moderately Disagree	Slightly Disagree	Slightly Agree	Moderately Agree	Strongly Agree
-3	-2	-1	+1	+2	+3



## Appendix S: Religious Fundamentalism Scale

Below are some statements about religious beliefs. Decide how much you agree or disagree with each statement. Write a number that reflects your agreement or disagreement with each statement on the line beside each statement.

- |    | -4 very strongly disagree   | -3 strongly disagree | -2 moderately disagree | -1 slightly disagree | 0 neutral                     | +1 slightly agree | +2 moderately agree | +3 strongly agree | +4 very strongly agree     |
|----|---|----------------------|------------------------|----------------------|-------------------------------|-------------------|---------------------|-------------------|----------------------------|
|    |   |                      |                        |                      | <i>Very Strongly Disagree</i> |                   |                     |                   | <i>Very Strongly Agree</i> |
| 1. | God has given humanity a complete, unflinching guide to happiness and salvation, which must be totally followed.  | -4                   | -3                     | -2                   | -1                            | 0                 | +1                  | +2                | +3 +4                      |
| 2. | No single book of religious teachings contains all the intrinsic, fundamental truths about life.  | -4                   | -3                     | -2                   | -1                            | 0                 | +1                  | +2                | +3 +4                      |
| 3. | The basic cause of evil in the world is Satan, who is still constantly and ferociously fighting against God.  | -4                   | -3                     | -2                   | -1                            | 0                 | +1                  | +2                | +3 +4                      |
| 4. | It is more important to be a good person than believe in God and the right religion.  | -4                   | -3                     | -2                   | -1                            | 0                 | +1                  | +2                | +3 +4                      |
| 5. | There is a particular set of religious teachings in this world that are so true, you can't go any "deeper" because they are the basic, bedrock message that God has given humanity. | -4                   | -3                     | -2                   | -1                            | 0                 | +1                  | +2                | +3 +4                      |
| 6. | When you get right down to it, there are basically only two kinds of people in the world: the Righteous, who will be rewarded by God; and the rest, who will not.                   | -4                   | -3                     | -2                   | -1                            | 0                 | +1                  | +2                | +3 +4                      |
| 7. | Scriptures may contain general truths, but they should NOT be considered completely, literally true from beginning to end.  | -4                   | -3                     | -2                   | -1                            | 0                 | +1                  | +2                | +3 +4                      |



		0 neutral			+1 slightly agree +2 moderately agree +3 strongly agree +4 very strongly agree					
					Very Strongly Disagree			Very Strongly Agree		
-4 very strongly disagree	-3 strongly disagree	-2 moderately disagree	-1 slightly disagree							
8.	To lead the best, most meaningful life, one must belong to the one, fundamentally true religion.	-4	-3	-2	-1	0	+1	+2	+3	+4
9.	“Satan” is just the name people give to their own bad impulses. There really is <i>no such thing</i> as a diabolical “Prince of Darkness” who tempts us.	-4	-3	-2	-1	0	+1	+2	+3	+4
10.	Whenever science and sacred scripture conflict, <i>science</i> is probably right.	-4	-3	-2	-1	0	+1	+2	+3	+4
11.	The fundamentals of God’s religion should never be tampered with, or compromised with others’ beliefs.	-4	-3	-2	-1	0	+1	+2	+3	+4
12.	All of the religions in the world have flaws and wrong teachings. There is <i>no</i> perfectly true, right religion.	-4	-3	-2	-1	0	+1	+2	+3	+4



## Appendix T: Liberalism-Conservatism Scale

**Political Background:** Please read each statement below and indicate your response to it by circling the number corresponding to your answer on the scale provided below.

1) How liberal or conservative do you tend to be when it comes to social policy?

1	2	3	4	5	6	7
Very liberal						Very conservative

2) How liberal or conservative do you tend to be when it comes to economic policy?

1	2	3	4	5	6	7
Very liberal						Very conservative

**Political Affiliation** (check one): Please indicate that political party you support below (check one):

☐ Bloc Québécois

☐ Conservative Party of Canada

☐ Green Party of Canada

☐ Liberal Party of Canada

☐ New Democratic Party

☐ Other (please specify): \_\_\_\_\_



## Appendix U: Memory Check

Without turning back to the essay, please write as many points about the essay as you can remember.

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_
7. \_\_\_\_\_
8. \_\_\_\_\_
9. \_\_\_\_\_
10. \_\_\_\_\_
11. \_\_\_\_\_
12. \_\_\_\_\_
13. \_\_\_\_\_
14. \_\_\_\_\_
15. \_\_\_\_\_
16. \_\_\_\_\_
17. \_\_\_\_\_
18. \_\_\_\_\_
19. \_\_\_\_\_
20. \_\_\_\_\_



## Appendix V and W: Demographics Sheet and Hypothesis/Suspicion Check

*Please note:* For the purposes of the research project, the researchers need as much demographic information as possible. Please complete the following questions, unless a question makes you feel particularly uncomfortable. The information from this sheet will be for statistical purposes only, as you will not be identifiable based on the information provided.

Age: \_\_\_\_\_ years old

Sex (check one): ☐ Male ☐ Female

Sexual Orientation (check one):

☐ Heterosexual ☐ Homosexual ☐ Bisexual ☐ Asexual ☐ Don't Know

Ethnic Background (check any that apply):

☐ White/Caucasian/European

☐ Black/African-American

☐ Asian

☐ Indigenous (Native) Canadian

☐ Middle Eastern

☐ Hispanic/Latino/South American

☐ Other (please specify): \_\_\_\_\_

*Please answer the following questions. If you do not have an answer, you may leave it blank.*

The main topic in this experiment was:

This hypothesis in this experiment was/is about:

Please turn your package upside down and wait for instructions. Thank you.



## Appendix X: Written Debriefing

**Research Project Title: Emotions and Social Opinions Study**

You have just taken part in a study concerning how making individuals think about different ideas evaluate an individual. Participants were asked to write about what they thought of their own death, being uncertain, or about watching television.

Concerning the individual and passage that was evaluated, contrary to what was said in the instruction sheet about each individual reading a different passage, all writers read about a fictional homosexual student; however, some essays described him as outwardly homosexual, while his homosexuality was not as obvious in other essays.

Previous studies have shown that when individuals are reminded of their own death or their being uncertain, people have a tendency to cling to the ideas and beliefs that are familiar to them—this can also include beliefs about people. For instance, one study showed that when people are reminded of their death, they generally prefer a stereotypical homosexual (who has many female friends and enjoys theatre and dance, for example) over a non-stereotypical homosexual (who has many male friends and enjoys sports, for example).

Please do not show this form to anyone else, this is for your viewing only. This is so that other potential participants do not find out about the study beforehand; this could prevent them from reacting naturally. This would ruin the overall results and you will have wasted your time by completing the study. Thank you.

If you feel you have experienced any negative emotions as a result of participating in this research study and wish to speak with a counselor please contact: Brock University Counselling Services, ST 400, ext. 3240.

If you feel your rights as a participant have been violated or you have any questions regarding research participant rights, contact the Research Ethics Office ([reb@brocku.ca](mailto:reb@brocku.ca), (905) 688-5550, ext. 3035).

**Thank you again for your time and support in participating in this study!!**

If you have any questions or concerns please feel free to contact any of the following:

PJ Sangalang (Principal Investigator)

[ps04cw@brocku.ca](mailto:ps04cw@brocku.ca)

905-688-5550 (ext. 3714)

Dr. Gordon Hodson (Supervisor)

[ghodson@brocku.ca](mailto:ghodson@brocku.ca)

905-688-5550 (ext. 5127)

For further information about the topics in this experiment, see:

Schimmel, J., Simon, L., Greenberg, J., Pyszczynski, T., Solomon, S., Waxmonsky, J., & Arndt, J. (1999). Stereotypes and terror management: Evidence that mortality salience enhances stereotypic thinking and preferences. *Journal of Personality and Social Psychology*, 77 (5), 905-926.

Van den Bos, K., Poortvliet, P. M., Mass, M., Miedema, J., & Van den Ham, E. (2005). An enquiry concerning the principles of cultural norms and values: The impact of uncertainty and mortality salience on reactions to violations and bolstering of cultural worldviews. *Journal of Experimental Social Psychology*, 41, 91-113.



## Appendix Y: Verbal Debriefing Script

Before I begin, I want to thank everyone again for participating. I also want to remind everyone that the all your answers will be kept confidential. Notice, for instance, that we never asked for your name or student number.

I will now go through the debriefing part of the experiment, where I will elaborate on the purpose of the study. Please stop me anytime if you have questions.

Now, as you know, you were told that this study involved emotions and social opinions. This, however, was not the whole story; this study did involve some intentional deception. So, I want to explain the work we're doing in a little more detail before you go today. Do you have anything you would like to ask before I start?

Ok, nobody raise your hand, but do any of you remember being asked to write about your own death or your being uncertain? You were in the experimental conditions. Those of you who wrote about television were in the control condition. You were all randomly assigned in these conditions, and even I don't even know who got what. Those of you in the experimental conditions were asked to think about death and being uncertain because we wanted you to keep those ideas in mind for the next few minutes as you complete the other upcoming tasks. As for those of you in the TV/control condition, we needed you to do a similar task but that did not prompt thoughts of death or being uncertain.

Research says that after being made to think about death or being uncertain, a short time delay, that includes you being distracted from thinking about death or uncertainty for a few moments, is required. That's why we had you fill out questionnaires about feelings and made you complete that word-stem task.

Any questions so far? Does all of this make sense?

Then we asked to read a passage written about a student at the university, that you then evaluated soon after being made to think about death or uncertainty. We wanted you to read about the student and evaluate him or her while you still had thoughts of your own death or being uncertain fresh in your mind. Research shows that when you are made to think about your death or about being uncertain, that will likely affect how you evaluate certain things, including people.

What you might like to know is that although you read that everyone received different written passages, everyone received only one of two passages; this deception was intentional. Again, don't raise your hand or indicate to others what passage you got, but you all received a passage describing the typical week of a homosexual who acted consistently with stereotypes about homosexuals (for instance, that they have a lot of female friends or doesn't enjoy contact sports) or who didn't act consistently with stereotypes concerning homosexuals. The characteristics describing stereotypical and non-stereotypical behaviour of homosexual males were based off the results of research done by other psychologists, which I then wrote up in essay form. You were told that everyone received a different passage because we wanted you to think that other people received passages where the author wasn't



a homosexual; basically, we wanted you to think that the authors of other papers were from different groups in case knowing everyone had a homosexual author would cloud how you answered the proceeding questions.

Any questions so far? Does all of this make sense?

Now I'll explain the purpose of the questions where you were asked to circle your answers, i.e., The questionnaires. First, we wanted to see if there is a relation between how people evaluated the written passage and the writer under the different experimental conditions I mentioned earlier. Then, we wanted to see the relation between all of that and some of the items on the questionnaires. Certain parts of the questionnaires measured differences between people. For example, one set of questions measured the personality variable called Need for Closure. So basically to sum it up, we wanted to see the relations between how people with different personalities evaluate others when made to think of their own death or being uncertain.

Would you like me to repeat that, or do you have any questions?

Now I want to explain why we didn't tell you everything concerning the purpose and procedure of the research until the study was over. If people know everything about the research before they come in here, they may answer the questionnaires according to what they think we are looking for—either subconsciously or just to be helpful and cooperative. Then we wouldn't know if the answers we are getting are people's true and honest responses or not. We would prefer not to hide anything about the experiment, but we also have to make sure that we are getting spontaneous and realistic responses from people. Does that make sense to you?

If you feel the need to do so as a result of this study, the contact information for Brock University Counselling Services will be in the written debriefing form I will give you before you leave. Furthermore, if you want to contact me with any questions, please feel free to e-mail me. In fact, if you want to talk for a bit after this session, I will be here for a few minutes afterwards.

You've all been very helpful. But before you go, I have to ask a favor of you before we wrap things up. It's very, very important that you do not discuss this study or anything I told you with anyone else. Those people could have signed up for this study. If people know what's expected of them before they come in here, their reactions to the questionnaire may be influenced in some way, as I just talked about, and the data that we are collecting would be useless. I cannot emphasize enough how important it is that people come into the study not knowing exactly what we are trying to do. With that in mind, it would be very helpful to me if you can let me know what, if anything, you heard about this study before you came here today. I don't care where or from whom you heard anything, I just want to know what you may have heard (*note: the experimenter will make a note of these on the participants' suspicion check form if they heard something*). You can tell people that you read a passage and filled out a questionnaire, just please do not tell them that you were made to think of anything before reading a passage, what the passage was about or what the questionnaire



questions were. Does everyone understand this?

Okay, the last thing I'm going to give you is a short, written explanation of the study for reference. The results of this research will be available approximately one year from now. Please do not show anyone this written debriefing form as it is for your viewing purposes only.

Do you have any more questions? Then allow me to thank you again for your cooperation.



### Appendix Z: Analysis of Three-Way Interaction Example

This section will now expand upon the method of analysis described in the text to deduce the significance of the three-way interactions involving the threat manipulation, the stereotype-fit manipulation, and the main individual difference variables. In this example, the predictor analyzed will be the continuous individual difference variable, RWA. The analysis follows Gardner and Esses (2002). SPSS Version 13 (Student Version) was used to in this analysis.

#### Step 1: Centering the continuous variable.

The first step in the process is to centre the variable. First, a total RWA score for each participant (designated with the SPSS variable name TOTALRWA) was calculated by computing an average of the participants' score on the 30 items of the RWA. A grand mean (GM) for the sample was then calculated by computing the average of TOTALRWA scores for each participant. In this case, the GM is -1.162528735632 (scores on the RWA scale ranged from -4 to +4). To center the variable, a grand mean (GM) of RWA was calculated, yielding a GM of -1.162528735632. The Centred RWA (cRWA) was calculated by subtracting the GM from the TOTALRWA:

$$\text{cRWA} = \text{TOTALRWA} - (-1.162528735632)$$

(Note: because the GM is negative, the number was added instead of subtracted to the TOTALRWA)

Examination of the mean of cRWA reveals a score of 0, indicating that the variable TOTALRWA was successfully centred. For the sake of simplicity for the rest of the calculations, a new variable, "A" was computed which is the equivalent of the cRWA



variable.

## 2) Effect Coding

The two categorical variables (Threat and Stereotype Fit) were effect coded. The three Threat conditions were coded as B1 and B2. Because the number of vectors = number of conditions minus 1, two threat vectors were then created for the three threat conditions. This is shown in the following table.

Variable Name	Vector (SPSS Code)	Effects Coding
Threat Vector 1		
<i>Mortality Salience</i>	B1	1
<i>Uncertainty Salience</i>	B1	0
<i>Control</i>	B1	-1
Threat Vector 2		
<i>Mortality Salience</i>	B2	0
<i>Uncertainty Salience</i>	B2	1
<i>Control</i>	B2	-1

The Stereotype Fit conditions were coded as C1 with one Stereotype Fit vector was created for the two conditions. This is shown in the following table.

Variable Name	Vector (SPSS Code)	Effect Coding
Stereotype-Fit Vector 1		
<i>Stereotypical</i>	C1	1
<i>Non-Stereotypical</i>	C1	-1



To create variables for the interactions, a series of “IF Statements” were used in SPSS to calculate the possible combinations of the continuous variable and the two categorical variables were used. These statements are shown in the following:

IF (Salience = 1) B1 = 1 .

IF (Salience = 2) B1 = 0 .

IF (Salience = 3) B1 = -1 .

IF (Salience = 1) B2 = 0 .

IF (Salience = 2) B2 = 1 .

IF (Salience = 3) B2 = -1 .

IF (Congruent = 1) C1 = 1 .

IF (Congruent = 2) C1 = -1 .

Seven new variables were created by multiplying the four original variables. The syntax is shown in the following:

COMPUTE AB1 = A\*B1 .

COMPUTE AB2 = A\*B2 .

COMPUTE AC1 = A\*C1 .

COMPUTE B1C1 = B1\*C1 .

COMPUTE B2C1 = B2\*C1 .

COMPUTE AB1C1 = A\*B1\*C1 .

COMPUTE AB2C1 = A\*B2\*C1 .

EXECUTE .

A, B1, B2, C, AB1, AB2, AC1, B1C1, B2C1, AB1C1 and AB2C1 comprised the main effects and two- and three-way interactions.

### 3) Calculating variance for particular effects

To calculate the variance contributed by each main effect and interactions, the Total  $R^2$  was first calculated for each dependent variable: the Evaluation of the Target (coded in SPSS as “EVALPers”) and Evaluation of the Essay (coded in SPSS as “EVALWrit”).

Afterward, each main effect and each interaction was first removed (subtracted) individually



and the  $R^2$  was re-calculated. To calculate for the variance contributed by A, this value is subtracted from the original  $R^2$  with all the variables.

$$R^2_x = R^2_{\text{Total}} - R^2_{\text{Without } x}$$

$x$  = the main effect/interaction

For this example, a total  $R^2$  for the evaluation of the target (designated in SPSS as “EVALPers”) was first calculated. This was computed by performing a linear regression on SPSS with EVALPers as the dependent variable and A, B (B1 and B2), C, AB (AB1 and AB2), AC (AC1), BC (B1C1, B2C1), and ABC (AB1C1, AB2C1) as the independent variables simultaneously (i.e., all in one block). The total  $R^2$  for EVALPers and these two variables is 0.228084193233.

Each of the main effects and interactions were removed from the block and the  $R^2$  was recalculated to calculate the variance contributed by each main effect and interaction term. For example, The total  $R^2$  for EVALPers when A (the main effect of RWA) is removed is 0.1617236646638. To calculate for the variance contributed by A, this value is subtracted from the original  $R^2$  with all the variables.

$$R^2_A = R^2_{\text{Total}} - R^2_{\text{Without } A}$$

$$R^2_A = 0.228084193233 - 0.1617236646638$$

$$R^2_A = 0.066360529.$$

For main effects which involve the variable B (which involves 2 vectors, B1 and B2), both



variations of B1 and B2 are removed. For instance, in the case of calculating the  $R^2$  of the main effect of B, the formula is as follows:

$$R^2_B = R^2_{\text{Total}} - R^2_{\text{Without B1}} \text{ and } R^2_{\text{Without B2}}$$

$$R^2_B = 0.228084193233 - 0.211576227233$$

$$R^2_B = 0.016507966$$

The variance contributed by the main effects and interactions are shown below.

Main Effect/Interaction	Variance Accounted For
$R^2$ Total	0.228084193
A	0.066360529
B	0.016507966
C	0.006774698
AB	0.006484390
AC	0.001308324
BC	0.012487162
ABC	0.087635973

#### 4) Calculating the F-Score

The  $R^2$  of each main effect and interaction was then used to calculate the  $F$  score for each effect, which was calculated by taking the quotient of the  $R^2$  of the main effect or interaction by the number of vectors of that same main effect or interaction (the numerator) and dividing that by the total degrees of freedom (the denominator). The mathematical representation is as follows.



$$F_x = (R^2 \text{ of } x / \text{Degrees of Freedom of } x) / n - a - b - c - ab - ac - bc - abc$$

$x$  = the main effect/interaction

$n$  = The number of participants (180)

$a, b, c, ab, ac, bc, abc$  = degrees of freedom for each term

To calculate the F-score for the main effect of RWA (A), the formula is as follows:

$$F_A = (R^2 \text{ of } A / df_A) / 180 - a - b - c - ab - ac - bc - abc$$

$$F_A = (0.066360529 / 1) / 180 - 1 - 2 - 1 - 2 - 1 - 2 - 2$$

$$F_A = 14.4427264$$

The F-Scores of each main effect and interaction is shown below.

Main Effect/Interaction	$F$
A	14.4427264
B	1.796399481
C	1.474447434
AB	0.705632348
AC	0.284744053
BC	1.358854894
ABC	9.536560452

### 5) Calculating the $p$ -value

The  $p$ -value of each variable is calculated using the F-score. An online tool developed by Dr. Allen Chang found at [http://department.obg.cuhk.edu.hk/researchsupport/F\\_Test.asp](http://department.obg.cuhk.edu.hk/researchsupport/F_Test.asp) was used to determine the  $p$ -value. The website requires the user to input the F-score, and the  $df$  of the group and the  $df$  of the residual. The  $df$  of the group is 1, except for when the main effects and interactions that involve B (B, AB, BC, ABC) where the  $df$  for the group is 2. The  $df$  for the residual is always 180.



For example, with a  $F$ -value of 14.4427264 and a group  $df$  of 1 and a residual  $df$  of 180, the variable A (the main effect of RWA) is significant at  $p = 0.0002$ . These values are shown in the following table, which is parallel to the top part of Table 5 (DV = Target Evaluation).

Main Effect/Interaction	$F$	$p$
A	14.4427264	<.001
B	1.796399481	0.169
C	1.474447434	0.226
AB	0.705632348	0.495
AC	0.284744053	0.594
BC	1.358854894	0.260
ABC	9.536560452	<.001



## Appendix AA: Measures of Affect

TMT research has shown that the resulting effects of asking individuals to think about their own death are not due to increased negative affect (Arndt et al., 1999, 2001; Arndt et al., 2002; Greenberg et al., 1990; Harmon-Jones et al., 1997; Landau et al., 2004). Many TMT studies have used the PANAS-X (Watson & Clark, 1991) to measure affect. To explore the role of affect, the present study included the PANAS-X. Additionally, the affective content of the passages written by participants under the various threat conditions were also examined.

*PANAS-X.* To test for affect in the present study, a total score for negative affect was calculated. First, reverse-scoring was performed on the scores of the positive affect items on the PANAS-X. These were then added to the scores on the negative affect items on the PANAS-X scale to create a single total score for negative affect. Table 4 shows that correlations between PANAS-X and the measure of liking of the target ( $-.01$ ) and the essay ( $-.08$ ) were both not significant suggesting that, indeed, affect scores did not correlate with the two evaluation scores. Within-cell correlations (that is, examining within the same six cells involving the three threat and two fit manipulations, as was done in the Principal Analyses) show that no significant correlations exist between Target Evaluation and the PANAS-X measure across all cells. A marginally significant negative correlation exists between PANAS-X and the Essay Evaluation in the Stereotypical-MS ( $r = -.36, p = .051$ ) and the Non-Stereotypical-Control ( $r = -.36, p = 0.54$ ) conditions. Additionally, no significant correlations exist between RWA and the PANAS-X nor between SDO and the PANAS-X, suggesting that those high in RWA and high SDO did not feel any more [negative] affect compared to those low in RWA and SDO, respectively. Finally, a one-way ANOVA also



shows that, among the three different threat conditions, no difference for affect, as measured by the PANAS-X, was found,  $F(1, 169) = .999, p = .499$ . Therefore, as measured by the PANAS-X, negative affect did not affect participants' evaluation of the homosexual target or the essay.

*Coded Affect Responses in Written Stories.* Affect was examined in a second way by coding for the level of affect present in the writing of the participants. Participants' written responses to the threat manipulations were examined for affect (Coded Affect). Interrater-reliability for Coded Affect for the subset of 30 was acceptable,  $r = .75, p < .001$ . When asked to write of their own mortality, being uncertain, or watching television, participants were given a score between 0 and 10. A score of 0 indicated high positive affect, a score of 10 indicated high negative affect, and a score of 5 indicated no discernable affect or that an equal amount of negative and positive affect was detected. Within-cell correlations also showed that in none of the six cells were Target or Essay Evaluations correlated with Coded Affect. Therefore, this other method of examining the influence of affect showed that participants' affect did not influence their evaluation of the homosexual target nor the essay.

*Coded Affect Scores Across the Three Threat Groups.* Results of the  $F$ -test show that there is a significant difference in affect scores across the threat groups,  $F(3, 185) = 66.19 (p < .001)$ . Results from Tukey's test indicate that participants showed significantly more negative affect in the mortality salience condition ( $M = 7.78$ ) than in the control condition ( $M = 3.02, p < .001$ ). Similarly, participants in the uncertainty condition ( $M = 7.85$ ) were rated as exhibiting more negative affect than those in the control condition ( $M = 3.02, p < .001$ ). No significant difference exists between the scores of those in the MS and UNC conditions ( $p = .982$ ). Thus, participants in the MS and UNC conditions were rated as exhibiting significantly



more negative affect than those in the control group.

Consistent with the claims of proponents of TMT that the results of the mortality salience manipulation is not affect driven (e.g., Arndt et al., 1999; Arndt et al., 2002; Landau et al., 2004), one-way ANOVA analyses from the current study do show that no difference in affect scores exist across the three threat groups. However, it is important to note that the main effect of threat was not significant in predicting liking of the homosexual and that no difference in affect was found within the different Threat and Stereotype Fit cells; it is unsurprising then, that affect scores across the threat groups are not significantly different.

*Presence of Positive and Negative Affect in the Control Group.* Additionally, a one-sample t-test shows that the mean Coded Affect score of 3.16 for the control group (i.e., those who wrote about watching television) is significantly more positive than the scale midpoint value of 5 (which indicates that no affect, or equal presence of both),  $t(63) = -6.20$ ,  $p < .001$ . Therefore, those in the control condition inadvertently experienced positive (not neutral) affect.

Further exploration of the participants' responses revealed that some participants wrote about viewing news programs about wars or crime dramas, which may prompt thoughts of their own death. Conversely, participants who spoke of viewing comedy programs or their favourite shows in general also indicated feelings of relaxation and happiness. Clearly, some individuals are passionate enough about this topic that positive or negative feelings may result from thinking about these topics, as the results showed. Only about one-fourth of individuals were coded as being neutral on the affect scale, whereas more than half were reported as experiencing positive affect while writing about television; in fact, the mean for the control group was indeed positive. This finding that participants in the



control condition experiencing a positive affect indicates a possible flaw with using television watching as a control group; if the purpose of the control group is to provide a neutral condition as a comparison group and participants in the control group may be experiencing positive affect when writing, perhaps a different task for this group is required.



### Appendix AB: The Schimel et al. (1999) Characteristics Measure

Participants' evaluations of the homosexual target were composed of 7 questions which asked participants' evaluations of the essay (questions 1 to 5) and the homosexual target himself (questions 6 and 7), as stipulated. Because aspects of this study were based on the design of Study 3 from Schimel et al. (1999), the 12-item target characteristics scale from that study was added for the purpose of comparison, even though they were originally used for liking of an African-American target. These questions asked participants to determine, along a 1 to 9 scale, the degree in which certain characteristics applied to the homosexual target. These include traits such as "Intelligent" (Question 8) and "Hostile" (Question 14), which are characteristics arguably more relevant to African-American stereotypes (Abreu, 1999) than homosexual stereotypes.

Two regression analyses, one involving RWA, Threat, and Stereotype Fit and another involving SDO, Threat, and Stereotype Fit, were performed using the Schimel et al. (1999) measure as the dependent variable, were performed similar to the main analyses. With regards to RWA, a significant main effect of RWA was found on the Schimel et al. Ratings,  $F(1, 169) = 19.73, p < .001$ , suggesting that RWA predicts disliking of the target on these characteristics. A significant main effect of Stereotype Fit also exists,  $F(1, 169) = 9.07, p < .01$ , suggesting that a difference exists in how participants liked the stereotypical and non-stereotypical homosexual target on these characteristics as well. Correlational analysis show a negative correlation between Stereotype Fit and the Schimel et al. measure ( $r = -.233, p = .002$ ), revealing that there is less liking for the target when he is a non-stereotypical homosexual than a stereotypical homosexual. No other main effects or interactions were significant; with regards to the three-way interaction in particular, using the Schimel et al.



characteristics as the dependent variable yielded an interaction that was not significant ( $F(2, 169) = 1.61, p > .05$ ).

With regards to SDO, a significant main effect of SDO was found on the Schimel et al. characteristics measure,  $F(1, 169) = 10.93, p < .01$ , suggesting that SDO predicts liking of the target on the characteristics described in the Schimel et al. measure. A check on the correlation between SDO and the Schimel et al. characteristics measure indeed show that SDO is significantly negatively correlated with the measure ( $r = -.244, p = 0.001$ ). Thus, increases in SDO are associated with decreased liking of the target, as measured by the Schimel et al. measure. A significant main effect of Stereotype Fit was also found ( $F(1, 169) = 9.03, p < .01$ ) suggesting that a difference exists in how participants liked the stereotypical and non-stereotypical homosexual target on the characteristics identified in the measure, such that Stereotype Fit is negatively correlated with the Schimel et al. Measure (as shown previously). Similarly to RWA, none of the other main effects or interactions involving SDO were significant, including the three-way interaction,  $F(2, 169) = 0.17, p > .05$ .

In conclusion, although Schimel et al. (1999) found success with the measure (regarding predicting liking of homosexuals), the current study did not. It is plausible that this is due to some of the items on the measure did not apply to the target in the current study (for instance, no indication of whether Carl was "Hostile" or not was hinted at in the essay). Therefore, because no three-way interactions were found to be significant using the Schimel et al. characteristics scale as a dependant variable, this measure was not considered any further.



### Appendix AC: Correlates of the Memory Recall Task

The current study included a measure of memory, the Memory Recall Task, at the end of the experiment. The task asked participants to try and remember information about the homosexual target whom they read about in the beginning of Package 2. Rojahn and Pettigrew (1992) and Stangor and McMillan (1992) have found a slight memory advantage for inconsistent information over information consistent with expectations. In the present study, inconsistent information is akin to the non-stereotypical homosexual target whereas consistent information is akin to the stereotypical homosexual. A One-way ANOVA reveals that in the current study, no advantage for memory exists for the non-stereotypical or stereotypical homosexual target,  $F(1, 175) = .002, p > .05$ .

Correlation analyses reveal that the Memory Recall Task is significantly positively correlated with Target Evaluation,  $r = .15, p < .05$ . This suggests that as the number of details about the homosexual target are correctly remembered, the more the participants liked him. The only other significant correlation involving the Memory Recall Task is a negative correlation between the measure and the Homosexual Attitudes Toward Homosexuals Scale,  $r = -.17, p < .05$ . In essence, high scores on the Homosexual Attitudes Toward Homosexuals Scale are associated with less number of details being remembered about the target.

It appears that although the RWA x Threat and SDO x Threat interactions predicts liking of the stereotypical and non-stereotypical target, preference is not equated with remembering details concerning the target. It is possible that the descriptions of the stereotypical and non-stereotypical homosexual may not prove to be memorable, although the descriptions do affect liking of the targets.

It is interesting to note the significant negative correlation between the Heterosexual



Attitudes Toward Homosexuals Scale and the Memory Recall Task as well as the significant positive correlation between Target Evaluation and the Memory Recall Task, however. With regards to the former, results appear to suggest that the more one dislikes homosexuals, less effort may be expended in remembering specific aspects about individual homosexuals. In a more general sense, it appears that dislike for an out-group leads to a homogenous view of all members of that particular out-group, as shown by the reduced number of details remembered about the individual member of the homosexual target group from the current study. Social cognition literature supports this possible explanation, as findings show that members of out-groups are perceived as more homogenous than members of in-groups (e.g., Park & Judd, 1990).

Conversely, and on a related note, the positive correlation between Target Evaluation and the Memory Recall Task seems to suggest that individuals who like the target homosexual do indeed recall more details about him. In a general sense then, it appears that once an individual (e.g., the target homosexual) is disliked (e.g., by those with high negative attitudes toward homosexuals), details concerning that person's individuality are not particularly recalled. Future studies involving threat, individual differences, and memory recall should be conducted to add to the literature.

Within-cell correlations involving RWA and SDO were performed using the Memory Recall as the dependant variable. The tests examined whether RWA and SDO predict the number of items remembered about the target in the Stereotypical-UNC and Non-Stereotypical-MS cells, respectively. Results show that RWA was not a significant predictor of memory recall in the Stereotypical-UNC condition,  $r = -.04, p > .05$ . SDO was not a significant predictor in the Non-Stereotypical-MS condition,  $r = -.14, p > .05$ .



### Appendix AD: Additional Individual Difference Predictors

Package 2 also asked participants to complete other scales which measured individual differences that were suspected to be related to the main variables of interest (RWA and SDO). Multiple regression analyses, similar to the ones performed on RWA and SDO, were performed using these variables as predictors. None of the main effects and interactions regarding self-esteem, the PANAS-X measure, and the Liberalism-Conservatism Scale yielded significant results for either the Evaluation for the Target and Evaluation of the Essay ratings.

A regression analysis involving Need for Closure indicates a significant main effect of Threat ( $F(2, 169) = 5.69, p < .01$ ) and a significant two-way interaction involving Need for Closure and Stereotype Fit ( $F(1, 169) = 4.84, p < .05$ ) were found on the Target Evaluation ratings, such that there was less liking for the non-stereotypical homosexual for participants low in Need for Closure. No significant main effects and interactions regarding Need for Closure were found on the Essay evaluation ratings. No significant main effects or interactions for Need for Structure were found for the Target Evaluation ratings, although a significant two-way interaction of Threat and Need for Structure was found ( $F(2, 169) = 3.15, p < .05$ ) for the Essay evaluation, such that there was more liking for the homosexual target, such that individuals lower in Need for Structure like the target's essay under the threat of death and uncertainty, but less so in the control condition. Conversely, individuals higher in Need for Structure like the target's essay in the threat conditions less in the two threat conditions compared to when in the control condition.

In summary, Need for Closure, Personal Need for Structure, and Religious Fundamentalism were significantly correlated with RWA. Previous research have shown that



these concepts are highly correlated (Altemeyer, 1998; Lippa & Arad, 1999). Future research regarding the relationships of these variables may test the idea that these concepts together indicate a general personality that is highly oriented to the idea that the world is a dangerous place, as individuals high in RWA are apt to believe. However, these variables did not (largely) perform in the same manner as RWA and SDO.

Interaction patterns involving the other predictor variables (PANAS-X, Self-Esteem, Need for Closure, Personal Need for Structure, and the Liberalism-Conservatism Scale), however, yielded few significant effects surprises. An unexpected finding is that the two-item Liberalism-Conservatism Scale developed by Skitka et al. (2002) is not a significant predictor of liking of the homosexual target or the essay. Although the scale is significantly positively correlated with the Heterosexual Attitudes Toward Homosexuals Scale (indicating that as conservatism increases, so does prejudice against homosexuals), it is possible that toward a single target homosexual (e.g. Carl), one's political leaning may prove to be less important. Examination of these variables found some interesting findings but as mentioned, the variables did not perform as well as the RWA and SDO scales in predicting liking of a homosexual target. Whereas RWA and SDO are specifically constructed to predict prejudice, these other variables are not. Therefore, it is understandable if they do not predict as well as the two key predictors in this study.

Although some interesting results were found, findings regarding the other predictor variables were sporadic at best. For this reason, and because the study does not focus on these other variables, they were not further discussed.









