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Internalizing and Automatizing Motivation to be Nonprejudiced:
The Role of Self-Determination in Stereotyping, Prejudice, and Intergroup Threat

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# *Internalizing and Automatizing Motivation to be Nonprejudiced: The Role of Self-Determination in Stereotyping, Prejudice, and Intergroup Threat*

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## ABSTRACT

Recent research suggests that people vary in the extent to which their self-regulation of prejudice is self-determined. Furthermore, differences in self-determined prejudice regulation have been shown to predict levels of self-reported prejudice, such that self-determined prejudice regulators display less prejudice than nonself-determined prejudice regulators. Despite this initial evidence, however, the automatic social-cognitive processes involved in the association between motivation to regulate prejudice and prejudice have not yet been examined. Thus, a deeper understanding of the reasons why self-determined prejudice regulation is more effective than nonself-determined prejudice regulation is necessary. To this end, the objective of the present set of studies was twofold. Firstly, differences in the *automatization of prejudice regulation* among those high and low in self-determined motivation to be nonprejudiced were investigated using two different experimental paradigms (*Studies 1, 2, & 3*). Secondly, the framework of motivation to be nonprejudiced was expanded by examining the interplay of motivation to regulate prejudice and *perceived intergroup threat*. In other words, the role of perceived intergroup threat in predicting prejudice was assessed among self-determined and nonself-determined prejudice regulators (*Studies 4 & 5*). *Study 1* ($N$=62), assessed the basic association between motivation to regulate prejudice and prejudice. In line with hypotheses, self-determined prejudice regulators demonstrated less prejudice than nonself-determined prejudice regulators on both explicit and implicit measures of prejudice. In order to determine whether self-determined prejudice regulation yields less prejudice than nonself-determined prejudice regulation due to automatized self-regulatory processing, the role of motivation to regulate prejudice in the automatic activation and application of stereotypes was examined in *Study 2* ($N$=84). Results revealed that, although both self-determined and nonself-determined prejudice regulators displayed similar levels of stereotype activation, only self-determined prejudice regulators were able to automatically inhibit the application of stereotypes when evaluating a target. To further examine the hypothesis that self-determined prejudice regulation operates implicitly in inhibiting prejudice, *Study 3* ($N$=135) experimentally assessed the extent to which the different forms of prejudice regulation were affected by self-regulatory depletion. As anticipated, for the self-determined regulators, prejudice regulation did not vary between depleted and non-depleted individuals. However, when nonself-determined prejudice regulators were depleted, prejudice increased, relative to non-depleted controls. It was concluded that the lower levels of prejudice among highly self-determined prejudice regulators is not merely the result of an absence of automatic racial bias, but rather the presence of a superior, automatic prejudice regulating mechanism. In s*tudies 4 and 5*, it was hypothesized that nonself-determined motivation to control prejudice would exacerbate the effect of perceived intergroup threat on prejudice. Conversely, self-determined motivation to regulate prejudice was expected to reduce the impact of intergroup threat on prejudice. *Study 4* ($N$=122) provided experimental support for this hypothesis by manipulating realistic and symbolic intergroup threat and measuring their impact on various outgroup attitudes. *Study 5* ($N$=255) generalized these findings in a cross-sectional model. Results of both studies supported the hypothesized interaction between motivation and intergroup threat in predicting prejudice. Overall, the present thesis offers promising evidence for the role of self-determined motivation to be nonprejudiced in minimizing prejudice, stereotyping, and the effects of intergroup threat. More fundamentally, results present new insight into the automatization of self-determination, offering promising implications for the reduction of prejudice.

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# Internalizing and Automatizing Motivation to be Nonprejudiced: The Role of Self-Determination in Stereotyping, Prejudice, and Intergroup Threat

*CHAPTER ONE*

## GENERAL INTRODUCTION

### *Problem Statement*

Prejudice causes harm. Broadly defined as a negative evaluation of a social group or group member (Crandall & Eshleman, 2003), prejudice elicits devastating and far-reaching consequences, from hurt feelings to violence and war. Not only is prejudice detrimental to its targets – causing stigma, impaired performance, and depletion of mental resources (Inzlicht & Gutsell, 2007; Inzlicht, McKay, & Aronson, 2006; Swim & Stangor, 1998), but it is also related to several consequences in its perpetrators, such as cognitive inflexibility (Altemeyer, 2004; Sidanius, 1978), diminished well-being (Hightower, 1997), and perpetration of hate-crimes (Hunt, 2007; Ross & Joseph, 2006). For various interpersonal, social, cultural, and economic reasons, the understanding and reduction of prejudice have always been important goals for social psychologists. And, within prejudice research, self-regulation comes into play as a focal topic (e.g., Allport 1954; Plant & Devine, 1998). Given our necessary human cognitive inclination toward categorization of the social world, stereotypes and prejudice are bound to influence behaviour toward outgroup categories in various ways. The role of self-regulation is thus crucial in diminishing the effects of social categorization, and in sublimating, reducing, or even eliminating prejudice and discrimination.

Of course, self-regulation is not a simple process. From personal experience, we know that it often eludes and fails us – whether it be in the forgetting of a birthday, the inability to resist a tempting dessert, or the inadvertent but derogatory remark made about a member of

another cultural group. Indeed, the relationship between self-regulation and prejudice reduction has yet to be fully understood. What motivational mechanisms account for successful prejudice regulation? How can the effective self-regulation of bias be facilitated? Can the internalization of nonprejudiced values lead to the automatization of prejudice regulation? Based on recent evidence that self-determined motivation to be nonprejudiced is related to a relative decrease in prejudice compared to nonself-determined prejudice regulation (Legault et al., 2007), the overarching goal of the current project was to explain the processes underlying this effect. This objective was pursued in two ways. Firstly, I examined whether the relative effectiveness of self-determined motivation to be nonprejudiced is a result of its automatization. The extent to which prejudice regulation is automatic was tested using two complementary conceptual paradigms: differences in automatic stereotype activation and application among self-determined and nonself-determined prejudice regulators were assessed, and; the role of self-regulatory depletion in self-determined and nonself-determined prejudice regulation was examined. Secondly, because intergroup threat is a focal cause of prejudice (Sherif, 1966; Stephan & Stephan, 1998), I investigated its interaction with motivation to regulate prejudice in predicting prejudice. Thus, the impact of intergroup threat on various outgroup attitudes was assessed for self-determined and nonself-determined prejudice regulators.

### *Motivation to be Nonprejudiced*

Prejudice has the potential to stigmatize, to marginalize, to propagate discrimination, and to instill injustice. As such, the reduction of prejudice and discrimination is an important undertaking for many individuals, and, to this end, people are often motivated to circumvent prejudice and reduce discrimination (e.g., Crandall, Eshleman, & O'Brien, 2002; Plant & Devine, 1998). Moreover, people may have differing reasons for the control and/or regulation

of prejudice. For instance, whereas some individuals may strive to be egalitarian because of the personal value inherent in such a goal pursuit, others may try to avoid prejudiced feelings due to perceived political and social standards (e.g., "political correctness"). Indeed, current evidence suggests that motivation plays a role in the control of prejudice (e.g., Devine, Plant, Amodio, Harmon-Jones, & Vance, 2002; Plant & Devine, 1998), and even in the automatic activation of stereotypes (e.g., Moskowitz, Gollwitzer, Wasel, & Schaal, 1999). Yet, until recently, explanations of motivation to be nonprejudiced or egalitarian were lacking in theoretical foundation. That is, despite highlighting the importance of motivation in reducing bias, previous works used simplistic operationalizations of motivation that were not always elaborated. Dunton and Fazio (1997), for instance, were pioneers in the development of a measure of motivation to control prejudice. However, after grappling with some measurement shortcomings (e.g., items that did not isolate the source underlying the motivation; difficulty stabilizing a factor structure representing their hypothesized motivational framework), Dunton and Fazio's final factor solution represented motivation in terms of *magnitude*, and not motivational *type*. Specifically, respondents were scored on the "amount" of motivation (i.e., high vs. low) they expressed, with high scores indicating more motivation to control prejudice. Interestingly, however, this study revealed that those scoring high on motivation to control prejudice also demonstrated lower racism scores on the Modern Racism Scale (McConahay, 1986), thus underscoring the potential influence of motivation on prejudice.

In their landmark paper in 1998, Plant and Devine made a more focused effort to disentangle motivation to respond without prejudice by distinguishing between external-social and internal-personal motivation. These authors developed scales to measure both internal and external motivation to respond without prejudice towards Black people. Internal motivation, in this case, referred to personally important standards of nonprejudice, while external motivation

reflected social pressure to comply with nonprejudiced social norms. Plant and Devine discovered that internal motivation to respond without prejudice was associated with lower self-reported racism scores than was external motivation to respond without prejudice. In a follow-up study, Devine et al. (2002) extended their findings to the implicit domain; those with an internal motivation to respond without prejudice displayed less implicit racial bias compared to those with an external motivation. These studies represent important steps in delineating two specific sources of motivation to respond without prejudice –which appear to have very distinct implications for how racist people actually are. However, their conceptualization (internal-external) of motivation is dichotomous, and therefore may not paint a complete picture of motivation to be nonprejudiced. Moreover, their items – especially those measuring "internal motivation" appear to tap personal standards or beliefs rather than actual *motives* to regulate prejudice. Because the existing conceptualization of motivation to be nonprejudiced overlooks a whole range of motivational orientations that have important implications, its complexity is currently limited. Rather, the framework of motivation offered by Self-Determination Theory (Deci & Ryan, 1985, 2000, 2002) provides a generative platform for the understanding of motivation to regulate prejudice.

### *Self-Determination Theory*

In attempting to develop a more comprehensive taxonomy of motivation to be nonprejudiced, it is useful to turn to Self-Determination Theory (SDT; Deci & Ryan, 1985, 2000, 2002), a broad theory of human motivation centered on the degree to which human goals and behaviours are volitional, internalized, and self-determined. SDT highlights the importance of feeling free and autonomous in order to foster self-determined motivation. The degree to which goals and behaviours are initiated and regulated through autonomous choice, as an

expression of the self, has a substantive and measurable impact on their experiential, behavioural, and cognitive characteristics. According to SDT, the more internalized or self-determined a goal or value, the more consistent one will be in acting in accordance with it; it will be autonomously self-regulated through time and across situations. Its endorsement by the self will make its experience pleasant and uncomplicated.

Within SDT, six styles of regulation are proposed, and these are placed along a continuum of self-determination, such that they vary in the extent to which they are internalized. From most to least self-determined, these include: intrinsic motivation; four forms of extrinsic motivation – i.e., integrated regulation, identified regulation, introjected regulation, external regulation; and finally, amotivation.

*Intrinsic motivation* represents the pinnacle of self-determination because it is pursued freely and out of enjoyment, and generates a sense of satisfaction and competence. Feelings of autonomy and internal control are salient. The individual perceives an internal locus of causality. Intrinsically motivated goals are ends in themselves and are maintained in the absence of external incentives, and often despite external barriers.

*Integrated regulation* is the most self-determined form of extrinsic motivation and occurs when personally endorsed goals, values, and needs are fused with the self, and become part of self-expression. The values and behaviours with which one identifies become assimilated within the self, that is, they align with other needs and values of the overarching value system. Internalization of regulation is so complete that behaviours are performed because they are construed as natural extensions of identity or self-concept. Integrated regulation shares commonalities with intrinsic motivation (e.g., feelings of free choice and autonomy are salient), but is still considered extrinsic because behaviour is performed in order to obtain personally valued outcomes rather than out of pure enjoyment.

*Identified regulation* refers to goals that are sought because they are personally valued or seen as important. Unlike integrated regulation, however, the goal or behaviour is not yet synthesized with one's core personal belief system. Nonetheless, the individual recognizes the relevance or significance of the goal, behaviour, value, or standard. It is a personal endorsement; the point at which externally-governed behaviour becomes self-governed and the perceived locus of causality shifts to internal. The value of behavioural regulation is genuinely acknowledged, and identified motives are meaningful and self-determined.

Within *introjected regulation,* behaviour regulation is not yet completely external, but rather proceeds through internal pressure and constraint. External incentives have been turned inward but not truly accepted as one's own, and thus this type of self-regulation feels quite constrictive. Behaviours stemming from introjected regulation are ego-involved, and are performed to avoid guilt or to enhance self-worth (Deci & Ryan, 2002). Internal pressure is salient, but it does not feel self-endorsed. Thus, this form of motivation is not self-determined.

*External regulation*, the least autonomous form of extrinsic motivation (i.e., completely nonself-determined), refers to motivation that is purely instrumental, that is, behaviours are performed to obtain rewards or to avoid negative consequences. Such behaviours serve external or social demands first and foremost, and this motivation feels forced and controlling. In other words, the locus of causality of behaviour is fully external.

*Amotivation* is positioned at the lowermost end of the internalization continuum. Amotivation refers to the lack of intention to act and results in either an absence of action or action that is passive (Deci & Ryan, 2002). Hence, amotivation demarcates a state in which individuals cannot perceive a relationship between their behaviour and that behaviour's subsequent outcome. Amotivated individuals may feel disintegrated or detached from their behaviours and goals, and may experience learned helplessness (see Abramson, Seligman, &

Teasdale, 1978). Amotivation also ensues when motivation is not valued (Legault, Green-Demers, & Pelletier, 2006; Ryan, 1995).

The prevalence of these separate dimensions of motivation has received support in a number of domains. These include work (Blais, Brière, Lachance, Riddle, & Vallerand, 1993; Deci, Gagné, Ryan, & Leone, 2001; Gagné, Ryan, & Bargmann, 2003; Lévesque, Blais, & Hess, 2004;), education (Cokley, 2000; Guay, Ratelle, & Chanal, 2008; Reeve, 2002), sexuality (Green-Demers, Séguin, Legault, & Pelletier, 2008), leisure (Pelletier, Vallerand, Green-Demers, Blais, & Brière, 1995, 1996), pro-environmental behaviours (Pelletier, Tuson, Green-Demers, Noels, & Beaton, 1998), health-related behaviours (Deco & Ryan, 2008; Sheldon, Williams, & Joiner, 2003; Williams, Gagné, Ryan, & Deci, 2002), sport, exercise, and physical education (Chatzisarantis, Hagger, Biddle, Smith, & Wang, 2003), as well as in client motivation for psychotherapy (Pelletier, Tuson, & Haddad, 1997; Zuroff, D.C., Koestner, Moskowitz, McBride, Marshall, & Bagby, 2007), motivation for friendship (Richard & Schneider, 2005), motivation to be a parent (Gauthier, Senecal, & Guay, 2007), and motivation toward religion (Neyrinck, Vansteenkiste, Lens, Duriez, & Hutsebaut, 2006). The application of SDT to the new domain of prejudice regulation is described next.

### *Prejudice Regulation from a Self-Determination Perspective*

***Self-Determined Prejudice Regulation.*** For people with *intrinsic motivation to be nonprejudiced*, egalitarianism-related goals and values are maintained out of personal satisfaction and enjoyment. Such individuals are motivated by the pleasure they find in being open-minded and in relating to other groups and group members. Interest in intergroup relations is authentic and motivation toward egalitarianism is satisfying and rewarding. These individuals are highly effective at regulating prejudice. An *integrated regulation of prejudice* entails

motivation to act in congruence with deeply internalized goals and values of nonprejudice. Integrated prejudice regulation shares commonalities with intrinsic motivation: Behaviour is performed volitionally and its value is well-integrated within the self. Egalitarianism or nonprejudice is incorporated within the self-concept and core value system – thus, behaving in nonprejudiced ways constitutes an expression of self. Having an integrated regulation of prejudice means regulating prejudice because one views oneself as an unbiased and tolerant person. Nonetheless, integrated regulation is not carried out of pure enjoyment and satisfaction, but instead to attain personally important outcomes, such as expressing one's nonprejudiced beliefs. An *identified regulation of prejudice* represents the conscious valuing and personal endorsement of nonprejudice and egalitarianism. Identified prejudice regulation may not reflect the core of a person's overarching value system, as in integrated prejudice regulation, and it may not always reveal a person's true and integrated self, but egalitarian goal-striving that is governed by identified regulation tends to be relatively autonomous. Because the individual wilfully adheres to the inherent worth of prejudice reduction, identified prejudice regulators can be grouped among those who have a self-determined orientation toward nonprejudice: They are motivated to avoid prejudice because they value egalitarianism and accept nonprejudiced attitudes and behaviour as personally important.

***Nonself-Determined Prejudice Regulation.*** *Introjected prejudice regulation* is observed among individuals who suppress racial bias or avoid discrimination because they feel as if they *should* or *must*, or because they would feel ashamed, guilty, or embarrassed if they failed to do so. Internal pressure to meet standards of egalitarianism and restraint to avoid prejudice is present, but it does not feel freely self-endorsed. As such, this type of regulation of prejudice is performed out of obligation or to reduce anxiety, and feels quite controlling. Someone who suppresses prejudice because s/he fears social reprimand or because s/he does

not want to appear prejudiced in front of others are examples of an *external regulation of prejudice*. Such individuals are highly influenced by social and external standards surrounding the inhibition of prejudice and bias. They may subscribe to nonprejudiced attitudes primarily because it is "politically correct" to do so. Finally, individuals who are *amotivated* to regulate prejudice view egalitarian aims as pointless and do not feel able to control prejudice. Such individuals may sometimes attempt prejudice regulation, but they do not know their underlying reasons. Alternately, they may abandon prejudice regulation because they do not value nonprejudice.

### *Consequences of Self-Determination*

Within SDT, motivation ranges on a continuum from nonself-determined to self-determined, and thus the psychological and behavioural consequences associated with each type of regulation are expected to differ in a manner that reflects this continuum; that is, the highest levels of self-determination are expected to yield the most beneficial outcomes, and this pattern should diminish and become negative as motivation becomes less self-determined. When people feel forced to behave in a particular way, as they do when behaviour is nonself-determined, regulation is weak and negative feelings are experienced. A lack of self-determination is linked to an aversive experience of the motivation. As behaviour becomes more self-determined and people feel free to choose their goals, these aversive elements diminish progressively; tasks become easier to perform, regulation feels comfortable and natural, and positive outcomes are observed.

The pattern of outcomes associated with the various forms of self-determination has also received much empirical support. In education, self-determination has been shown to relate positively to perceived competence, positive emotion, concentration, performance, and

satisfaction with school (Vallerand et al., 1993, 1997), as well as greater cognitive flexibility and active information processing (Grolnick & Ryan, 1987). Conversely, low academic self-determination has been shown to predict school dropout (Vallerand et al., 1997). In the professional domain, self-determination has also been positively linked to satisfaction at work and negatively associated with burnout (Blais et al., 1993). Sexual self-determination has been positively associated with sexual arousal and satisfaction (Green-Demers et al., 2008); self-determined leisure motivation with psychological well-being (Pelletier et al., 1995, 1996); and self-determined environmental motivation with pro-ecological behaviours (Green-Demers, Pelletier, & Menard, 1997). In the realm of health-related behaviours, self-determination has been shown to predict adaptive outcomes in diabetes management (Hill & Sibthorp, 2006), smoking cessation (Williams et al., 2006), oral hygiene (Halvari & Halvari, 2006), and increased physical activity (Thogerson-Ntoumani & Ntoumanis, 2006; Wilson, Blanchard, Nehl, & Baker, 2006).

***Nonprejudice as a Consequence of Self-Determination.*** In line with this prior pattern of consequences associated with degrees of self-determination, recent work has shown that as one moves toward greater self-determination in relation to prejudice regulation, prejudice steadily diminishes (Legault et al., 2007). *Figure 1* summarizes each of the six forms of motivation to regulate prejudice and its implication for the control of prejudice. Theoretically, as a result of self-determined prejudice regulation, people inhibit prejudice more frequently and reliably, and do so with greater ease and effectiveness. Motivational subtypes are defined and ranked according to their level of self-determination, and their outcomes are theorized to be a function of this fundamental dimension. However, each motive is characterized by its unique qualitative form of regulation. Thus, self-determined motivation to be nonprejudiced can occur

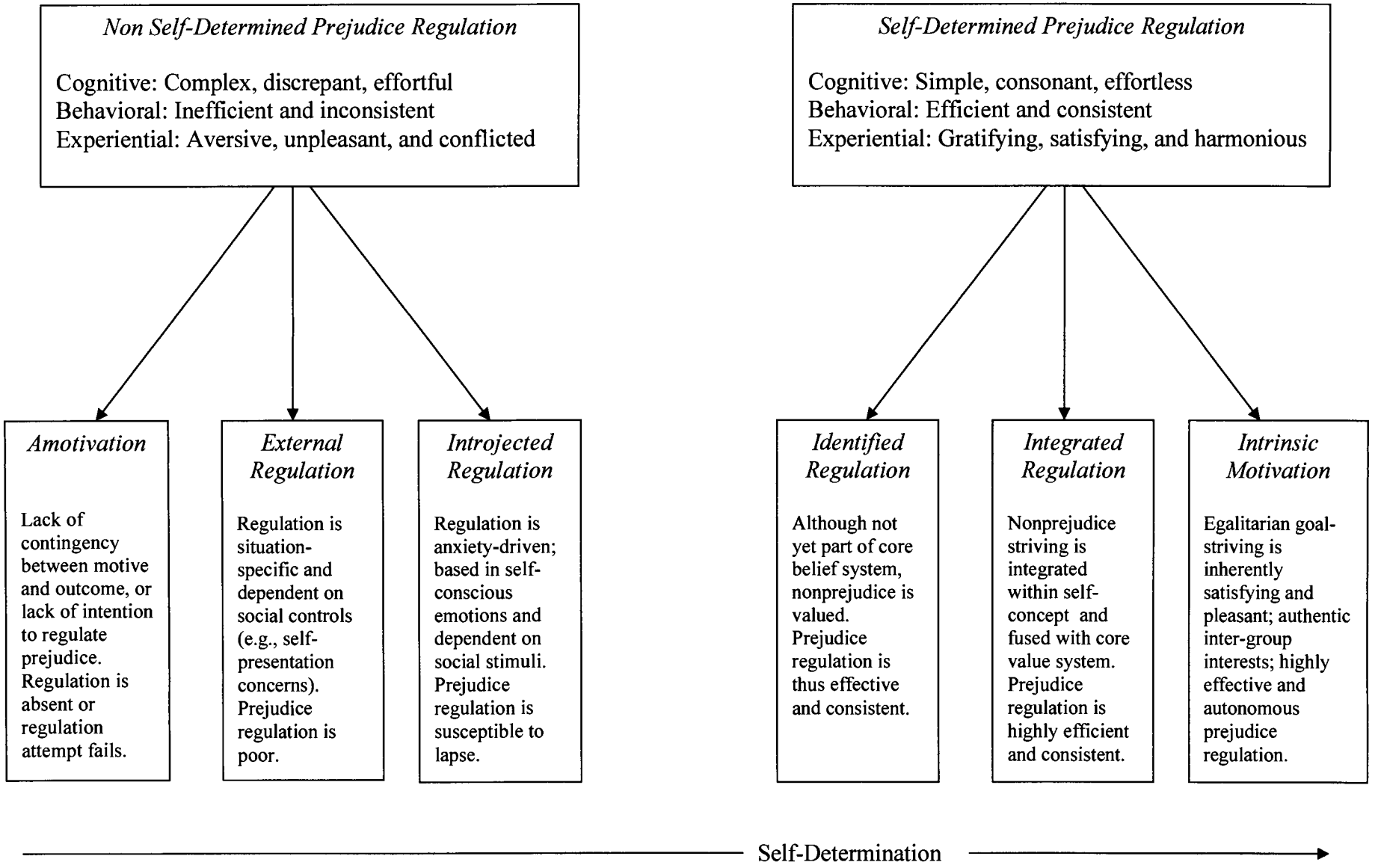



*Figure 1.* Continuum of Motivation to Regulate Prejudice (Legault et al., 2007)

when people enjoy being nonprejudiced and tolerant, or when they derive pleasure from intergroup relations (i.e., intrinsic motivation to be nonprejudiced). Similarly, prejudice regulation is self-determined when people define themselves, or their self-concept, as nonprejudiced (i.e., integrated prejudice regulation), and when they personally endorse egalitarian goals and values (i.e., identified prejudice regulation). Similar positive outcomes can be expected for these motives, but they are brought about by different reasons. Because self-determined motivation to be nonprejudiced is internalized, well-rehearsed and embedded, and autonomously upheld irrespective of external circumstance, its relationship with prejudice regulation is expected to be reliable.

Whereas people with self-determined motivation to regulate prejudice are well-equipped to thwart prejudice because they freely and proactively seek to do so, nonself-determined prejudice regulators tend to falter. Indeed, when people feel obligated to maintain egalitarian standards that they do not truly care about (i.e., introjected prejudice regulation), or when they stifle prejudice and bigotry primarily out of social pressures (i.e., external prejudice regulation), prejudice regulation is weak and inconsistent. Nonself-determined prejudice regulation is demanding, and tends to be unreliable because it is not authentic. Although prejudice may be inhibited when external constraints are in place, it is liable to lapse when instrumental incentives diminish. When people feel alienated from equality strivings, as in the case of amotivation vis-à-vis prejudice regulation, prejudice suppression is unlikely to occur, and thus prejudice will be high (Legault et al., 2007).

### *Empirical Support for a SDT Perspective of Motivation to be Nonprejudiced*

The current framework (i.e., Figure 1) rests on the plausibility that there is more to motivation to regulate prejudice than simply its intensity (as in Dunton & Fazio, 1997) or its

external-internal dichotomy (as in Plant & Devine, 1998; Devine et al., 2002). Thus, the six-dimensional taxonomy, depicting the aforementioned forms of motivation to regulate prejudice, was recently validated (Legault et al., 2007). My prior work, published in *Personality and Social Psychology Bulletin* in 2007, serves as a starting point for the current project.

In this prior set of studies, the *Motivation to be Nonprejudiced Scale* (Legault et al., 2007) was validated using both exploratory and confirmatory factors analyses based on independent samples. Excellent psychometric properties were demonstrated. More specifically, a clean six-factor structure was obtained, such that the hypothesized six-factor model fit the sample data quite well, according to all relevant and substantively meaningful fit indices (i.e., RMSEA, SRMR, and CFI). Reliability was also very good – including internal consistency and test-retest reliability. Good construct validity was also obtained. For instance, as motivation to be nonprejudiced became more self-determined (i.e., as one moved from amotivation to intrinsic motivation along the SDT continuum), correlations with racism and sexism steadily diminished. Indeed, the three self-determined forms of motivation to be nonprejudiced were negatively correlated with prejudice. Moreover, dimensions of motivation to be nonprejudiced showed expected associations with other related constructs. In particular, introjected and external regulations, as well as amotivation, were positively associated with a fear of being negatively evaluated by others, positively associated with having conservative social and political attitudes (e.g., endorsement of the death penalty or authoritarian parenting), and negatively associated with having an internal locus of control.

In terms of concurrent validity, the three self-determined dimensions of motivation to be nonprejudiced displayed moderate positive associations with Plant and Devine's (1998) Internal Motivation Scale (IMS), suggesting convergence of the internal construct but also indicating that the self-determined subscales of the MNPS measure something other than what is

measured by the IMS. It was concluded that the items on the MNPS isolate specific motivational distinctions that the IMS overlooks. In other words, the IMS only evaluates one type of internal motivation or personal standard (i.e., identified). In addition, the self-determined subscales of the MNPS were uncorrelated with Plant and Devine's (1998) External Motivation Scale (EMS); the three nonself-determined dimensions of the MNPS were uncorrelated with the IMS; and only external regulation was correlated with the EMS, which is appropriate given that the items of the EMS would be construed as purely external regulation from a SDT perspective. That none of the other nonself-determined forms of motivation to regulate prejudice were correlated with the EMS further indicates that the MNPS subscales capture a wider range of motivation to be nonprejudiced, from both a self-determined and nonself-determined perspective.

It is of further conceptual interest to note that the MNPS' associations with global self-determination were positive for the three self-determined forms of motivation to be nonprejudiced and negative for the three nonself-determined forms. Thus, the subscales of the MNPS relate to a measure of global self-determination in a conceptually meaningful manner. Indeed, as proposed by the Hierarchical Model of Motivation (Vallerand, 1997), such associations are to be expected between motivational variables at the personality level, and motives that relate to a more domain-specific aspect of self-regulation (e.g., nonprejudice motives). As a final point of construct validity, the MNPS was not related to desirable responding (Legault et al., 2007).

### *Automatization of Prejudice Regulation through Internalization:*

### *The Internalization-Automatization Hypothesis*

Although it appears that motivation to regulate prejudice is related to prejudice, the

precise nature of this relationship requires deeper understanding. On the basis of Self-Determination Theory, it has been found that when people are self-determined in prejudice regulation, prejudice is curtailed more frequently and reliably (Legault et al., 2007). Thus, to the extent that the regulation of prejudice is self-determined, that is, it is done with choice, volition, and a sense of autonomy, it will be effective and effortless, relative to nonself-determined prejudice regulation. But why, exactly, should the self-regulation of prejudice be more efficient among self-determined prejudice regulators? Moving beyond nonprejudice as a consequence of self-determined prejudice regulation, it is of central importance in the present thesis to explore the notion that self-determined motivation to be nonprejudiced can be internalized to the point that it becomes automatic. Thus, the extent to which prejudice regulation is automatic for those high and low in self-determined motivation to regulate prejudice will be addressed.

Thanks to their self-originating nature, the chronicity and stamina of self-determined goals make them prime candidates for automatization (e.g., Moskowitz et al., 1999). The more a goal is rehearsed, the more likely it is to become automatic, and indeed automatic motives inhabit a substantial portion of our motivational system (Bargh & Chartrand, 1999; Hassin, Uleman, & Bargh, 2005). Bargh's Auto-Motive model (1990, 1997) suggests that motivation can become automatic when it is well-learned; Associative environmental cues can unconsciously activate goal pursuit and go on to influence intentions and behaviour. This does not mean that those with self-determined motivation to regulate prejudice are unaware of their nonprejudiced goals – quite the contrary, motivation toward nonprejudice is consciously self-endorsed. However, once it becomes effectively rehearsed and integrated, it is theorized to operate harmoniously and preconsciously, without the expenditure of effort. Thus, such spontaneous prejudice regulation may remain intact when distracted, tired, or when not actively

using self-control. Such automaticity in self-regulation, in turn, is liable to help explain why self-determined prejudice regulation is so much more effective and consistent in reducing prejudice, especially given the toll and disruption of our everyday cognitive life.

Thus, in accordance with the proposed *internalization-automatization hypothesis*, it is theorized that rehearsed, entrenched, and personally-important self-determined goals to be nonprejudiced will become chronically accessible to the point of automaticity. Such automatic self-regulation of prejudice should be evident in the realm of automatic prejudice and stereotyping. That is, self-determined prejudice regulators are expected to demonstrate automatic self-regulation of prejudice on implicit and spontaneous measures of outgroup attitudes. If motivation to regulate prejudice does indeed predict differences in automatic racial attitudes (either through differences in automatic stereotyping or differences in implicitly measured prejudice), then it may be argued that that this regulation of prejudice operates automatically. After all, if implicitly-measured prejudice and automatic stereotyping are somehow controllable, this control *must* occur implicitly (Glaser & Knowles, 2008). Thus, *if* the self-regulation of implicit prejudice and stereotyping is more efficient among self-determined regulators (i.e., they show less automatic racial bias), it is possible that: a) they are regulating racial stereotypes and prejudice automatically with relative effectiveness, presumably because they have repeatedly and deeply internalized their goals of nonprejudice making such self-regulation habitualized and proficient, or b) they display less prejudice because they have less cognitive potential for prejudice to being with; for instance, they hold fewer of the cultural stereotypes that predispose them to associative bias. In search of support for the internalization-automatization hypothesis, the question is thus: Do differences in prejudice among self-determined and nonself-determined individuals reflect true differences in the automatic self-regulation of prejudice, or simply differences in automatic bias to begin

with? This question will be explored using two experimental paradigms designed to test the extent of automatization of prejudice regulation: 1) automatic stereotype activation and application, and; 2) self-regulatory-depletion.

### *1. Automatic Stereotype Activation and Application*

An important way to ascertain whether self-determined prejudice regulators automatically self-regulate prejudice is to examine the implicit process of stereotyping, which involves stereotype activation (i.e., "turning on" the stereotype in memory) and application (using the activated stereotype to make a judgment about a target). Stereotype application is akin to prejudice. Indeed, the mainstream *tripartite model of attitudes* contained in most current social psychology textbooks proposes that a stereotype is the *cognitive component* of a prejudiced attitude (Aronson, Wilson, Akert, & Fehr, 2007; Harding, Proshansky, Kutner, & Chein, 1969). Hence, many classic and contemporary perspectives on prejudice have specified that prejudice is an unavoidable consequence of everyday social categorization (Allport, 1954; Bargh, 1999; Harding et al., 1969; Macrae & Bodenhausen, 2000). Stereotype application and prejudice often ensue automatically from making categorical generalizations about individuals – generalizations that save us time and mental resources. However, at what point does self-determined prejudice regulation come into play during the (often automatic) process of stereotyping?

#### *Automatic Stereotype Activation*

Studies documenting the automatic activation of stereotypes have illustrated that White people harbour automatic negative associations for Black people or other non-White cultural groups which colour judgment about individuals belonging to those groups (e.g., Devine,

1989), and that young adults hold automatic negative stereotypes about the elderly, which, when activated, compel them to behave in ways congruent with elderly stereotypes (Bargh, Chen, & Burrows, 1996). Of course, one of the most significant implications of these findings is that since stereotype activation generally occurs automatically (i.e., it often occurs outside one's awareness and beyond one's control), these biases may be inevitable and impossible to avoid. Accordingly, an abundance of research has underscored the high probability that stereotypes are well-rehearsed sets of associations which are activated unconsciously, unintentionally, and effortlessly by the mere presence of category primes, and go on to influence social thought (i.e., prejudice) and behaviour (e.g., Banaji & Greenwald, 1994, 1995; Banaji, Hardin, & Rothman, 1993; Bargh, Chen, & Burrows, 1996; Chen & Bargh, 1997; Devine, 1989; Dovido, Evans, & Tyler, 1986; Dovido, Kawakami, Johnson, Johnson, & Howard, 1997; Fazio et al., 1995; Gilbert & Hixon, 1991; Lepore & Brown, 1997; Macrae, Milne, & Bodenhausen, 1994; Wittenbrink, Judd, & Park, 1997).

The *automatic activation hypothesis* (Devine, 1989; Bargh, 1999) stems from Allport's (1954) notion that mere exposure to a stimulus target is sufficient to activate 1) categorical thinking and; 2) its subsequent stereotyped reaction (such as applying the stereotype to make a judgment about the target). Devine (1989) suggests that this reaction is due to the fact that the stereotype has been frequently activated in the past and is thus well-learned. Evidently, if a stereotype is *applied* (i.e., you make a stereotypical judgment about a target), it necessarily must have been activated. However, the automatic activation hypothesis goes a step further in suggesting that the automatic activation of stereotypes inevitably leads to their application (Bargh, 1999; Devine, 1989). Given that categorical thought and stereotypes are part of the natural human construal of the social world in which we live, and given that it is impossible to escape immersion in the stereotypes of our cultural environment, the notion that prejudice or

stereotype application automatically follows stereotype activation has undeniably serious implications, and one may wonder whether this process harbours any exceptions.

### *Controlled and Automatic Stereotype Application*

Although it has been argued that stereotypes do not always unfold themselves inexorably, most research on stereotype application suggests that prejudice evaluations can be inhibited through effortful, controlled processes. Otherwise, the automaticity of stereotype application tends to prevail. For instance, in her seminal doctoral dissertation, Devine (1989) reports that even though an individual may have knowledge of a stereotype, his or her personal beliefs may not necessarily be a reflection of that knowledge. In other words, knowing the content of a stereotype may not imply prejudice. Devine argues that this is because stereotypes and personal beliefs are distinct mental structures, representing automatic and controlled processing, respectively. Whereas stereotypes may be activated automatically, without awareness or intention, personal beliefs are more flexible expressions of deliberative processing that require motivation, time, and cognitive capacity to effectuate – particularly when overriding automatic responses. On the other hand, Devine (1989) found that, regardless of their personal beliefs, both high and low prejudiced participants made automatic prejudiced attributions of hostility against a character in a story when they had been subconsciously primed with a Black stimulus (in the absence of any information concerning hostility). Thus, Devine (1989) concludes that activated stereotypes will be automatically applied in making a negative evaluation of a target, unless people have time and energy to exercise their personal beliefs of nonprejudice (i.e., use effortful self-regulation). I argue, however, that when motivation to regulate prejudice is self-determined, the control of stereotype application and prejudice may not require the time and deliberation previously suggested (e.g., Devine 1989).

Rather, if prejudice regulation among those with a self-determined motivation to be nonprejudiced has been deeply internalized to the point of becoming automatic, the application of stereotypes should be implicitly inhibited, independent of depleted regulatory resources.

### *The Intervening Role of Self-Determined Prejudice Regulation in Stereotyping*

I expect that both self-determined and nonself-determined prejudice regulators hold similar cultural stereotypes (i.e., the bases for prejudice). However, I propose that, for those with self-determined motivation to regulate prejudice, the control of stereotyping and prejudice may not require time and deliberation. If prejudice regulation has been internalized to the point of becoming automatic for those with a self-determined regulation of prejudice, then it is possible that they are able to control the extent to which activated stereotypes influence automatic evaluations of stereotype targets. On the heels of evidence that people do not *always* demonstrate prejudice, despite the likelihood that they harbour stereotypes (Blair 2002; Gilbert & Hixon, 1991; Kawakami, Dovidio, Moll, Hersen, & Russin, 2000; Kunda & Sinclair, 1999; Sinclair & Kunda, 1999), I propose that self-determined prejudice regulation intercedes in the implicit process of stereotype application. Because of our universal need and tendency to categorize social information, it is theorized that *both self-determined and nonself-determined individuals will harbour implicit stereotypes*. After all, in order to establish that self-determined prejudice regulation is a relatively more effective and automatic form of prejudice *regulation* per se, we must be certain that there exist stereotypes to regulate in the first place. However, self-determined and nonself-determined individuals are expected to differ in their self-regulation of stereotypes and prejudice, a process that occurs after stereotypes have been activated (Devine, 1989; Kunda & Spencer, 2003). Thus, I expect *self-determined and nonself-determined prejudice regulators to diverge in their automatic application of stereotypes.*

Whereas it may not be particularly surprising that self-determined prejudice regulation should predict relatively less stereotype application when the opportunity for deliberation is high (say, for instance, on explicit self-reports of prejudice; Legault et al., 2007), this trend is expected even when stereotype application is automatic. Thus, moving a step past Devine's (1989) assertion that high and low prejudiced individuals *automatically* apply stereotypes with similar frequency but differ in the controlled and voluntary expression of racial bias, it is anticipated that self-determined prejudice regulation should come into play at the preconscious level to inhibit automatic evaluation of stereotype targets. This assertion is supported by the previous finding that self-determined individuals demonstrate less prejudice than their nonself-determined counterparts on automatic measures (Legault et al., 2007), but also on the reasoning that a self-determined regulatory style is theorized to operate implicitly through nonprejudiced goals that are highly valued (e.g., Legault et al., 2007; Moskowitz, Gollwitzer, Wasel, and Schaal, 1999). Also, spontaneous stereotype application has been shown to be higher among those who feel that stereotype suppression is not a very important goal, compared to those who value the goal of stereotype avoidance (Gordijn et al., 2004). Moreover, Moskowitz and his colleagues (1999) note that having an egalitarian goal-orientation may operate unconsciously to prevent stereotyping.

In summary, the proposed internalization-automatization hypothesis states that the self-determination of motivation to be nonprejudiced fosters the automatization of prejudice regulation. In search of support for this hypothesis, it is proposed that self-determined prejudice regulation intercedes in the automatic stereotyping process, such that self-determined and nonself-determined prejudice regulators differ in the nature of their prejudice regulation (i.e., automatic stereotype application), not simply in the accessibility of their cultural stereotypes. Thus, whereas both self-determined and nonself-determined prejudice regulators are expected

to demonstrate automatic stereotype activation, only self-determined prejudice regulators are expected to automatically inhibit the application of stereotypes.

To answer the question of automaticity, one may also ask whether self-determined and nonself-determined prejudice regulators differ in the extent to which prejudice regulation requires effort. If self-determined prejudice regulation does indeed occur automatically, it should not require effort, and should not be affected by self-regulatory depletion. Thus, another way to assess the automaticity of motivation to be nonprejudiced is to examine the extent to which it falters when self-regulatory capacity is reduced.

### *2. The Impact of Self-Regulatory Depletion on Prejudice*

If prejudice regulation is indeed automatic among self-determined regulators, then it should not be influenced by depletion. On the other hand, if prejudice regulation is effortful and requires self-control, then it should be hindered by depletion and be taxing on self-regulatory resources. According to the strength model of self-regulation (Baumeister, Heatherton, & Tice, 1994; Baumeister, Bratslavasky, Muraven & Baumeister, 2000; Muraven, & Tice, 1998), the self is a limited resource that is used for all acts of controlled processing, self-regulation, and overriding dominant responses (i.e., inhibition). Exercising self-regulation seems to produce a psychic cost, in the sense that subsequent acts of self-regulation are more apt to fail. This phenomenon of *self-regulatory depletion*, also known as ego-depletion (e.g, Baumeister et al., 1994; Gailliot, Plant, Butz, & Baumeister, 2007), has been demonstrated in a wide variety of situations (e.g., Baumeister et al., 1994, 1998; Gailliot et al., 2007; Muraven, Tice, & Baumeister, 1998; Stucke & Baumeister, 2006; Tice, Baumeister, Schmueli, & Muraven, 2007; Vohs & Faber, 2007; Vohs & Heatherton, 2000).

For example, people who refrained from eating tempting chocolates were less persistent

at a subsequent problem-solving task compared to people who had not exercised impulse control (Baumeister et al., 1998). In another experiment, the effort that participants exerted while regulating emotional responses to an upsetting film clip predicted their diminished endurance at squeezing a handgrip (Muraven, et al., 1998). Depleted resources have also been shown to increase impulse buying (Vohs & Faber, 2007), aggression (Stucke & Baumeister, 2006), and vulnerability to persuasion (Wheeler, Brinol, & Herman, 2006) by impairing self-regulatory strength. This extensive line of work reasons that the ability to override pre-existing patterns of response, or to exercise self-control in general, constitutes a limited resource that can become temporarily depleted after use. As a result, the depleted self is less able to carry out further acts of self-regulation. Of course, the effects of depletion are said to apply only to behaviours and self-regulation that require controlled and effortful processing. Automatic behaviours and goals that do not tax the self's limited resource should not be affected by depletion (Muraven & Baumeister, 2000; Muraven & Slessareva, 2003). Applied to prejudice regulation, it has been demonstrated that exertion of limited self-control resources leads to increased stereotyping by limiting ability to control racial biases (Govorun & Payne, 2006; Muraven 2008), and that interracial interactions are depleting such that they impair executive functioning (Richeson & Trawalter, 2005).

### *Moderating Role of Self-Determined Prejudice Regulation on the Depletion-Prejudice Link*

As outlined above, successful prejudice regulation is dependent on the availability of self-control resources. Thus, prejudice increases as a function of self-regulation failure (e.g., Muraven 2008). However, the extent of the effect of depleted self-control appears to be a function of motivation. That is, research has shown that ego-depletion can be overcome with sufficient motivation. Muraven and Slessareva (2003) found that individuals who exercised

self-control in a thought suppression task were able to compensate for their diminished self-control resources when highly motivated to do so (i.e., when they believed their task performance would be beneficial to themselves and others). That is, a sufficient level of motivation attenuated the effect of depletion on a self-control task.

However, from a SDT perspective, we know that motivation is neither homogeneous nor equal. Indeed, the effects of depletion may depend not only on whether motivation exists, but on the extent to which said motivation is self-determined. In line with this reasoning, it has been suggested that the experience of self-determination is less cognitively demanding than is nonself-determination (Ryan & Deci, 2008; Moller, Deci, & Ryan, 2006; Muraven, Gagne, & Rosman, 2008). Whereas nonself-determined motivation involves feeling pressured by internal or external forces, self-determined goals and processing objectives are authentic and chronically salient, and are thus sought and regulated with greater cognitive ease and effectiveness. In support of this tenet, recent research has found that a sense of self-determination can offset the effects of ego-depletion (Moller, et al., 2006; Sharp & Pelletier, 2004; Sharp, Pelletier, Blanchard, & Levesque, 2003). SDT emphasizes that different regulatory approaches have differential relations to psychological energy and vitality, and therefore to depletion as well (Moller et al., 2006). When people feel autonomous in their goal pursuits, depletion effects are reduced (Muraven et al., 2008). In fact, according to SDT, self-determined regulation should be energizing rather than depleting. Indeed, when such regulation is internalized, its motivational steering may be automatic.

In my view, a self-determined regulation of prejudice should not be cognitively demanding or depleting because egalitarian values have been deeply internalized, thereby making them easily accessible. Thus, self-determined prejudice regulation should be effortless. As a result, prejudice should not be affected by depletion. Nonself-determined prejudice

regulation, however, is marked by a sense of self-discrepancy and motivational complexity. Because this type of self-regulation is not driven by inner volition, it is more likely to be an effortful process. Accordingly, people with nonself-determined motivation to control prejudice may experience prejudice regulation as an endeavour demanding substantial expense of self-regulatory strength, and thus be more susceptible to the detrimental effects of prior self-regulatory-depletion. In other words, I expect prejudice will increase when nonself-determined prejudice regulators are depleted.

### *A Note on Self-Regulatory Depletion and the Implicit Association Test (IAT)*

It is of substantive importance to assess the role of depletion on prejudice using implicit techniques. In order to detect the factors which truly influence the experience of racial bias, it is crucial that the measure tap spontaneous racial attitudes that are not transformed by self-presentation effects. Indeed, empirical reliance on explicit self-reports continues to be questioned. Because implicit and spontaneous instruments circumvent social desirability, they are considered by many researchers to be a preferred objective means of assessing racial attitudes (e.g., Fazio & Olson, 2003; Greenwald et al., 1998; Devine et al., 2002; Nosek & Banaji, 2001). The Race IAT, used in the proposed project, measures implicit race bias by assessing people's tendency to associate positive evaluations with White people and negative evaluations with Black people, and vice versa. Caucasians tend to categorize prejudice-congruent concepts (e.g. White-Good) more quickly than prejudice-incongruent concepts (e.g. Black-Good). The virtue of an implicit measure is that it circumvents social desirability biases typically associated with the self-reported measurement of racial attitudes because it taps evaluative associations that may be introspectively unavailable or difficult to control. Moreover, such measures are predictive of spontaneous outgroup behaviours (Fazio & Olsen,

2003; McConnell & Leibold, 1991).

What is particularly relevant for the issue of self-regulatory depletion is that the IAT contains both an automatic and a controlled component. The automatic stereotyped association is made in the stereotype-congruent pairing task, while controlled processes are required to override the dominant (i.e., stereotyped or prejudiced) response on the stereotype-inconsistent pairing task – in this latter task, the stereotypical/automatic response is to categorize in stereotype-congruent ways, however, respondents are required to make non-stereotypical responses. For this reason, cognitive resources and self-regulation are said to be required. Thus, IAT responding requires the self-regulation of prejudice. Presumably, performance on the stereotype-inconsistent task, for which self-regulation is required, will deteriorate when individuals are depleted, resulting in longer response latencies and greater automatic racial bias.

To summarize, the first objective of the present thesis is to examine evidence for the internalization-automatization hypothesis. Thus, it is argued on the basis of Self-Determination Theory that self-determined prejudice regulation is liable to elicit greater egalitarianism and nonprejudice than is nonself-determined prejudice regulation because it has been internalized to the point of becoming automatic. For those with nonself-determined motivation, however, nonprejudiced goals are arduous and controlled by external cues, making consistent and effective prejudice regulation difficult and unlikely. Using an automatic stereotyping paradigm, unconscious activation of stereotype categories is not expected to differ as a function of motivation to be nonprejudiced because both groups are theorized to possess the cognitive potential for making stereotypical evaluations. However, when making evaluations of a target after being primed with a stereotype, self-determined prejudice regulators are expected to display less automatic stereotype application than their nonself-determined counterparts. Similarly, using a self-regulatory depletion framework, the relative success of self-determined

prejudice regulation is theorized to be explained, in part, by its relative automatization. That is, self-determined prejudice regulation is expected to operate without effort or depletion of self-regulatory resources because it springs from autonomous and authentic functioning and relies on motives that are chronically accessible. Therefore, depletion should not impair prejudice regulation among self-determined prejudice regulators. Conversely, nonself-determined prejudice regulation is theorized to drain regulatory strength. By this logic, subjecting nonself-determined prejudice regulators to a depleting task should further thwart successful control over prejudice. It is anticipated that the joint implementation of these two paradigms will prove convincing in demonstrating the automatization of prejudice regulation through self-determination.

Thus far, the extent to which self-determined prejudice regulation is automatic has been theorized to be an important feature of the relationship among motivation to control prejudice, stereotyping, and prejudice. However, it is not the only explanative factor. While the distinction between self-determined and nonself-determined motivation to be nonprejudiced may explain differences in stereotype application, automatic and self-reported prejudice, and self-regulatory strength, it may also be related to differences in reactivity to external threat – a central cause of prejudice (Sherif, 1966; Stephan & Stephan, 2000).

### *Threat, Motivation, and Prejudice*

The second main goal of the current project was to expand the understanding of the relationship between self-determination and prejudice regulation by examining the influence of perceived intergroup threat. Intergroup threat is a fundamental cause of prejudice (Sherif, 1966; Tajfel & Turner, 1986). The susceptibility to threat, in general, is a dispositional correlate of self-determination (Hodgins & Knee, 2002; Hodgins, 2008). Given these two lines of research,

the consideration of threat is liable to contribute to the understanding of the way in which motivation to regulate prejudice predicts prejudice and stereotyping.

### *Threat Theories of Prejudice: Realistic and Symbolic Threat*

Our automatic inclination toward stereotyping aside, a major cause of prejudice outlined in the intergroup processes literature is the experience of threat in response to the outgroup. To offer a general definition, intergroup threat occurs when one group's actions, beliefs, or characteristics challenge the goal attainment or well-being of another group (Riek, Mania, & Gaertner, 2006). Plenty of evidence suggests that perceived intergroup threat plays a salient role in prejudice (e.g., Baumeister & Butz, 2004; Corenblum & Stephan, 2001; Cottrell & Neuberg, 2005; Florack, Piontkowski, Rohman, Balzer, & Perzig, 2003; Pettigrew, Christ, Wagner, & Stellmacher, 2007; Stephan & Renfro, 2002; Stephan & Stephan, 2000; Tajfel & Turner, 1979, 2001); when people feel threatened by another cultural group, prejudice toward that group increases.

Therefore, moving beyond the traditional view of prejudice as either a negative evaluative attitude or a consequence of stereotyping, intergroup process perspectives of prejudice, such as Realistic Group Conflict Theory (Sherif, 1966), Intergroup Conflict Theory (Tajfel & Turner, 2001), and Integrated Threat Theory (Stephan & Renfro, 2002; Stephan & Stephan, 2000; Stephan, Ybarra, Martinez, Scharzwald, & Tur-Kaspa, 1998) note that prejudice arises in reaction to intergroup threat and conflict. Such threat perspectives on prejudice build on the early work of Muzafer Sherif and his associates and their Realistic Group Conflict Theory. Its central hypothesis –that real conflict of groups' interests causes intergroup conflict– has been compelling in its straightforwardness. Within this theory, real conflicts refer to actual, tangible sources of conflict, such as threatened economic power (e.g., money, employment) or

threatened political power and control. Thus, when two groups compete for scarce resources, the potential goal-attainment of one group threatens the well-being of the other, and negative intergroup attitudes ensue.

Strong empirical support has been offered for the intergroup conflict explanation (LeVine & Campbell, 1972; Sherif, 1966; Stephan & Renfro, 2002; or see Riek et al., 2006 and Stroebe, Kruglanski, Bar-Tal, Hewstone, 1988, for reviews). For instance, in a study based on data from 12 countries, feelings of threatened well-being due to poor economic conditions was positively related to negative attitudes toward primary immigrant groups (Quillian, 1995). In addition, MacLaren (2003) measured realistic threat in 17 European countries and found it to be related to the desire to expel immigrants, and Ashmore and Del Boca (1976) found that White Americans' anti-Black racism was higher when they perceived Black Americans as posing a realistic threat. Experimental evidence has revealed that the manipulation of realistic threats posed by immigrants (e.g., telling Canadian citizens that immigrants are usurping Canadian jobs) increases negative attitudes toward immigrants (Esses, Dovidio, Jackson, & Armstrong, 2001). Moreover, activation of negative stereotypes has been shown to be especially likely when faced with threat – when threat is perceived to come from a stereotyped target, perceivers tend to derogate that target (Sinclair & Kunda, 1999; Tajfel & Turner, 1979).

Because realistic group conflict theory, in its classic form, neglects some of the social psychological and social-cognitive processes underlying the development and maintenance of intergroup conflict, more recent threat theories of prejudice have been advanced to supplement the realistic conflict perspective. Thus, a second domain of threat, symbolic threat, refers to the perception of intergroup conflict in values, attitudes, morals, and beliefs, rather than conflict due to competition and divergent realistic goals. Symbolic threats represent threats to the worldview of the ingroup (Stephan et al., 2005), and also refer to the imagined threat posed by

the culture and cultural practices of the outgroup – including the belief that outgroup's values are interfering or undermining the values of the dominant culture.

Modern theories of prejudice, such as modern, symbolic, and aversive racism (Gaertner & Dovidio, 1986; Henry & Sears, 2002; McConahay, 1986) are based on the symbolic threat perspective. Indeed, because we live in a diverse contemporary world in which outward racial segregation and discrimination are not always readily evident (as in traditional blatant racism), it is likely that prejudice has taken a subtler, more symbolic form (Henry & Sears, 2002). Thus, rather than believing that Black people are biologically inferior to White people, modern racists believe that Black people violate, and thus threaten, the values that are important to White people. Indeed, members of the dominant culture (i.e., the ingroup) often hold a belief that cultural outgroups or minorities threaten to change the ingroup's existing cultural fabric (Stephan et al., 1998; Zarate, Garcia, Garza, & Hitlan, 2004). As noted by Riek et al. (2006), many White Americans believe that the values of equity and merit, which prevail in White-dominant American culture, are threatened by affirmative action programs. Such programs may be considered a violation of equity and meritocracy values by giving minorities an unfair advantage. This type of threat construal regarding affirmative action differs from that of realistic group conflict theory in that the threat arises from a conflict over values rather than a conflict over resources (i.e., competing for jobs).

Various correlational studies have noted that such symbolic threats are positively related to prejudice (e.g., Esses, Haddock, & Zanna, 1993; McConahay, 1986). For instance, White people who viewed Black people as unsupportive of their values demonstrated greater Anti-Black prejudice than did White people who believed that Black people shared their values (Biernat, Vescio, & Theno, 1996). Experimental evidence by Maio, Esses, and Bell (1994) has revealed that the negative manipulation of an outgroup's values, along with information on how

other people had negatively reacted to this outgroup, increased participants' prejudice toward the outgroup. Conversely, presenting the outgroup in a way that did not threaten the values of the dominant culture did not increase prejudice toward the group. Zanna (1994) illustrated that the relationship between value violation and negative outgroup evaluation remained intact for several different outgroups, including gays and lesbians.

Although realistic and symbolic threat theories were once at odds with one another as competing explanations of prejudice, they are now considered complementary (Riek et al., 2006). As such, Stephan and Stephan (2000) have recently combined realistic and symbolic threats in their Integrated Threat Theory. Within this theory, intergroup threat is classified as comprising symbolic and realistic threats, as well as negative stereotypes and intergroup anxiety. These threats are simultaneously expected to be antecedents of prejudice. Support for Intergrated Threat Theory indeed suggests that both realistic and symbolic threat explain unique variance in outgroup prejudice – in both White and Black samples (Stephan & Renfro, 2002); and with respect to attitudes toward immigrants (Stephan et al., 1998). Indeed, the link between intergroup threat and prejudice is strong and prevalent (Riek et al., 2006). Despite this promising correlational support and some experimental evidence (Stephen et al., 2005), there is a severe dearth of empirical research on individual differences in the experience of intergroup threat. Moreover, potential moderators of the path from threat to prejudice have only just begun to receive empirical attention, and evidence linking motivation to intergroup threat is non-existent. For these reasons, the proposed research also seeks to examine the extent to which self-determined motivation to be nonprejudiced modulates the role of perceived intergroup threat in prejudice.

### *The Role of Self-Determination in Threat Reactivity*

Although not yet linked to intergroup attitudes, one's response to and threshold for threat has been tied to one's level of self-determination (Hodgins, 2008). More generally, the positive outcomes associated with self-determined motivation (relative to nonself-determined motivation) can be explained by ego-functioning (Hodgins & Knee, 2002). Ego-functioning, or "motivational style", accounts for how people experience the world and approach (or defend against) novel experiences.

The individual with an autonomous motivational orientation is adjusted toward aspects of the environment that stimulate intrinsic and self-determined motivation, and that promote growth and well-being. Such individuals are open to experience and the integration of that experience. They are willing to perceive information, individuals, and experiences accurately, without feeling threatened, and without distortion or defensiveness (Hodgins, 2008; Hodgins & Knee, 2002). Autonomously functioning individuals are open to a wide range of experiences and emotions, which are integrated into the organismic experience. As they show a realistic appraisal of the world, they are not likely to hide or distort information or falsely represent others (Hodgins & Knee, 2002). This style of functioning is quite in line with Carl Rogers' (1961) proposition that a fully functioning human being is one that encounters experience honestly. Self-determination is thus associated with the authentic and nondefensive experiencing of the social environment. Compared to nonself-determined individuals, it has been noted that those high in self-determination demonstrate less defensiveness and greater cognitive flexibility, as well as a greater sense of security and higher self-esteem (Deci & Ryan, 2002). Even under threat, defensiveness is reduced when motivational orientation is self-determined (Hodgins, 2008).

On the other hand, it has been proposed that increased defensiveness to threat is a feature of nonself-determined motivational orientation (Gurland & Grolnick, 2005; Hodgins & Knee, 2002; Hodgins, 2008). A nonself-determined individual is likely to be ego-involved, and may be disposed to feeling threatened and defensive when his/her unintegrated and relatively less secure self is threatened or challenged. When faced with threat, non self-determined individuals are likely to feel more threatened, and to react with greater defensiveness and hostility (Hodgins, 2008). It has been found, for instance, that when parents feel a greater sense of threat – through economic instability and scarce social resources – they behave in more controlling ways with their children (Gurland & Grolnick, 2005), and when mental health workers feel threatened in their work environment, they experience diminished self-determination at work (Lynch, Plant, & Ryan, 2005). Nonself-determined orientation has been associated with a lack of self-awareness (Deci & Ryan, 1985), an inconsistency among attitudes, traits, and behaviours (Koestner, Bernieri, & Zuckerman, 1992), a heightened readiness to perceive threat (Hodgins, Yacko, & Gottleib, 2006), ego-threatened and defensive behaviour (Knee & Zuckerman, 1998), as well as social anxiety, and an external perceived locus of control (Deci & Ryan, 1985). In addition, experimental research has shown that those primed with nonself-determined motivation react with greater defensiveness when threatened compared to those primed with self-determined motivation (Hodgins et al., 2006). These factors help to underscore the fragility and vulnerability of nonself-determined ego functioning, opening it up to the negative effects of external threats in general.

Based on the integration of: 1) SDT's general conceptualization of the relationship between defensiveness to threat and self-determined motivational style with; 2) intergroup threat theories of prejudice; it stands to reason that differences in the perception of intergroup threat may be linked to the extent to which motivation to be nonprejudiced is self-determined.

In the face of perceived intergroup threat, those with nonself-determined motivation to regulate prejudice should react in a defensive and highly threatened manner, and thus demonstrate a subsequent increase in prejudice. On the other hand, self-determined motivation to be nonprejudiced is theorized to provide a buffer against the effects of intergroup threat. That is, self-determined motivation to be nonprejudiced should protect against the effect of threat posed by cultural outgroups, which, in turn, should produce less prejudice.

## GENERAL GOALS AND HYPOTHESES OF THE PRESENT PROJECT

In line with the previous discussion, the proposed project had two broad goals. First, I sought to investigate the *internalization-automatization hypothesis* by exploring differences in the automatization of prejudice regulation between self-determined and nonself-determined prejudice regulators. This objective was pursued by examining the automatic processes of stereotype activation and application, as well as the impact of depletion on prejudice regulation. The second general goal of the current thesis was to incorporate an important related construct and precursor to prejudice: *perceived intergroup threat*. Thus, the role of perceived intergroup threat in predicting prejudice was assessed for those high and low self-determined motivation to be nonprejudiced. General hypotheses are outlined next.

### *Hypothesis 1*

It was expected that self-determined motivation to regulate prejudice would be associated with significantly less prejudice than would nonself-determined prejudice regulation. This trend was expected to hold at both the explicit (i.e., self-report) and implicit (i.e. automatic) level of measurement.

### *Hypothesis 2*

The proposed internalization-automatization hypothesis suggests that self-determined prejudice regulators are better able to regulate prejudice than are nonself-determined prejudice regulators as a result of their superior and automatized self-regulatory functioning, and not merely as a result of a diminished potential for prejudice (i.e., absent or weakened stereotypes). Two paradigms tested this general premise.

### *Hypothesis 2a*

The relative effectiveness of self-determined prejudice regulation in generating less racial bias than nonself-determined prejudice regulation was *not* expected to be the result of absent or weakened stereotypes or reduced stereotype accessibility. Thus, both self-determined and nonself-determined prejudice regulators were expected to demonstrate automatic stereotype activation. However, it was expected that those with a self-determined regulation of prejudice would exert automatic control over the *application* of racial stereotypes, whereas nonself-determined prejudice regulators would not.

### *Hypothesis 2b*

Again, prejudice regulation is expected to be automatic among self-determined prejudice regulators, relative to nonself-determined prejudice regulators. Thus, I expected that self-determined prejudice regulation would be less vulnerable to self-regulatory depletion than would nonself-determined prejudice regulation, resulting in comparatively less racial bias. When depleted of self-regulatory resources, it was hypothesized that self-determined prejudice regulators would show similarly low levels of prejudice as non-depleted controls. Conversely,

when nonself-determined prejudice regulators were depleted of self-regulatory strength, they were expected to show significantly more racial bias than their non-depleted counterparts.

### *Hypothesis 3*

Incorporating an additional prejudice-related construct, intergroup threat was expected to significantly increase prejudice among nonself-determined prejudice regulators. However, this effect was expected to be substantially smaller in magnitude for self-determined prejudice regulators. In other words, it was hypothesized that the level of self-determination in relation to prejudice regulation would moderate the impact of perceived intergroup threat on prejudice and other negative outgroup attitudes (i.e., negative affect, interracial anxiety, and racial discrimination).

### *Overview of Studies 1-5*

The goal of Study 1 was to test the link between level of self-determined motivation to regulate prejudice and implicit prejudice toward Black Canadians. This was a laboratory experiment wherein participants were pre-selected on the basis of their motivation to regulate prejudice. That is, those scoring in the top and bottom tertiles of motivation to be nonprejudiced were asked to participate. Participants completed the Race Implicit Association Test (Greenwald, McGhee, & Schwartz, 1998), and differences in self-reported prejudice were also assessed. Mean levels of prejudice among self-determined and nonself-determined individuals were compared using ANOVAs.

In Study 2, results of Study 1 were elucidated and extended by determining the extent to which self-determined and nonself-determined prejudice regulation was related to both the automatic activation (i.e., stereotype accessibility) and the automatic application (i.e.,

prejudiced evaluations) of stereotypes. In a laboratory experiment, Caucasian participants high and low in self-determined prejudice regulation were either non-consciously primed with an Asian stereotype category or placed in a no-prime control condition. In a second experimental task, Caucasian participants were either primed with African Canadian stereotypes or given a no-prime control task, and were then given the opportunity to apply a Black stereotype. Automatic stereotype activation and application were assessed by means of 2 (self-determination: high vs. low) x 2 (prime vs. no prime) factorial designs.

The purpose of Study 3 was to further understand the nature of the link between the internalization of motivation to be nonprejudice and implicit prejudice regulation by examining the interplay of motivation to regulate prejudice and self-regulatory depletion in prejudiced responding on the Race IAT. Specifically, the moderating effect of self-determined motivation to regulate prejudice on the relationship between self-regulatory depletion and prejudice was assessed. Study 3 was a laboratory experiment where participants were, once again, pre-selected on the basis of their motivational orientation in relation to prejudice inhibition. This study employed a 2 (self-determination: high vs. low) x 2 (depletion vs. none) factorial design.

The objective of Study 4 was to analyze the interactive role of intergroup threat and motivation to regulate prejudice in producing negative outgroup attitudes. In a laboratory experiment, perceived intergroup threat was manipulated for those high and low in self-determined prejudice regulation. Thus, two groups of Caucasian participants –one demonstrating self-determined prejudice regulation and the other demonstrating nonself-determined prejudice regulation– were presented with either a realistic or symbolic intergroup threat concerning Arab-Muslim immigration, or were placed in a no-threat control group (representing a 2 x 3 between-subjects design). Participants then completed several measures of

negative outgroup attitudes, including modern Arab-Muslim prejudice, negative affect toward Arab-Muslims, implicit prejudice, interracial anxiety, and racial discrimination.

Study 5 serves as a cross-sectional generalization and external validation of Study 4. Using structural equation modeling, the interaction of self-determined prejudice regulation and perceived intergroup threat in the prediction of prejudice was assessed. This was achieved by comparing two models of the threat-prejudice association: one for self-determined prejudice regulators and one for nonself-determined prejudice regulators.

*CHAPTER TWO*

# STUDY 1

## *The Link between Self-Determined Motivation to be Nonprejudiced and Prejudice*

(Reproduced in part from Legault et al., 2007)

In order to replicate and extend past findings of the association between self-determined prejudice regulation and explicit (i.e., self-reported) prejudice, participants scoring high and low in self-determined motivation to regulate prejudice completed measures of explicit prejudice, as well as the IAT (Greenwald et al., 1998). For the present study, the IAT was designed to assess implicit racial bias by measuring the association between positive or negative evaluations and pictures of Black or White individuals. Participants' response latencies for the pairing of positive words with White faces and negative words with Black faces (prejudice congruent pairing) were compared to their response latencies for the reverse configuration (prejudice incongruent pairing). This difference between congruent and incongruent response latency represents participants' degree of implicit racial bias, also known as the IAT effect.

It has been widely noted that people are quicker to categorize stereotype-congruent concepts (e.g., White-Good) compared to stereotype-incongruent ones (e.g., Black-Good), that is, by and large, people show implicit racial bias on the IAT (e.g., Dasgupta, McGhee, Greenwald, & Banaji, 2000; Greenwald et al., 1998, McConnell & Leibold, 2001). However, there remains a substantial amount of individual variability in IAT scores, which begs the question: Why do some people show less automatic bias than others? The main purpose of Study 1 was to assess explicit as well as implicit racial bias among those with high and low self-determined regulation of prejudice. Because of the theorized autonomous regulatory style and internalization of nonprejudiced standards among those with a highly self-determined

motivation to be nonprejudiced, it stands to reason that these self-directed individuals will prevail in reducing prejudice not only in the explicitly-measured realm, but in the automatic domain as well. If the self has truly internalized egalitarian attitudes, this should be decipherable at the implicit level. After all, it has been noted that long-term and chronic egalitarian aspirations are likely to become automatic (cf. "automatic motivation"; Gollwitzer & Bargh, 2005; Hassin, 2005; Moskowitz, et al., 1999), and such persistent goal rehearsal is theorized to occur among those with highly self-determined prejudice regulation. Thus, I hypothesized that those with a highly self-determined motivation to be nonprejudiced would display less explicit and less implicit prejudice compared to those with a less self-determined regulation of prejudice.

To balance the main objective presented above, associations were sought between the six dimensions of motivation to regulate prejudice, on one hand, and explicit and implicit racial bias, on the other. It was expected that the self-determined forms of motivation to regulate prejudice (i.e., intrinsic, integrated, and identified regulation) would demonstrate negative associations with both explicit and implicit prejudice. Due to their reliance on anxiety motives and unstable external reinforcements (respectively), it was hypothesized that introjected and external regulation would be unrelated to prejudice. Amotivation was expected to be positively associated with both explicit and implicit prejudice.

## *Method*

### *Participants and Procedure*

Undergraduates ($N$=150) completed the Motivation to be Nonprejudiced Scale (Legault et al., 2007). A subset of participants was selected based on their motivation to be nonprejudiced scores. Specifically, a global self-determined regulation of prejudice index

(SDRPI) was calculated using a standard formula that gives a weight to each dimension according to its position on the continuum (and thus its relative level of self-determination). As per previous studies using this technique (e.g., Grolnick, Ryan, & Deci, 1991; Ryan & Connell, 1989), self-determined forms of motivation to regulate prejudice were assigned weights of +3, +2, and +1, while weights for the nonself-determined forms were specified as -1, -2, -3. Weighted scores were then summed and divided by the number of variables in the equation (i.e., 6). These SDRPI scores were subjected to a tertile split, and only those from the top and bottom tertiles were considered for participation. Thus, 4-8 weeks after completing the MNPS, those from the top and bottom tertiles, that is, those high ($n$=31) and low ($n$=31) in self-determined motivation to regulate prejudice, were invited to complete a race IAT (Greenwald et al., 1998), followed by an explicit measure of affective prejudice toward Black people. Of the 62 participants who partook in the lab study, 40 were female and 22 were male. They ranged in age from 18 to 54 years ($M$ = 21.6; $SD$ = 7.9), and they were predominantly Canadian (92%) and Caucasian (86%). It should be noted that, of those participants who came from visible minority backgrounds, none were African-Canadian, as the goal of the current study was to assess differences in racial prejudice toward this target group.

Upon arrival at the lab, participants were informed that they would be performing a computer task designed to test the "cognitive processes involved in perception and memory". The experimenter then explained the IAT task and encouraged participants to respond as quickly as possible without making errors. Participants completed the Black Race IAT (Greenwald et al., 1998), followed by a measure of self-reported affect toward Black Canadians.

*Measures*

***Motivation to be Nonprejudiced Scale*** (MNPS; Legault et al., 2007). The MNPS assesses respondents' ultimate reasons for refraining from prejudice. Items are based on the six dimensions of motivation outlined by Self-Determination Theory (intrinsic motivation; integrated regulation; identified regulation; introjected regulation; external regulation, and; amotivation), and serve to distinguish between self-determined and nonself-determined prejudice regulation. Participants were asked to rate the extent to which items corresponded to their "ultimate reasons for regulating cultural prejudice" on a 9-point Likert scale (1= does not correspond at all; 5= corresponds moderately; 9= corresponds exactly). Examples from the self-determined dimension include "Because striving to understand others is part of who I am"; "Because I am tolerant and accepting of differences"; "Because I value nonprejudice"; and "Because tolerance is important to me". Items representing nonself-determined prejudice regulation include "Because racist people are not well-liked"; "I don't know why; it's not a priority"; "Because I get more respect/acceptance when I act in an unprejudiced fashion"; and "I'm not sure why; inhibiting prejudice is not important to me". The six-factor structure of the MNPS has been validated by means of exploratory and confirmatory factor analyses, and the subscales have demonstrated high internal consistency, as well as construct validity, concurrent validity, and predictive validity (Legault et al.). For the present sample, Cronbach's alpha ranged from .85 to .91. The MNPS is presented in Appendix A.

***Explicit prejudice*** (adapted from Cottrell & Neuberg, 2005). In addition to being an explicitly or implicitly measured attitude, prejudice has also long been conceptualized as negative affect toward an outgroup (e.g., Allport, 1954; Fiske, 1998). Thus, in order to complement the symbolic racism construct that was measured in previous pilot work, as well as the implicit racial bias measured in the current study, the affective component of prejudice

toward Black people was assessed (see Appendix A). Participants were asked to rate 20 adjectives (10 positive and 10 negative) in terms of the extent to which each represented their feelings about Black people (1 = not at all; 9 = extremely). This method of assessing prejudiced affect has generated good convergence with other measures of explicit prejudice (e.g., Cottrell & Neuberg, 2005; Stephan et al., 2005). Internal consistency for this measure in the current study was .87 (positive adjectives reverse-scored). Unsurprisingly, the correlation between this explicit measure of prejudice and the IAT was modest ($r$=.19, $p$=.15).

***Implicit racial bias*** (IAT; Greenwald et al., 1998). The Race IAT was administered on a Pentium 4 computer using Windows XP and Inquisit 2.0 software. The stages of the Black-White Race IAT are summarized in *Table 1*. For each of the 128 test trials, participants' correct responses were followed by a 250 ms delay before the next stimulus was presented. Errors were followed by an "X" which appeared until a correct response was given. This method uses the built-in error penalty recommended by Greenwald, Nosek, and Banaji (2003), where response latency is recorded (in milliseconds) after the presentation of each stimulus until the correct response is specified. Overall, the IAT has achieved greater reliability than other latency-based implicit measures (Greenwald et al., 2003), with internal consistency ranging from .70 to .90 (Greenwald & Nosek, 2001), and test-retest reliability averaging $r$ = .56 (Schmuckle & Egloff, 2004). Also, because the IAT often reveals implicit associations that participants do not outwardly endorse, it is suggested that it is resistant to deliberate manipulation (Nosek, Greenwald, & Banaji, 2007). Indeed, the IAT has only been shown to be fakeable when respondents are given explicit instructions on how to control IAT scores (Asendorpf, Banse, & Schnabel, 2006). In general, abstract attempts to control IAT responding do not lower scores (Asendorpf, Banse, & Mucke, 2002), and even produce ironic rebound effects (Hausmann & Ryan, 2004). The IAT has also been shown to display good construct, convergent, and

Table 1

*Method of the Implicit Association Test*

| *Stage* | Stimuli Presented/Judgment Required | Left Key | Right Key |
|---|---|---|---|
| 1 | Face Discrimination | Black | White |
| 2 | Adjective Discrimination | Unpleasant | Pleasant |
| 3 | Face and Adjective Discrimination | Black or Unpleasant | White or Pleasant |
| 4 | Face Discrimination (reversed) | White | Black |
| 5 | Face and Adjective Discrimination (reversed) | White or Unpleasant | Black or Pleasant |

*Note.* The order of presentation of face and adjective labels is counterbalanced across participants.

discriminant validity (Greenwald et al., 1998, 2003; Nosek, Greenwald, & Banaji, 2007), as well as some predictive validity (McConnell & Leibold, 2001). In addition, the IAT has been shown to assess attitudes, rather than general cognitive skill (Cai, Sriram, Greenwald, & McFarland, 2004). Moreover, the *D* scoring algorithm for the IAT, which was used in the present study, has been shown to greatly reduce the influence of cognitive fluency, that is, individual differences in response latency, which are a common nuisance factor for response latency data in general (Greenwald et al., 2003; Nosek et al., 2007). The current Black-White race IAT uses black and white morphed pictures of male and female faces, as used in the Web version of the Race IAT created for Project Implicit at Harvard University (Nosek, Banaji, & Greenwald, 2006; or see https://implicit.harvard.edu/implicit).

## *Results and Discussion*

### *Level of Explicit Prejudice*

A between-subjects ANOVA revealed a main effect of motivation, such that those with a highly self-determined motivation to regulate prejudice displayed significantly less affective racial prejudice compared to those with less self-determined prejudice regulation, $F(1,60) = 9.109$, $p < .01$, partial $\eta^2 = .13$ (power = .84). Group values are displayed in *Table 2*.

Supplementary correlations between the six dimensions of motivation to regulate prejudice and affective prejudice were also assessed. As was expected, the more self-determined forms of motivation to regulate prejudice (i.e., intrinsic, integrated, and identified regulation) demonstrated moderate to strong negative associations with affective prejudice. Introjected and external regulations of prejudice were not associated with affective racial prejudice, while amotivation displayed a moderate positive association with this variable (please see *Table 3*).

Table 2

*Study 1: Prejudice as a Function of Motivation to Regulate Prejudice*

| | High Self-Determined (n=31) | | Low Self-Determined (n=31) | | *F* | *df* | *Partial* $\eta^2$ |
|---|---|---|---|---|---|---|---|
| Type of Prejudice | *M* | *SD* | *M* | *SD* | | | |
| *Explicit Prejudice* | 39.00 | 18.15 | 52.07 | 15.73 | 8.97* | 1,60 | 13 |
| *Implicit Prejudice* | | | | | | | |
| Congruent Trials (ms) | 648.90 | 100.67 | 649.14 | 130.49 | <1 | | |
| Incongruent Trials (ms) | 756.01 | 160.90 | 917.34 | 265.04 | 8.72** | 1,60 | .13 |
| **IAT Score** | **107.10** | **121.40** | **268.20** | **173.56** | **18.40*** ** | **1,60** | **.24** |
| Errors in Congruent Trials (%) | 4.54 | 3.74 | 3.36 | 3.43 | 1.64 | 1,60 | |
| Errors in Incong. Trials (%) | 5.74 | 3.64 | 7.84 | 6.16 | 2.78 | 1,60 | |

*Note*. Theoretical range for explicit prejudice = 20 to 180. *$p$<.01; **$p$<.005; ***$p$<.001.

Results offer initial evidence that self-determined prejudice regulation is more effective in the reduction of racism, at least insofar as it is expressed at the explicit level. The examination of affective prejudice echoes previous work (e.g. Plant & Devine, 1998; Legault et al., 2007), extending the predictive validity of motivation to regulate prejudice beyond modern racism to the affective component of prejudice. These results also shed light on the important role of affect in racial prejudice, which is often overlooked in social-cognitive perspectives of prejudice. While prejudice does indeed seem to be an attitude, it may also comprise both negative affect and a lack of positive affect for targeted outgroups.

***Level of Implicit Prejudice***

In order to obtain an IAT score for each participant, the average latency for prejudice-congruent trials was subtracted from the average latency for prejudice-incongruent trials. Thus, this *IAT score* reveals a relative difference between prejudice-congruent and prejudice-incongruent associations, with higher scores indicating greater implicit racial bias. This constitutes the classic way of representing IAT scores, and scores (in milliseconds) are presented *in Table 2*, for ease of interpretation.

Table 3

*Study 1: Correlations among Dimensions of Motivation to be Nonprejudiced and Prejudice*

| | IM | Integ | Iden | Intro | Ext | Amo | SDRPI |
|---|---|---|---|---|---|---|---|
| Explicit Prejudice | -.22§ | -.44*** | -.41*** | -.07 | .09 | .33** | -.45*** |
| Race IAT | -.40*** | -.38** | -.35** | -.09 | .06 | .40*** | -.53*** |

SDRPI=Self-Determined Regulation of Prejudice Index; § $p$ <.10; **$p$<.01; ***$p$<.001

For the analysis of IAT scores, the most recently recommended scoring algorithm was used (*D* scores; Greenwald et al., 2003). With this algorithm, the standard deviations within conditions are applied to calculate the *D* scores for each condition. Higher *D* scores reflect more implicit prejudice by showing greater facilitation when associating Black Canadians with unpleasant words and White Canadians with pleasant words. Thus, *D* scores were submitted to a between-subjects ANOVA (i.e., high self-determination vs. low self-determination), which revealed a main effect of motivation to regulate prejudice. That is, those with a highly self-determined regulation of prejudice displayed significantly less prejudice ($D = .34$; $SD = .36$) compared to those with low self-determination to regulate prejudice ($D = .68$; $SD = .27$), $F(1,60) = 16.88$, $p<.0001$, partial $\eta^2 = .22$. *Figure 2* offers a visual representation.

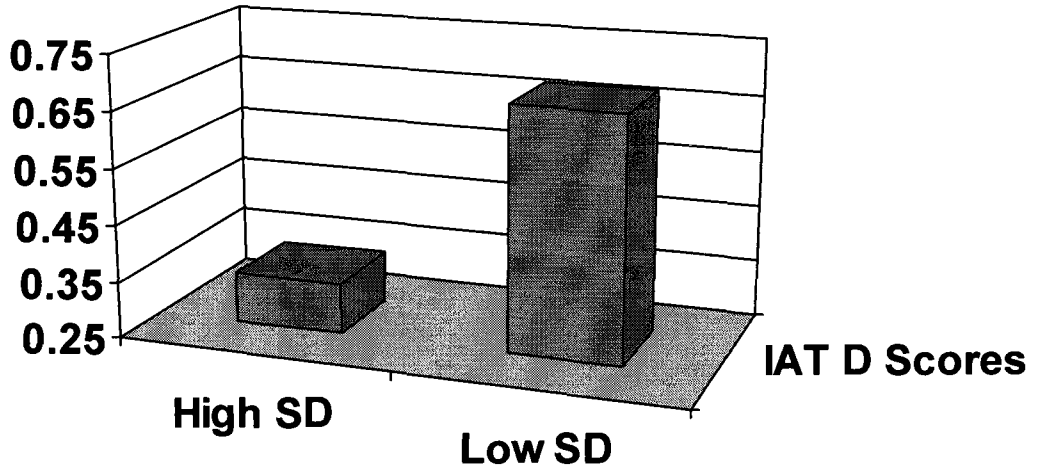



*Figure 2.* Study 1: Implicit Prejudice as a Function of Motivation to Regulate Prejudice

A closer examination of why those with highly self-determined motivation to regulate prejudice displayed much lower IAT scores revealed an effect of type of trial. That is, both groups displayed nearly identical latencies for congruent trials, however, the highly self-determined group displayed significantly faster latencies on incongruent trials, compared to the low self-determination group (again, see *Table 2*). Thus, the larger IAT effect observed among those with less self-determined prejudice regulation stems from longer latencies for Black-Pleasant and White-Unpleasant associations. Presumably, it is more difficult for nonself-determined prejudice regulators to override their automatic dominant response of associating Black faces with negative attributes and White faces with positive attributes (Greenwald et al., 1998).

An interesting finding concerns the magnitude of the effect of motivation on prejudice; the size of the effect is twice as large for implicit prejudice as it is for explicit (see *Table 2*). This may be because less self-determined prejudice regulators are not able to present themselves in a socially desirable manner with the IAT, which aligns with recent evidence suggesting that those with an external motivation to control prejudice are successful at appearing nonprejudiced when the measure is controllable, but display greater biases when the measure of prejudice becomes more difficult to control (Devine et al., 2002; Hausmann & Ryan, 2004).

An examination of error rates on the IAT (Table 2) revealed that individuals with high and low self-determined regulations of prejudice did not display significantly different numbers of errors on congruent nor on incongruent trials. Thus, it appears that the significant group difference in the IAT effect stems mainly from differences in reaction time rather than number of errors per se.

Once again, correlations were assessed; this time between the dimensions of motivation to be nonprejudiced and implicit racial bias as measured by the IAT (Table 3). Complementing the associations found for the explicit measure, and in accordance with our expectations, the three self-determined forms of motivation displayed negative associations with implicit racial bias toward African Canadians. Amotivation displayed a positive association with implicit racial bias, while introjected and external regulations of prejudice were not related to IAT scores. Interestingly, the pattern of IAT-motivation correlations revealed that, as the self-determined regulation of prejudice increased, implicit racial bias systematically decreased. This trend aptly corresponds to the continuum of internalization within SDT; as regulation becomes more internalized and self-congruent, it concurrently becomes more effective. The summation of these correlations is represented by the strong negative correlation between the higher order SDRPI and implicit racial bias.

Taken together, the analyses of IAT scores support Hypothesis 1; those with a more self-determined, internalized regulation of prejudice were more successful than nonself-determined individuals in reducing their prejudice at the implicit level. Based on the foundation of SDT, one can surmise that the relative success of self-determined prejudice regulation lies in the fact that it stems from the autonomous operation and expression of the self, while the relative increase in implicit racial bias among those with a nonself-determined regulation of prejudice rests, presumably, on the premise that this form of prejudice regulation is unstable, subject to external influence, and feeble in attaining its regulatory objective (i.e., nonprejudice). Additional work is required to resolve whether the superior self-regulation found in self-determined individuals is a function of automatized self-regulatory and inhibitory processes. This objective was sought using a stereotype priming paradigm (Study 2) and a self-regulatory depletion paradigm (Study 3).

CHAPTER THREE

# STUDY 2:

## *The Role of Self-Determined Prejudice Regulation in the Automatic Activation and Application of Stereotypes*

(Legault, Green-Demers, & Eadie, in press)

Study 2 assessed the role of motivation to regulate prejudice in the process of automatic stereotyping. More specifically, the objective was to determine whether self-determined and nonself-determined prejudice regulators possess different levels of stereotype accessibility or, rather, differences in the ability to control the application of stereotypes. Self-determination in prejudice regulation is theorized to operate implicitly in controlling the expression of racial bias rather than be a reflection of variance in the accessibility of stereotypes and prejudice. In line with previous research (e.g., Devine, 1989) suggesting that most people have conscious and implicit knowledge of racial stereotypes and their content, I anticipated that those high and low in self-determined motivation to regulate prejudice would experience similar levels of activation of Asian stereotypes. In other words, self-determined motivation was not expected to moderate stereotype activation. In conjunction with findings from Study 3 (next), this hypothesized finding is expected to shed important supplementary light on the nature of prejudice regulation among self-determined individuals by establishing that their superior prejudice regulation is not simply a matter of an absence of stereotypic associations in memory.

If, as hypothesized, stereotypes are equally activated and accessible among those high and low in self-determined motivation, to what extent will such stereotypes be applied in making evaluative judgments? I hypothesized that the application of stereotypes will differ between those high and low in self-determined prejudice regulation. That is, in response to black stereotype primes, I expected that those with a nonself-determined motivation to control

prejudice would demonstrate greater stereotype application than those with a self-determined orientation – in the form of increased attributions of *hostility* toward a target. As has been noted in previous work, hostility has been rated as a centrally key component of the black stereotype (Devine 1989; Devine et al., 2002). In addition, I expected that an interaction between type of motivation to regulate prejudice and prime condition would reveal that self-determined prejudice regulators who were primed with the Black stereotype would not make significantly more stereotype applications than their non-primed controls. On the other hand, because nonself-determined prejudice regulators are theorized to be ineffective at controlling racial bias, it was expected that they would apply more stereotypes when primed than when not primed.

The present study was divided into two tasks. Similar to the methodology employed by Gilbert and Hixon (1991), the experiment consisted of an initial *activation* phase and a subsequent but methodologically unrelated *application* phase. In the activation phase, Asian stereotypes were automatically activated. In a discrete application phase, a different set of stereotypes (Black stereotypes) were *primed*, and then participants were given the opportunity to apply them or not.

## *Method*

### *Participants and Design*

Participants were 84 Caucasian undergraduates at the University of Ottawa participating for partial course credit within the *Integrated System of Participation in Research* (58 females; 26 males). The *Motivation to be Nonprejudiced Scale* (Legault et al., 2007) was administered to students 4 weeks prior to testing. As in Study 1, a global self-determined regulation of prejudice index (SDRPI) was calculated and those scoring above and below the median were separately but randomly assigned to experimental (i.e., prime) and control (i.e., no-prime) conditions. The

experimenter was blind to this participant randomization. Two between-subjects factorial ANOVAs were employed (one for each experimental task – stereotype activation and application); 2 (motivation: self-determined vs. nonself-determined) x 2 (prime vs. none).

***Procedure***

Upon arrival at the laboratory, participants were informed that they would complete two separate studies assessing language ability. Participants were told that because each study was very brief, it was requested that they complete two of them in order to obtain their course credit. The first study was a fill-in-the-blank task lasting 10 minutes, and the second was a sentence-unscrambling task lasting 15 minutes. Between studies participants were given a 10 minute break in order to reduce any effect the first task might have had on the second (as per Dovidio et al., 1997).

***"Task A": Stereotype activation phase.*** Adapted from Gilbert and Hixon (1991), participants were instructed to watch a digital video clip of either an Asian or a Caucasian confederate (the independent variable or prime) who displayed a sequence of 12 word fragments. In both conditions, there were 6 neutral word fragments and 6 word fragments that could be completed in such a way that either confirmed or disconfirmed the Asian stereotype. For instance POLI___E could be competed as "polite" or "police"; S__ORT could be completed as either "short" or "sport" (or some other non-stereotyped word). The on-screen confederate displayed the word fragments for 3 seconds. Participants were instructed to write their responses as quickly as possible, as soon as the word came to mind, on the sheet provided. Please see Appendix B for a list of the word fragments used in this exercise.

In word-fragment completion tasks (Gilbert & Hixon, 1991), an automatic stereotype is assumed to be operating if participants provide more stereotypic word completions in the presence of the stereotype target (usually the interviewer). Automatic stereotype activation is

thought to be occurring because participants are unlikely to be aware that the confederate's group membership had any influence on their responses (Kunda & Spencer, 2003). Thus, this method relies on unawareness of the link between the stimulus (prime) and the required response.

***"Task B": Stereotype application phase.*** After a 10 minute break, participants were administered either a Black stereotype prime or were presented with neutral stimuli. In addition to the rest period between studies, the racial target was changed in order to reduce the carry-over of any stereotype priming effects. Each participant completed 32 scrambled sentences. In the control condition, every scrambled sentence was unrelated to the Black stereotype. In the priming condition, 18 sentences contained words related to the Black stereotype, such as "black"; "poor"; "jazz"; "hip-hop"; "basketball", and so on (neutral and prime sentences can be found in Appendix B). Participants were instructed to create a grammatically correct sentence using any four of the five words provided. They were instructed to complete the task as quickly as possible, writing down the first complete sentence that came to mind. Immediately following the sentence de-scrambling, participants were asked to complete an ostensibly unrelated task that assessed "the way in which people form impressions of others". In this task, all participants read a paragraph describing a day in life of a man named Mike (e.g., "The Donald Paragraph"; Devine 1989; Gilbert & Hixon, 1991; Srull & Wyer, 1979). The script presents a man engaging in a series of ambiguously hostile behaviours, such as refusing to pay his rent and demanding his money back from a store clerk. Mike's behaviour is presented in a neutral and non-evaluative fashion, and perceivers may or may not attribute Mike's actions to hostility. After reading the paragraph, participants were asked to rate Mike along several evaluative dimensions, most notably hostility, which is an African American stereotype (Devine, 1989).

Stereotype application, while often described in research as an explicit judgment of a member of a stereotyped group, can also be automatic if the respondent is not aware of the influence of a stereotype prime on their appraisal of a target (Kunda & Spencer, 2003). This is referred to as attentionless processing – as the respondent is aware of the prime, but not aware of its influence (Bargh, 1999). Because participants were told that the studies looked at different aspects of language ability and impression formation, they were not made explicitly aware that the experiment assessed racial categorization and evaluation. Moreover, at the end of the experiment, participants were asked whether they perceived a link between the prime (scrambled sentences) and response (evaluation of Mike) in Task B. They were also questioned on whether they believed that tasks A and B were related.

***Instruments***

***Motivation to be Nonprejudiced Scale*** (Legault et al., 2007). Once again, the MNPS, measuring the extent to which people are self-determined in their pursuit of nonprejudiced goals, was administered early in the academic year. As is comparable to previous studies, reliability of the MNPS subscales in the current study ranged from $\alpha$ =.80 to $\alpha$ =.89. Moreover, reliability was $\alpha$ =.92 for all self-determined items, and $\alpha$ =.81 for all nonself-determined items.

***Stereotype activation: Word fragment completion.*** Number of stereotypes completed in the activation task were counted – up to a maximum of 6. Potentially stereotypic word fragments included: S__Y; POLI__E; QU_____; S__ORT; N__P; and RI__E.

***Stereotype application: Evaluations of Mike*** (Adapted from "The Donald Paragraph, Srull & Wyer, 1979). After being exposed to either Black stereotypes or neutral stimuli, participants were asked to read about and rate Mike, a character engaging in a series of ambiguously hostile actions. Next, participants were asked to rate their feelings about Mike on a Likert-type scale, ranging from 0 (not at all) to 10 (extremely). Similar to a feeling

thermometer, participants scored their judgments about Mike on dimensions such as "considerate"; "boring"; "kind"; "lazy"; and most importantly, "hostile". Because hostility was the key Black stereotype being primed, the rating of hostility was the focal dependent measure in the application task. At the end of the experimental task, participants were asked whether they detected the Black stereotypes.

## *Results*

### *Preliminary Analyses: Establishing Automaticity*

Preliminary analyses assessed whether participants were consciously aware of the presence of racial primes. For the first task, the Asian stereotype activation task, none of the participants revealed an awareness of the stereotype prime. For the Black stereotype application task, it was not surprising that 54% of participants in the prime condition recalled being aware that the scrambled sentences contained black stereotype words. Indeed, the scrambled sentence task was designed to activate the Black stereotype – making it accessible for application. However, none of the participants suspected that their subsequent evaluation of "Mike" was related to the sentence descrambling task. Participants' lack of awareness of the links between the priming stimuli and their response suggested attentionless processing, a feature of automaticity (Bargh, 1997). In attentionless processing, stimuli are detectable, but not recognized. In addition, none of the participants reported seeing any connection between the study's components. These results suggest that both stereotype activation and application were automatic in the current study.

### *Main Analyses*

***Automatic stereotype activation.*** Main effects of motivation and priming were examined, as was the motivation x priming interaction. Thus, the frequency of stereotypic word

completions were entered into a 2 x 2 between-subjects ANOVA based on participants' motivational orientation (self-determined versus nonself-determined) and the presence of Asian priming stimulus (Asian versus Caucasian confederate). All means and standard deviations used in this analysis are presented in *Table 4*. A main effect of prime condition indicated that those presented with the Asian prime demonstrated greater stereotype activation than those presented with the Caucasian prime, $F = 11.68$, $p = .001$, partial $\eta^2 = .13$. This finding suggests that the prime manipulation was successful in activating the Asian stereotype. As hypothesized, level of motivation did not reveal a significant main effect; differences in stereotype activation between self-determined and nonself-determined prejudice regulators were negligible, $F < 1$. Not surprisingly, the motivation x prime interaction was not significant, $F < 1$.

***Automatic stereotype application.*** After being primed (or not primed) with Black stereotypes, participants read about and evaluated "Mike". Participants' hostility ratings of Mike were entered in a 2 (self-determined vs. nonself-determined) x 2 (prime vs. none) between-subjects ANOVA. Main effects of motivation and priming were once again examined, as was the motivation x prime interaction. Planned contrasts of priming were computed for self-determined and nonself-determined groups separately. All means and standard deviations used in these analyses are presented in *Table 4*.

A main effect of motivation was obtained, $F = 54.91$, $p < .001$, partial $\eta^2 = .41$. Thus, on average, self-determined individuals demonstrated less stereotype application than nonself-determined individuals. As expected, the main effect of prime condition was not significant, $F = 2.11$, $p = .15$. Moreover, a significant motivation x prime interaction was revealed, $F = 18.80$, $p < .001$, partial $\eta^2 = .19$. An examination of the planned comparisons for this interaction demonstrated that self-determined prejudice regulators did not display significantly greater stereotype application when they were primed compared to when they were not primed, $F =$

Table 4

*Study 2: Impact of Self-Determination and Stereotype Prime on Stereotype Activation and Stereotype Application (N = 84)*

| | Self-Determined | Nonself-determined | Total |
|---|---|---|---|
| *Stereotype Activation* | | | |
| Prime | **2.61** | **2.61** | **2.61** |
| | *1.41* | *1.59* | *1.48* |
| | (*n*=23) | (*n*=23) | (*n*=46) |
| No Prime | **1.65** | **1.56** | **1.61** |
| | *1.18* | *1.04* | *1.10* |
| | (*n*=20) | (*n*=18) | (*n*=38) |
| Total | **2.16** | **2.15** | |
| | *1.38* | *1.46* | |
| | (*n*=43) | (*n*=41) | |
| *Stereotype Application* | | | |
| Prime | **4.45** | **8.23** | **6.34** |
| | *1.76* | *.97* | *2.37* |
| | (*n*=22) | (*n*=22) | (*n*=44) |
| No Prime | **5.38** | **6.36** | **5.85** |
| | *1.40* | *1.64* | *1.58* |
| | (*n*=21) | (*n*=19) | (*n*=40) |
| Total | **4.91** | **7.37** | |
| | *1.64* | 1.61 | |
| | (*n*=43) | (*n*=41) | |

*Note.* Standard deviations are presented in italics, below the bolded means.

3.62, $p = .064$. However, nonself-determined prejudice regulators showed significantly greater stereotype application when primed, compared to their non-primed controls, $F = 20.12$, $p < .0001$, partial $\eta^2 = .34$.

### *Chapter Summary and Brief Discussion*

I did not anticipate that self-determined and non self-determined motivation to regulate prejudice would differ in the extent to which the Asian stereotype was accessible. That is, I expected similar levels of stereotype activation among both motivational groups. In contrast, I anticipated that differences would be revealed in the extent to which activated stereotypes were automatically inhibited or applied in making hostile evaluations of a target. These hypotheses were supported in Study 2, using two separate experimental priming tasks. Thus, it appears that, despite the stereotypic associations that are activated in working memory to provide the knowledge and capacity for prejudiced responding, self-determined prejudice regulation (but not nonself-determined prejudice regulation) effectively intervenes before these stereotypes are applied – even if this stereotype application occurs automatically. This finding sheds important supplementary light on the nature of prejudice regulation among self-determined individuals by establishing that their superior prejudice regulation is not simply a matter of an absence of stereotypic associations in memory. Furthermore, because this stereotype application is automatic, the current results support the tenet that those with self-determined motivation to be nonprejudiced are able to automatically control stereotype application. In fact, these individuals inhibited stereotype application so effectively that they displayed slightly fewer stereotype applications than their non-primed controls. On the other hand, it was not surprising that nonself-determined prejudice regulators showed greater stereotype application when they were primed with the stereotype, compared to when they were not primed.

In other words, the results of Study 2 support the internalization-automatization hypothesis and also draw a clear path for motivational orientation in the stereotyping process. Because the activation task in the current study shows both the presence and similarity of stereotype activation in both motivation groups, but differences emerge in the application phase, it can be concluded that stereotypes are indeed activated among self-determined and nonself-determined groups, however, they are *subsequently* inhibited only among those with a self-determined regulation of prejudice. The phenomenon of "inhibition following activation" (Eimer & Schlaghecken, 2002), then, may only be pertinent to those who have internalized and automatized nonprejudice goals.

Although not yet linked to SDT, previous work has demonstrated that motivation can alter stereotype activation and application (Gilbert & Hixon, 1991; Kawakami, Dovidio, Moll, Herman, & Russin, 2000; Moskowitz et al., 1999; Sinclair & Kunda, 1999). Interestingly, however, this research has not used motivation constructs to discriminate between activation and *automatic* application. That is, when previous research has considered activation and application jointly, findings have suggested that *both* activation and application can be curtailed when motivation and cognitive resources are high. Thus, another contribution of the current study resides in the possibility of refining the location of prejudice regulation; self-determined prejudice regulation is thought to occur somewhere between the activation of stereotypes in the mind, and the *automatic* use of those stereotypes to make prejudiced judgments. So, unlike what Devine (1989) suggests, having an internalized motivation to suppress prejudice is expected to do more than just reduce controlled and deliberative judgment – it is expected to operate implicitly in curtailing the unconscious evaluation of stereotype targets. Indeed, Study 3 is expected to offer further evidence of this assertion.

CHAPTER FOUR

# STUDY 3

## *The Moderating Role of Self-Determined Prejudice Regulation in the Link between Depletion and Prejudice*

(Legault et al., in press)

Despite evidence of the influence of self-determined prejudice regulation on automatic prejudice, as presented in Study 1, as well as the finding that self-determined prejudice regulation appears to operate automatically to prevent the application of (activated) stereotypes (Study 2), the reasons why self-determined regulation is effective at the implicit level require further clarification. In Study 3, additional evidence was sought to corroborate the contention that self-determined motivation to be nonprejudiced facilitates automatic prejudice regulation (i.e., the internalization-automatization hypothesis). Thus, the automaticity of prejudice regulation was assessed from an alternate angle.

Moskowitz et al. (1999) have suggested that, for chronic egalitarians, prejudice regulation may be habitualized such that they need not exert conscious effort to inhibit racial biases. If chronic egalitarianism is automatized, prejudice regulation should not demand self-regulatory resources. Extending this notion, the objective of the present study is to assess the interrelations between motivation to regulate prejudice, self-regulatory depletion, and implicit prejudice on the Implicit Association Test (IAT; Greenwald et al., 1998). Specifically, Study 3 aimed to determine whether self-determined motivation to be nonprejudiced moderates the relationship between deficits in self-regulatory strength and IAT scores, thus offering further insight into the nature of effective prejudice regulation strategies.

### *Hypotheses*

Theoretically, if prejudice regulation is automatic, then IAT responses on stereotype-incongruent trials should not require controlled processing. Individuals are required to override dominant prejudiced responses on the IAT, which requires effort, and which manifests in elevated response latencies. Because people with self-determined prejudice regulation have deeply internalized their nonprejudiced standards and experience a sense of autonomy in being egalitarian, I hypothesized that their prejudice regulation would require minimal self-regulatory effort, compared to nonself-determined prejudice regulators. As such, self-determined prejudice regulators should not demonstrate lapses in prejudice regulation as a consequence of self-regulatory depletion. *Thus, for those with a self-determined regulation of prejudice, no differences in implicit prejudice were expected between depleted and non-depleted groups.*

Conversely, nonself-determined prejudice regulation may require more effortful control since it does not stem from a self-chosen value orientation. As such, it may be more adversely affected by regulatory depletion. *Thus, individuals with nonself-determined regulation were expected to display heightened prejudice when their resources were depleted, compared to when they were not depleted.*

Vitality was also measured as an ancillary indicator of depletion. I expected that prejudice regulation on the IAT would be less draining of vitality when motivation to regulate prejudice was self-determined, compared to when it was nonself-determined.

## *Method*

### *Participants, Design, and Procedure*

Introductory psychology students attending the University of Ottawa participated in the experiment in exchange for partial course credit. The current study used a two time-point data

collection strategy in order to manipulate the motivational independent variable prior to beginning the lab study, as well as to reduce the effect of prejudice-related questioning on the main measure of racism. Thus, a total of 224 participants completed the Motivation to be Nonprejudiced Scale (Legault et al., 2007) during a mass testing session early in the semester – six weeks before being invited to complete the ostensibly unrelated lab study. As in Studies 1 and 2, a global self-determined regulation of prejudice index (SDRPI) was calculated after the first round of data collection. Based on SDRPI scores, a tertile split was performed to preselect individuals high and low in self-determined prejudice regulation ($N = 135$; 99 female; 36 male). Members of cultural minorities were excluded in order to focus the investigation on White people's attitudes toward Black people. Moreover, only participants indicating that they were motivated to regulate prejudice were retained (although, 95% of respondents favoured this intention). To examine the effect of depletion, participants were randomly assigned to either a task designed to deplete self-regulatory capacity, or a non-depleting control task. Thus the experimental design was a 2 (high self-determined vs. low self-determined) x 2 (depletion vs. control) factorial.

Upon arrival at the lab, participants reported their baseline vitality. They were then instructed to complete the IAT as quickly and accurately as possible. After the IAT, participants rated their level of vitality, task depletion, self-regulation, mood, and intrinsic motivation. Participants were then debriefed, thanked for their participation, and dismissed.

***Independent Variables***

***Motivation to be Nonprejudiced Scale*** (MNPS; Legault et al., 2007). The MNPS was once again administered to assess respondents' ultimate reasons for refraining from prejudice. In the current study, subscale reliability (i.e., Cronbach's alpha) ranged from .80 to .85.

***Self-Regulatory Depletion.*** Participants in the depletion condition completed the two-

step self-regulation task designed by Baumeister and his colleagues (1998), and recently validated by Wheeler, Brinol, and Herman (2006). All participants were given a page of type-written text and asked to spend two minutes circling every instance of the letter *e* (text is presented in Appendix C; the text used in the depletion manipulation was a page from a statistics textbook, whose content was unrelated to the goals and parameters of the present study). To enact self-regulatory behaviour, participants in the experimental condition were then instructed to circle every instance of the letter *e* with several exceptions (e.g., if it was one-letter removed from a vowel, if it preceded an *l* or an *r,* etc). The control group was not given any regulatory instructions for the *e*-circling task. Thus, in the experimental condition, the *e*-circling task required participants to carefully monitor their decisions and override their baseline response of circling every single *e*. This task has been shown to reliably deplete people's self-regulatory mechanism, leaving them less able to complete subsequent tasks requiring self-regulation (Baumeister et al., 1998; Dewall, Baumeister, Stillman, & Gailliot, 2007, Wheeler et al., 2006).

***Manipulation Verification Measures***

***Subjective Vitality Scale*** (Ryan & Frederick, 1997). To verify whether the experimental depletion of self-regulation was effective, participants were asked to complete the Subjective Vitality Scale at the beginning of the study and after each task. Prior research has noted that people who experience depletion report increased fatigue (e.g., Baumeister, Bratslavsky, Muraven, & Tice, 1998), and decreased vitality (e.g., Ryan & Deci, 2008; Sharp & Pelletier, 2004). The eight items on the Subjective Vitality Scale reflect a phenomenological sense of vitality and aliveness. Participants were asked to rate each statement (e.g., "I feel energized") on a 7-point Likert scale ranging from "not at all" to "completely." The scale's psychometric properties (i.e., construct validity and single-factor structure) have been validated in two large

college samples (Bostic, Rubio, & Hood, 2000). In the current sample, Cronbach's alpha was $\alpha$ = .79.

***Self-reported depletion and self-regulation exerted on depletion task.*** Using a Likert scale from 1 to 11 (1=Not at all; 11=Extremely/All the time), a manipulation check was developed for the purpose of the present study to assess the extent to which the *e*-task depleted self-regulatory resources (3 items; e.g., "Did you find the task to be draining?"). Participants also reported how much self-regulation the task required (3 items; e.g., "How much were you fighting against an urge while completing the task?").

***Brief Mood Introspection Scale*** (BMIS; Mayer & Gashke, 1988). The BMIS measures mood valence and arousal. Participants rated the extent to which 11 adjectives (e.g., happy, tense) described their current mood. Responses were given on a 9-point scale (1=Very much; 9=Not at all). The BMIS was included to confirm that any effects resulting from the experimental manipulation could not be attributed to differences in mood induced by the *e*-task.

***Intrinsic motivation.*** Participants were asked to rate the extent to which they felt intrinsically motivated toward the *e*-task and the IAT. Intrinsic motivation was thus measured twice (3 items; $\alpha$ = .85; e.g. "How interesting was the task?"). Responses were given on an 11-point scale (1=Not at all; 11=Extremely). The purpose of these items was to address the concern that variability in depletion and vitality throughout the experiment may actually be a function of differences in participants' motivation toward the tasks. Specifically, this measure was used to ensure that variations in IAT performance between high and low self-determined groups could not be attributed to differences in their intrinsic motivation for the activities designed to manipulate depletion.

### *Dependent Measures*

***Implicit Association Test*** (Greenwald et al., 1998). The Race IAT was used once again to measure the evaluative associations that underlie White participants' implicit prejudice toward Black people. The IAT program was run using Inquisit 2.0 software. The Race IAT stimuli and methods were identical to those of Study 1 (see *Table 1*).

***Subjective Vitality Scale*** (Ryan & Frederick, 1997). The vitality measure that was previously described as a manipulation check measure was also used as a complementary measure of depletion, to help elucidate the interaction of motivation and depletion on racial prejudice. Therefore, it was administered thrice – at the start, after the e-task, and after the IAT.

## *Results*

### *Preliminary Analyses*

***Manipulation check of the depletion task: Vitality, depletion, self-regulation, and mood.*** I reasoned that if the experimental manipulation was successful, then participants in the depletion condition would show a significantly greater decrease in vitality compared to participants in the control condition. As can be seen in *Table 5*, this was indeed found to be the case. It should be noted that changes in vitality scores were first calculated within-subjects, as the difference in vitality from baseline to post-depletion. Compared to controls, participants in the experimental condition also found the *e*-circling task to be more tiring, and to require greater self-regulation. These analyses indicated that the depletion manipulation had the intended effect of taxing self-regulatory resources. On the mood valence factor of the BMIS, depleted and non-depleted participants did not differ, indicating that effects of the self-regulation task could not be attributed to differences in affect. Likewise, no differences in arousal were found. Please see *Table 5* for these results.

Table 5

*Study 3: Depletion Induction*

| | Low Depletion Task | High Depletion Task | | |
|---|---|---|---|---|
| *Manipulation Check* | *M (SD)* | *M (SD)* | *F* | *df* |
| Drop in vitality | -2.73 (6.13) | -5.47 (6.32) | 6.36* | 1,134 |
| Fatigue | 3.56 (2.44) | 6.46 (1.88) | 49.06*** | 1,134 |
| Self-regulation | 3.45 (2.31) | 6.11 (2.09) | 49.06*** | 1,134 |
| Mood | | | | |
| Pleasantness | 2.68 (1.21) | 2.96 (1.16) | 1.16 | 1,134 |
| Arousal | 3.27 (1.07) | 3.44 (1.02) | <1 | 1,134 |

*Note.* Theoretically, scores range from 1 to 10; * $p < .05$; ***$p < .0001$.

***Controlling for intrinsic motivation.*** I anticipated that variability in depletion and vitality throughout the experiment would not be attributable to participants' varying levels of motivation toward the tasks (i.e., the e-task and the IAT). As predicted, participants high ($M$ = 6.06; $SD$ = 1.98) and low ($M$ = 5.66; $SD$ = 2.41) in self-determined prejudice regulation did not display significantly different levels of intrinsic motivation toward the *e* task, $F(1, 132) = 1.11$, $p = .29$.

With respect to the IAT, the high self-determined group ($M$ = 8.41; $SD$ = 1.82) and the low self-determined group ($M$ = 7.95; $SD$ = 1.83) again showed no significant differences in intrinsic motivation, $F(1, 132) = 2.15$, $p = .15$. Since both groups completed the tasks with comparable levels of intrinsic motivation, we can be reasonably certain that the depletion effect on IAT scores is not an artefact of apathy toward the experimental tasks for those with nonself-determined prejudice regulation.

***Main Analyses***

***Main effects and interaction.*** A 2 x 2 analysis of variance (ANOVA) was conducted to evaluate the effects of motivation and depletion on implicit prejudice. IAT $D$ scores were once again calculated according the to scoring algorithm recommended by Greenwald et al. (2003). Results indicated a significant main effect of motivation, $F(1, 134) = 22.25$, $p < .001$, partial $\eta^2 = .15$. Although D scores were used in the analysis, IAT scores (representing the difference in reaction time between prejudice-congruent and prejudice-incongruent trials) are presented here for ease of interpretation. Thus, those with a high self-determined prejudice regulation showed a significantly lower IAT effect ($M$ = 102.13, $SD$ = 124.21) than those with a low self-determined prejudice regulation ($M$ = 203.87, $SD$ = 131.40). Moreover, a significant interaction between motivation and depletion was obtained, $F(1, 134) = 4.50$, $p < .05$, partial $\eta^2 = .03$,

supporting the hypothesis that motivation to regulate prejudice moderates the relationship between self-regulatory depletion and implicit prejudice (the main effect of self-regulatory depletion was not significant).

***Planned comparisons.*** I hypothesized that depletion would increase prejudiced responding among those low in self-determined prejudice regulation, but not among self-determined individuals. A Bonferroni's correction was used to control for Type I error across the two planned comparisons. *D* scores are displayed in *Figure 3* and IAT scores (in milliseconds) are presented in *Table 6*. Among the low self-determined group, participants who underwent self-regulatory depletion showed significantly more implicit prejudice than those in the control condition, $F(1, 66) = 5.57$, $p < .025$. However, this finding was not observed for individuals with self-determined prejudice regulation. That is, when motivation to regulate prejudice was self-determined, depleted and non-depleted participants showed similar IAT D scores.

***Vitality.*** To supplement our focal analysis of the impact of motivation to regulate prejudice on the relationship between depletion and prejudice, vitality levels were examined throughout the experiment. An association between vitality and self-determined motivation has been shown in previous research (e.g., Moller et al., 2006; Ryan & Frederick, 1997; Ryan & Deci, 2008; Sharp et al., 2003, 2004). Moreover, deficits in vitality are expected when individuals are depleted (Baumeister et al., 1998).Vitality was calculated within-subjects at three time points (baseline, post-depletion, and post-IAT). Both self-determined and nonself-determined prejudice regulators displayed similar decreases in vitality when depleted (i.e., from baseline to pre-IAT; $M = -5.74$; $SD = 5.82$; $M = -5.23$; $SD = 5.56$, respectively). However, the highly self-determined prejudice regulators displayed significantly greater increases in vitality ($M = 5.21$; $SD = 7.13$) from pre-IAT to post-IAT, compared to their less self-determined

counterparts ($M = 2.03$; $SD = 5.46$), $F(1, 66) = 3.70$, $p < .05$). In fact, this recovery in vitality represented a complete return to baseline ($M_D = 1.06$; $SD = 6.73$, $t < 1$) for the self-determined group, whereas the less self-determined prejudice regulators did not recover their vitality (i.e., post-IAT vitality was significantly lower than baseline; $M_D = -2.47$, $SD = 6.78$, $t(33) = 2.13$, $p < .05$). Thus, among depleted participants, the IAT appeared to have a vitalizing effect for those with a self-determined regulation of prejudice. These results align with the additional finding that highly self-determined individuals reported using less self-regulation on the IAT ($M = 4.53$; $SD = 1.94$) than those with a low self-determined prejudice regulation ($M = 5.72$; $SD = 2.15$), $F(1, 66) = 5.76$, $p < .05$).

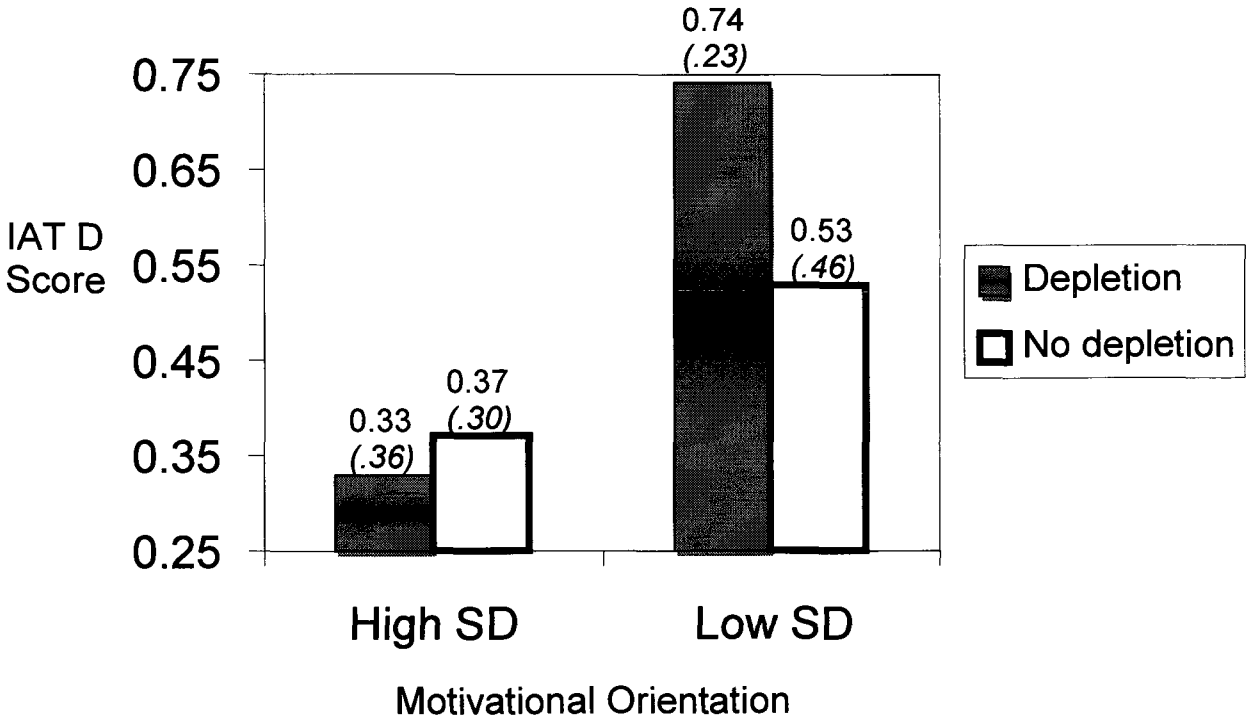



*Figure 3.* Study 3: Moderating Impact of Motivation to Regulate Prejudice on the Link between Depletion and Prejudice on the IAT

*Note.* Standard deviations of D Scores are presented in parentheses, below the means.

Table 6

*Study 3: Mean Latencies and Errors on the IAT per Experimental Condition*

| | High SD | | Low SD | |
|---|---|---|---|---|
| | No Depletion | Depletion | No Depletion | Depletion |
| | *M (SD)* | *M (SD)* | *M (SD)* | *M (SD)* |
| | *(n=33)* | *(n=35)* | *(n=31)* | *(n=36)* |
| Latencies | | | | |
| Congruent | 666.98 (113.03) | 658.40 (109.91) | 652.18 (127.51) | 656.18 (114.63) |
| Incongruent | 776.10 (165.10) | 753.93 (135.29) | 816.87[a] (187.35) | 896.93[a] (159.65) |
| Average | 721.54 (139.07) | 706.17 (122.60) | 734.53 (157.43) | 776.56 (137.14) |
| Errors | | | | |
| Congruent | 4.42 (5.32) | 4.26 (2.96) | 3.92 (4.49) | 4.35 (4.25) |
| Incongruent | 7.45 (7.26) | 6.26 (5.30) | 7.04 (6.55) | 7.78 (5.75) |
| Average | 5.94 (6.29) | 5.26 (4.13) | 5.62 (5.52) | 6.02 (5.00) |
| IAT Score | 109.119 | 95.534 | 159.664[a] | 269.699[a] |
| | (113.197) | (135.090) | (136.734) | (125.233) |

*Note.* High SD = highly self-determined prejudice regulators; Low SD = low self-determined prejudice regulators; Latencies are in ms; Errors are calculated as percentages; [a]Underscored values are significantly different, $p < .01$.

### *Chapter Summary and Brief Discussion*

Firstly, the results of the present research support the previously documented finding that self-determined motivation to be nonprejudiced is an important factor in the reduction of racial bias. That is, the current results reveal that individuals who are self-determined in the regulation of prejudice are more successful at upholding their nonprejudiced standards, compared to nonself-determined prejudice regulators.

Furthermore, the assessment of motivation to regulate prejudice contributes to our understanding of the depletion-prejudice link. The current study indicates that when the self-regulatory resources of nonself-determined prejudice regulators are depleted, they reveal heightened prejudice compared to their non-depleted counterparts. This finding suggests that their regulatory efforts have indeed been impaired. We can conclude that a low self-determined regulation of prejudice is characterized by effortfulness and relative inefficiency.

This main finding diverges from that reported by Devine et al. (2002), who did not find that the pattern of IAT responding among internally and externally motivated participants was influenced by cognitive busyness. In their study, both internal and external motivation groups were distracted by the busyness task, as measured by longer overall response latencies; there was no interaction between motivation level and cognitive load on IAT scores. The current results, in contrast, suggest that nonself-determined regulatory efforts were indeed impaired by depletion, whereas self-determined prejudice regulation was not (in fact, self-determined regulators showed less prejudice when depleted). These unique results are likely attributable to two main differences from Devine et al.'s (2002) work: 1) the current depletion task was designed to drain self-regulatory strength in a sequential manner (as per the strength model of self-regulation; Baumeister et al., 1998), rather than to serve as a distractor during IAT responding, and; 2) our consideration and measurement of the full range of self-determination

theory factors in the context of prejudice control.

Of particular note is the finding that self-regulatory-depletion did not impair overall IAT performance; average response latencies and probability of error were unaffected. Rather, depletion specifically influenced the tendency of individuals with a nonself-determined prejudice regulation to make prejudiced evaluative associations. This observation lends further support to the argument that, for those low in self-determined motivation to be nonprejudiced, the inhibition of prejudice depends on the availability of self-regulatory resources. In contrast, the (lower) level of prejudice of self-determined prejudice regulators is not influenced by self-regulatory depletion. For these individuals, prejudice does not differ as a function of availability of self-control resources.

The ability to effectively regulate prejudice is related, at least in part, to the extent to which racial stereotypes are activated (e.g., Bargh, 1999; Devine, 1989). In combination with results from Study 2, it can be concluded that people with self-determined prejudice regulation do not evade stereotype activation, nor do they display a relative dearth of stereotype accessibility, but rather the application (i.e., expression) of stereotypes and prejudice is automatically controlled. Together, results of Studies 1, 2, and 3 support the internalization-automatization hypothesis and satisfy the fundamental question of whether lower implicit prejudice among self-determined prejudice regulators reflects an effective and automatic inhibition of prejudice.

In sum, *Studies 1-3* offer evidence of the role of self-determination in the reduction of stereotype application and prejudice. These findings indicate that the comparatively lower level of prejudice associated with self-determined motivation to be nonprejudiced is the result of superior automatized regulatory functioning. That is, the lower prejudice scores found among those with self-determined prejudice control are not merely a function of the absence of the

cognitive bases for prejudice, but rather due to internalized, personalized, and efficient self-regulation. In contrast, nonself-determined motivation to be nonprejudiced results in greater racial bias (i.e., both stereotyping and prejudice) due to its less capable regulatory ability. When goals to be nonprejudiced are self-determined, prejudice regulation does not appear to require self-control. Thus, the *quality of self-regulation* is an important component of the relationship between motivation to control prejudice and prejudice. However, it is not the only explanative factor. While the difference between self-determined and nonself-determined motivation to be nonprejudiced can be significantly explained by the extent to which prejudice regulation has been automatized, it may also be related to differences in the effect of intergroup threat.

CHAPTER FIVE

# STUDY 4:

## *Intergroup Threat and Intergroup Attitudes:*

## *The Moderating Impact of Self-Determined Motivation to be Nonprejudiced*

The interrelations among perceived intergroup threat, motivation to regulate prejudice, and various outgroup variables were examined in Study 4. Specifically, the role of self-determined motivation to be nonprejudiced in moderating the impact of intergroup threat on outgroup attitudes was assessed in a laboratory experiment. Thus, two independent variables were manipulated: level of self-determined prejudice regulation and perceived intergroup threat. Their subsequent interactive influence on various indicators of negative outgroup attitudes was evaluated.

According to various major threat theories of prejudice (LeVine & Campbell, 1972; Sherif, 1966; Stephan & Stephan, 2000; Tajfel & Turner, 2001), realistic and symbolic threats are focal causes of prejudice and negative outgroup attitudes. In general, it has been documented that when people feel threatened by another cultural group – whether it be in the form of competition for resources (realistic) or rivalry between cultural values (symbolic) – prejudice toward that group increases (e.g., Stephan et al., 1998; Stephan & Renfro, 2002). Moreover, it has been documented that realistic and symbolic threats each predict substantial unique variance in prejudice (Riek et al., 2006). Thus, both realistic and symbolic threats were induced in the current study.

Furthermore, while not yet linked to the domain of prejudice and intergroup attitudes, self-determination research suggests that ego-involved and nonself-determined motivational styles are more vulnerable to the effects of threat, and reveal increased emotional reactivity in the face of threat (e.g., Hodgins, 2008; Hodgins & Knee, 2002). It stands to reason that such

threat reactivity may extend to the perceived outgroup threats that lead to prejudice. Specifically, because nonself-determined motivation to control prejudice does not emanate from the internalization of self-chosen goals to be nonprejudiced, it is liable to be highly influenced by perceived threats posed by outgroups, which, in turn, are likely to increase outgroup prejudice and discrimination. Self-determined motivation, on the other hand, is associated with less threat defensiveness and threat susceptibility (Hodgins, 2008). Indeed, those with a self-determined or autonomous orientation have been shown to be open to experience and events (Hodgins & Knee, 2002; Majstorovic, Legault, & Green-Demers, 2008). Therefore, applied to the current context, it was theorized that self-determined motivation to be nonprejudiced would provide a buffer against the effects of perceived intergroup threat. In other words, motivation to be nonprejudiced was hypothesized to moderate the causal link between intergroup threat and prejudice; Compared to nonthreatened controls, those exposed to intergroup threat were expected to demonstrate increased prejudice – however, this effect was expected to be significantly larger when prejudice regulation was nonself-determined, compared to when it was self-determined.

In contrast to Studies 1-3, which assessed Asian stereotype activation and attitudes toward African Canadians, Arab-Muslim prejudice was assessed in the current study in an attempt to increase the generalizability of the motivation to regulate prejudice construct by including an additional cultural target of prejudice. This target group was also chosen based upon the contemporary salience and relevance of Arab-Muslim threat and anti-Arab prejudice. In order to incorporate several facets of Arab-Muslim prejudice, various measures were administered in the current experiment. These dependent variables included modern Arab-Muslim racism, negative affect toward Arab-Muslims, interracial anxiety, implicit Arab-Muslim prejudice, and racial discrimination. Self-determined motivation to be nonprejudiced

was hypothesized to moderate the impact of intergroup threat on all forms of explicit prejudice (i.e., modern racism, negative affect, interracial anxiety, and racial discrimination). The measure of automatic prejudice was included for the sake of interest and consistency with Studies 1 to 3, but it was not expected that ingrained, automatic racial attitudes would be altered by the one-time situational threat manipulation. Nonetheless, a main effect of motivation was expected on all measures of prejudice, such that nonself-determined prejudice regulators would experience greater implicit and explicit prejudice against Arab-Muslims than those high in self-determined motivation to regulate prejudice.

## *Method*

### *Participants and Design*

English-speaking undergraduates at the University of Ottawa completed the MNPS early in the academic year, and 122 pre-selected Canadian Caucasian respondents (82 females; 38 males) scoring high and low in self-determined motivation to regulate prejudice were randomly assigned to experimental conditions (i.e., those scoring above and below the median for self-determined prejudice regulation). Participants' age ranged from 17 to 43 years ($M = 19$; $SD = 2.64$). The experiment was thus a 2 (self-determined vs. nonself-determined motivation to be nonprejudiced) x 3 (realistic threat vs. symbolic threat vs. no threat control) between-subjects factorial design. Dependent variables related to Arab-Muslim attitudes included modern Arab-Muslim racism, negative affect toward Arab-Muslims, interracial anxiety, implicit Arab-Muslim prejudice, and intentions to behaviourally discriminate against Arab-Muslims.

***Procedure***

Upon arrival at the laboratory, participants were greeted and presented with one of three newspaper articles. This first phase served as the *threat induction phase*. One third of participants were asked to read an article containing a manipulation of *realistic threat*, as conveyed through a news story about Arab-Muslim immigrants usurping Canadian jobs. This article is presented in Appendix D. It discusses trends in Arab-Muslim immigration, noting "Muslim immigrants are now occupying a disproportionate percentage of the local job market. While the employment rate for Caucasian Canadians has been steadily decreasing over the last five years, employment of Arabic Muslims in Canada continues to increase". It then describes an incident wherein a Canadian Caucasian man was rejected for employment in favor of a lesser-qualified Arab-Muslim candidate. The article concludes by noting increasing trends in Arab-Muslim immigration.

The second article, also presented in Appendix D, was designed to manipulate perceived symbolic threat by describing a specific scenario from the recent past in which Canadians' way of life had been overruled by Arab-Muslim cultural influence. Specifically, the ostensible news story explains how a campus bar at a Canadian university was forced to ban the sale of alcohol and stop the playing of music because of a petition made by Arab-Muslim students who complained that the bar undermined their comparatively modest cultural and religious values. The individual interviewed in the article expresses his concern over having to "change a way of life on campus". Again, the article concludes by noting increases in Arab-Muslim immigration trends. While based on actual events, both news stories in the threat conditions were fabricated for the purposes of the experiment. Nonetheless, the news articles were designed, formatted, and printed in the image of actual newspaper columns. This style of threat induction has previously been used and validated (Stephan et al., 2005).

The third article, which designated the control condition, was not intended to incite intergroup threat. This unrelated article depicted a local lottery result, and was selected on the basis of its comparatively neutral content. The control article was selected from a local newspaper. It is presented in Appendix D. After the threat induction phase, participants were asked to rate the extent to which they felt a sense of realistic and symbolic threat from the target outgroup, based on several items designed to test the tenability of the threat manipulation. Measures used in the current study can be found in Appendix D.

Next, participants were asked to complete a baseline measure of self-reported vitality before performing the Arab-Muslim/Caucasian Implicit Association Test. Immediately following the IAT, participants completed a modified Stroop task (as an objective cognitive measure of depletion), followed by a second measure of vitality. Participants then completed a battery of self-report measures of prejudice and outgroup attitudes (presented next). At the end of the experiment, participants were questioned regarding the credibility of the newspaper article, and then were debriefed on its fictitious nature.

***Main Measures***

***Motivation to be nonprejudiced.*** Levels of self-determined and nonself-determined regulation of prejudice were assessed, as per Studies 1-3, using the Motivation to be Nonprejudiced Scale (Legault et al., 2007). In the current experiment, internal consistency (i.e., Cronbach's α) of the MNPS subscales ranged from .82 to .91.

***Modern Arab-Muslim racism.*** The Subtle Prejudice Scale (Pettigrew & Meertens, 1995), which was designed to measure modern prejudice toward Arabic people was adapted and used. Contextual and political features have caused a shift from overt to subtle expressions of racism and this scale is designed to assess covert negative attitudes toward Arabic people – reflecting more current racist attitudes (e.g., the denial of racial discrimination). The 9 item

scale was adapted from McConahay's (1986) well-known Modern Racism Scale, measuring Anti-Black racism, such as "There exists a lot of racism against Arab-Muslims in Canada today, which limits their chances to get ahead" and "Many other groups have come to Canada and overcome prejudice and worked their way up. Arab-Muslims should do the same" (1=Strongly Disagree; 9=Strongly Agree). The scale has demonstrated good reliability, as well as good construct validity (McConahay, 1986; Pettigrew & Meertens, 1995). In the current study, internal consistency of the modern racism indicators was .80.

***Negative affect toward Arab-Muslims.*** Positive and negative affect toward Arab-Muslims was assessed. Participants were asked to rate their feelings toward Arab-Muslims using 17 adjectives (e.g., "dislike"; "resentment"; "fear"; "anger"; "disgust"; "hatred"; "affection"; "warmth"; "respect"), based on a Likert-type meter from 1 ("none at all") to 9 ("extremely"). Negative and positive adjective ratings were combined to yield an overall measure of negative affective prejudice (positive adjective ratings reverse-scored). Affective adjective ratings have been shown to be a valid measure of the affective component of prejudice (e.g., Cottrell & Neuberg, 2005). Internal consistency of these items was $\alpha = .83$.

***Interracial anxiety***. Anxiety regarding interracial interactions (with Arab-Muslims) was assessed. Intergroup anxiety involves feelings of uneasiness and awkwardness in the presence of outgroup members because of uncertainty about how to behave toward them (Plant & Devine 2003; Stephan & Stephan, 2000). Intergroup anxiety is an important correlate of outgroup attitudes and bias, and has been noted to be a consequence of intergroup conflict (Ho & Jackson, 2001; Stephan & Stephan, 2000). As such, intergroup anxiety was expected to vary as a function of intergroup threat in the current study. Using a Likert-type scale, participants were asked to rate the extent to which they would feel anxious, uncertain, apprehensive, and

worried during the course of an interaction with an Arab-Muslim person (4 items; 1= "not at all"; 9= "extremely"). Internal consistency of the interracial anxiety measure was $\alpha = .87$.

***Implicit Arab-Muslim prejudice.*** An Arab-Muslim/Caucasian Name IAT was administered. The procedure of this IAT is identical to the IAT procedure used in Studies 1 and 3 and depicted in Table 1, however, instead of using Black and White *faces* as priming stimuli, common Arab-Muslim and Canadian Caucasian male *names* were used. Examples of these Arab-Muslim names included "Ashraf", "Amir", and "Hassan". Examples of Canadian Caucasian names include "John"; "Pierre"; and "Benoit". Based on the needs of the current study, I created name stimuli that were adapted from the "Arab-Muslim/Other People IAT" created by Nosek, Banaji, and Greenwald (2006). This original Arab-Muslim/Other People IAT combined names from several European and Asian cultures in the "other people" category. However, data has demonstrated that the IAT effect is lost when Caucasian Canadian respondents are required to differentiate between the uncommon Italian, Japanese, and German names of the "other people" category and the Arab-Muslim names (Legault, 2007). This reason, along with the fact that the inclusion criterion for the present sample consisted of only of Caucasian Canadians, justified the use of the predominant name category 'Caucasian Canadian' in the current IAT. After all, the measure of interest was Caucasians' attitudes toward Arab-Muslims.

***Racial discrimination.*** Four indicators of behavioural intention to discriminate against Arab-Muslims were included. Participants were asked to describe the extent to which they would engage in the following behaviours: "...Share my class notes with an Arab-Muslim person"; "...Play on the same sports team as an Arab-Muslim"; "...Eat a meal with an Arabic-Muslim person"; "...Study with an Arab-Muslim student". Stephan et al., (1998) have suggested that such indices of behavioural intention to discriminate are valid proxy measures of

behavioural discrimination. Based on Ajzen's (1985) theory of planned behaviour, an extension of the theory of reasoned action (Fishbein & Ajzen, 1975), behavioural intentions are the immediate determinants of behaviour and, in turn, a function of an individual's subjective norms and attitudes. Thus, these items were used to approximate the behavioural assessment of Arab-Muslim discrimination (Cronbach's $\alpha = .89$).

***Threat manipulation check measures.*** In order to verify whether the threat induction was successful, the Realistic and Symbolic Threat Scales (Stephan et al., 1998) were adapted to provide an indication of threat perception following the threat induction. Six items on a scale from 1 ("Not at all") to 9 ("Extremely") pinpoint realistic threat (3 items; e.g., "To what extent are you concerned that Canadians' jobs may be threatened by increased Arab-Muslim immigration?"), and cultural threat (3 items; e.g., "To what extent are you concerned that Canadian values such as freedom may be jeopardized by increased Arab-Muslim immigration?"). This manipulation check was designed to assess whether the induction targeted the relevant type of intergroup threat.

***Post-experimental validity check: Credibility of newspaper articles.*** At the end of the experiment, participants were questioned about what they thought of the newspaper article. They were free to offer their thoughts and impressions; were asked about the validity of the immigration threat; and were asked whether they believed the event had occurred locally or elsewhere. To avoid leading questions, participants were not outwardly asked whether they thought the article was fake, but rather if they had any feedback. Article credibility scores were recorded (1=Yes; 0=No).

***Supplementary Measures: Depletion of Self-Regulation***

Study 3 suggested that self-determined prejudice regulation is less depleting – and indeed automatic – relative to nonself-determined prejudice regulation. In the name of

cohesion, the extent to which Arab-Muslim prejudice regulation was depleting was assessed for each motivation condition. It was expected that these ancillary measures would mirror findings from Study 3, revealing greater depletion among nonself-determined prejudice regulators after completing the IAT. Depletion was measured using vitality and Stroop interference scores.

***Vitality.*** Self-reported vitality was measured using the Subjective Vitality Scale (Ryan & Frederick, 1997) in order to provide supplementary evidence of self-regulatory depletion among self-determined and nonself-determined individuals. Vitality was measured at baseline and again following the IAT – in which the self-regulation of prejudice is expected to be enacted. Thus, changes in vitality were compared between self-determined and nonself-determined prejudice regulators. Internal consistency of the vitality measure was .85 at Time 1 and .82 at Time 2.

***Stroop Test*** (Stroop, 1935). Since Stroop's seminal paper, over 1000 articles have documented the Stroop effect. As it is a relatively objective cognitive measure of depletion, the Stroop Test was administered in conjunction with the Subjective Vitality Scale to complement findings from Study 3 concerning the depleting nature of IAT responding among those high and low in self-determined prejudice regulation. The Stroop Test provides insight into cognitive effects that are experienced as a result of attentional fatigue. The logic of the Stroop effect is demonstrated by the attentional effect of automatic processing on effortful responding; reading is a highly automatized process, whereas color naming is a less automatic process, which is vulnerable to interference. The Stroop effect emphasizes the interference that automatic processing of words has on the more mentally effortful task of naming colours. The task of making an appropriate response (i.e., indicating the *colour*, not the *word*) when given two conflicting signals has been interpreted as a signal of executive function (MacLeod, 1991). The present Stroop task was administered on a computer, and respondents were required to use the

keyboard to quickly choose the colour in which the word on the screen was written, rather than indicating the color that the word denoted. Response latency was recorded in milliseconds. The Stroop used in the current study differs from the longer Stroop Test in that only the test phase was administered. That is, response latency was recorded for colour naming only, rather than for the practice and baseline trials involving the reading of both black and coloured words.

***Analyses***

Analyses were conducted in four stages: a) preliminary analyses; b) overall 2 x 3 analysis of the impact of motivation and threat on prejudice and outgroup attitudes; c) planned comparisons between (i) no threat controls and (ii) each threat condition, for each motivation group on each DV, and; d) auxiliary analysis of the extent of depletion for each motivation group.

Preliminary analyses consisted primarily of verification analyses regarding the threat manipulation; multiple comparisons assessed differences in perceived realistic and symbolic threat for each threat condition. The credibility of the news story was also ascertained and statistical assumptions for analysis of variance were assessed. A 2 x 3 ANOVA was used to evaluate the overall main effect of motivation as well as the motivation x threat interaction on the dependent measures under study. Principal a priori hypotheses were tested with a series of planned comparisons (ANOVAs); prejudice scores for threatened and non-threatened self-determined participants and threatened and non-threatened nonself-determined participants were analyzed. Finally the extent of depletion was assessed for each motivation group using t-tests. Alpha levels for each analysis were adjusted using a Bonferroni correction to maintain a maximum familywise error rate of 5%.

## *Results*

### *Preliminary Analyses*

***Threat manipulation check.*** Corroborative analyses were conducted in order to determine whether the threat manipulation contained in the news article produced its intended effect. Thus, after reading the newspaper article in the threat induction phase, all participants were asked to rate the extent to which they felt threatened by Arab-Muslim immigration in Canada. Firstly, in order to ascertain whether those in both threat conditions exhibited greater intergroup threat in general, compared to non-threatened participants, differences in overall perceived intergroup threat were compared using Tukey's HSD. Compared to the threat experienced by those in the control group ($M = 3.14$; $SD = 1.67$), both realistically-threatened and symbolically-threatened groups experienced significantly greater overall intergroup threat ($M = 4.67$; $SD = 2.34$, $|M_D| = 1.53$, $p < .005$ and $M = 4.41$; $SD = 1.92$, $|M_D| = 1.26$, $p < .03$, respectively).

Looking more precisely at the nature of perceived intergroup threat, participants were asked to specifically assess the type and extent of threat that they were experiencing in response to the situation described in the news article. When asked to rate their level of perceived realistic threat, contrasts revealed that greater perceived realistic threat was reported among those who read the realistic threat article ($M = 4.64$; $SD = 2.58$), compared to those exposed to the symbolic threat article ($M = 2.92$; $SD = 1.80$, $|M_D| = 1.72$, $p < .01$), and those in the no-threat condition ($M = 2.66$; $SD = 1.80$, $|M_D| = 1.98$, $p < .001$). Moreover, the difference in perceived realistic threat between the symbolic and no-threat conditions was not significant. When asked to rate their level of perceived symbolic threat, those who read the symbolic threat article reported greater perceived symbolic threat ($M = 5.05$; $SD = 2.21$), compared to those who read

the realistic threat article ($M = 3.81$; $SD = 2.46$, $|M_D| = 1.25$, $p < .04$) and those in the no-threat condition ($M = 3.09$; $SD = 1.84$, $|M_D| = 1.97$, $p < .001$). Again, there was no significant difference in perceived symbolic threat when the realistic and no-threat conditions were compared. Thus, the threat induction exerted the intended effect of increasing intergroup threat; more specifically, those exposed to a realistic threat experienced the greatest amount of perceived realistic threat, whereas those exposed to symbolic threat reported the highest level of symbolic threat.

***Credibility of newspaper articles.*** During a post-experimental interview, all participants were asked to give their impressions of the newspaper article. None of the 122 participants reported awareness that the newspaper article was fictional.

***Assumptions of analysis of variance.*** Prior to analyses, data were assessed for accuracy and violations to the statistical assumptions of normality and homogeneity of variance. Data were deemed satisfactory and there were no univariate or multivariate outliers.

### *Principle Analyses: The Moderating Role of Motivation to Regulate Prejudice in the Threat-Prejudice Link*

***Analysis of variance.*** A 2 x 3 factorial analysis of variance was conducted on the five dependent variables measuring negative outgroup attitudes. These global analyses were intended to shed light on the main effects of motivation, as well as to substantiate the interactions underlying the planned comparisons.

In line with expectations, results revealed that all main effects of motivation to regulate prejudice on outgroup attitudes were significant. These findings are presented in *Table 7*. Thus, compared to those with nonself-determined motivation to regulate prejudice, self-determined

Table 7

*Study 4: Mean Differences in Outgroup Attitudes between Self-Determined and Nonself-determined Prejudice Regulators*

| *Outgroup Variable* | Self-Determ. ($n$=66) | Nonself-Det. ($n$=56) | $F$ | $df$ | Partial $\eta^2$ |
|---|---|---|---|---|---|
| Modern Racism | 2.95 | 3.97 | 20.09*** | 1,116 | .15 |
| | (1.16) | (1.57) | | | |
| Negative Affect | 2.31 | 3.59 | 41.45*** | 1,116 | .27 |
| | (.85) | (1.50) | | | |
| Interracial Anxiety | 1.89 | 3.51 | 38.04*** | 1,116 | .25 |
| | (1.02) | (1.92) | | | |
| Implicit Prejudice | .43 | .63 | 6.07** | 1,116 | .05 |
| | (.45) | (.38) | | | |
| Discrimination | 1.41 | 2.78 | 39.24*** | 1,116 | .26 |
| | (.71) | (1.78) | | | |

*Note.* Self-Determ. = Self-determined prejudice regulation; Nonself-Det. = Nonself-determined prejudice regulation; *Implicit Prejudice* values represent overall degree of association between Caucasians and pleasant words, and Arab-Muslims and unpleasant words (IAT D Scores); The theoretical range for all other values is 1-9; ***$p$<.001; **$p$<.01

prejudice regulators demonstrated less modern Arab-Muslim racism; less negative affect toward Arab-Muslims; less interracial anxiety; less implicit racial bias; and less racial discrimination. Unsurprisingly, the main effect of intergroup threat on (all forms of) prejudice was not significant.

Cell means for the motivation x threat conditions are displayed in *Table 8*. For the dependent measures of modern racism, negative affect, and racial discrimination, the motivation x threat interaction was significant, $F_{(2,116)}=3.65$, $p<.03$, $\eta^2=.06$; $F_{(2,116)}=7.34$, $p<.001$, $\eta^2=.12$; $F_{(2,116)}=5.44$, $p<.01$, $\eta^2=.09$, respectively. Although the effect of threat on interracial anxiety was indeed more pronounced in the nonself-determined group than in the self-determined group, this interaction failed to reach significance, $F_{(2,116)}=1.52$, $p=.22$, $\eta^2=.03$. Finally, intergroup threat did not appear to have an impact on automatic prejudice, for either motivation group, $F_{(2,116)}=1.25$, $p=.2903$, $\eta^2=.02$.

***Planned comparisons.*** The principle objective of the current study was to assess the impact of intergroup threat on outgroup attitudes, at two levels of motivation to be nonprejudiced (self-determined and nonself-determined). Specifically, it was hypothesized that nonself-determined prejudice regulators would experience relatively heightened prejudice when faced with realistic and symbolic threat, compared to when not threatened. In contrast, this effect was expected to be of substantially lesser magnitude among self-determined prejudice regulators. To test these main comparisons, the no threat control group was compared to the realistic and symbolic threat groups at each level of motivation, for each DV. Again, mean levels of prejudice and prejudice-related outcomes per experimental condition can be found in *Table 8*. These interactions are displayed pictorially in *Figure 4*.

Table 8

*Study 4: Mean Differences in Outgroup Attitudes per Experimental Condition*

| | Nonself-Determined | | | Self-Determined | | |
|---|---|---|---|---|---|---|
| | No Threat ($n$=25) | Real. Thr. ($n$=20) | Symb. Thr. ($n$=21) | No Threat ($n$=22) | Real. Thr. ($n$=17) | Symb. Thr. ($n$=17) |
| Modern Racism | | | | | | |
| *Mean* | 3.26 | 4.88 | 3.96 | 3.04 | 3.07 | 2.79 |
| *SD* | *1.02* | *2.05* | *1.17* | *1.13* | *1.26* | *1.15* |
| Negative Affect | | | | | | |
| *Mean* | 2.80 | 4.33 | 3.85 | 2.41 | 2.15 | 2.37 |
| *SD* | *1.13* | *1.85* | *1.02* | *.99* | *.87* | *.65* |
| Interracial Anxiety | | | | | | |
| *Mean* | 2.82 | 4.18 | 3.74 | 1.77 | 2.03 | 1.89 |
| *SD* | *1.32* | *2.40* | *1.87* | *.83* | *1.19* | *1.05* |
| Implicit Prejudice | | | | | | |
| *Mean* | .64 | .66 | .57 | .45 | .32 | .53 |
| *SD* | *.32* | *.38* | *.45* | *.50* | *.55* | *.49* |
| Discrimination | | | | | | |
| *Mean* | 2.00 | 3.44 | 3.13 | 1.52 | 1.29 | 1.35 |
| *SD* | *.83* | *2.54* | *1.45* | *.88* | *.60* | *.53* |

*Note.* Nonself-Determined = Nonself-determined prejudice regulation; Self-Determined = Self-determined prejudice regulation. *Real. Thr.* = Realistic threat; *Symb. Thr.* = Symbolic threat. *Implicit Prejudice* values represent overall degree of association between Caucasians and pleasant words, and Arab-Muslims and unpleasant words (IAT D Scores). The theoretical range for all other values is 1-9.

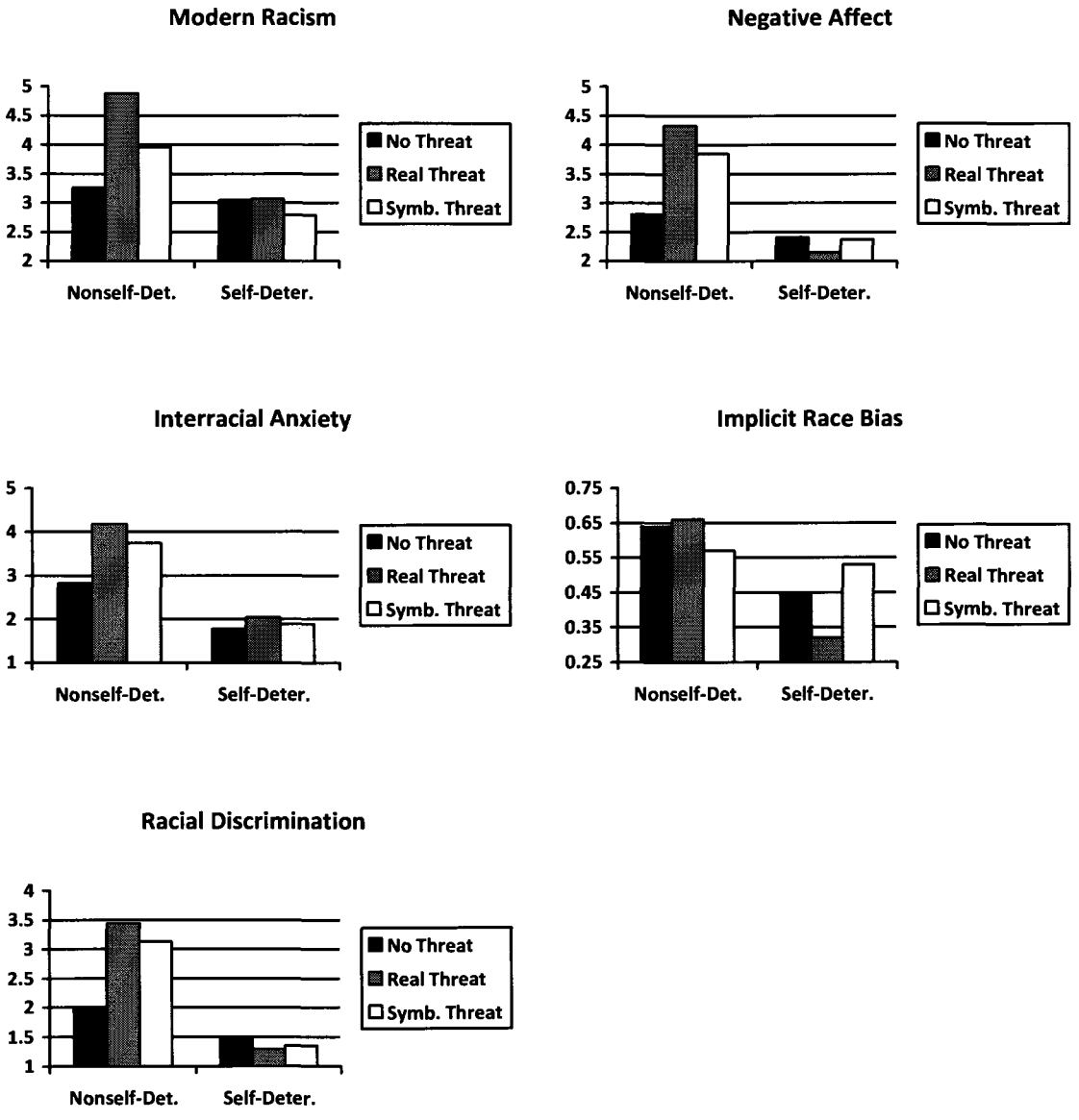



*Figure 4.* Study 4: Moderating Role of Self-Determined Prejudice Regulation in the Causal Link between Intergroup Threat and Prejudice-Related Outcomes

Firstly, differences in ***modern Arab-Muslim racism*** were ascertained. In line with expectations, nonself-determined prejudice regulators in the realistic threat condition demonstrated significantly greater modern racism than did those in the no-threat group, $F_{(1,39)}=10.34$, $p < .005$, partial $\eta^2=.22$. Nonself-determined prejudice regulators exposed to symbolic threat experienced a similar increase in modern racism, relative to non-threatened controls, $F_{(1,39)}=4.00$, $p < .04$, partial $\eta^2=.10$. In contrast, when motivation to regulate prejudice was self-determined, Arab-Muslim racism did not increase when participants were realistically and symbolically threatened, relative to when they were not threatened ($F <1$ for both contrasts).

Secondly, ***negative affect toward Arab-Muslims*** was assessed. Among nonself-determined prejudice regulators, negative affect increased when realistic threat was experienced, relative to when no threat was experienced, $F_{(1,39)}=10.10$, $p < .005$, partial $\eta^2=.21$. Similarly, when nonself-determined prejudice regulators were exposed to symbolic threat, negative affect toward Arab-Muslims was significantly greater than when they were not threatened, $F_{(1,39)}=8.95$, $p < .005$, partial $\eta^2=.20$. No threat-dependent differences in negative affect were observed for those in the self-determined group ($F <1$ for both contrasts).

Thirdly, results revealed heightened ***interracial anxiety*** when those with a nonself-determined prejudice regulation were realistically threatened, compared to when they were not threatened, $F_{(1,39)}=5.09$, $p < .04$, partial $\eta^2=.16$. The same trend was noted in the symbolic threat condition, $F_{(1,39)}=3.23$, $p = .07$, partial $\eta^2=.08$, although this difference was marginally significant. When those with a self-determined motivation to regulate prejudice were realistically and symbolically threatened, they did not demonstrate increases in interracial anxiety ($F <1$ for both contrasts).

Fourthly, ***implicit prejudice*** toward Arab-Muslims was assessed via an Arab-Muslim/Caucasian Canadian IAT. IAT data were prepared according to recent recommendations (Greenwald et al., 2003). That is, the IAT *D* measure, which divides IAT scores by their standard deviation, was used to adjust for individual differences in cognitive fluency and the non-normality of reaction time data. Moreover, reaction times were scanned for values greater than 10,000 ms and less than 300 ms. All response latencies on test trials fell within the acceptably reliable range (as per Greenwald et al., 2003). In line with expectations, results revealed that neither type of threat increased automatic racial bias for nonself-determined prejudice regulators. The same trend was observed among self-determined prejudice regulators – that is implicit prejudice remained relatively unchanged, regardless of threat ($F<1$, for all contrasts).

Lastly, differences in ***behavioural intentions to discriminate against Arab-Muslims*** were compared. Realistic threat increased discrimination for nonself-determined prejudice regulators, $F_{(1,39)}=6.36$, $p < .025$, partial $\eta^2=.15$, as did symbolic threat, $F_{(1,39)}=9.68$, $p = .025$, partial $\eta^2=.21$. In contrast, no differences in discrimination were found in the self-determined prejudice regulation group, $F_{(1,44)}=1.36$, $p = .25$, partial $\eta^2=.032$ (no threat vs. realistic threat); $F<1$ (no threat vs. symbolic threat).

***Supplementary Analyses: Depletion***

As complementary information to Study 3, self-reported vitality and Stroop interference scores were evaluated in order to shed light on the extent to which prejudice regulation during the IAT was depleting for self-determined and nonself-determined prejudice regulators.

Vitality levels were recorded at baseline (pre-IAT) and after completing the IAT. Depletion was computed within-subjects as a drop in vitality from baseline to post-IAT; self-determined and nonself-determined prejudice regulators were compared. In parallel with findings from Study 3, nonself-determined prejudice regulators experienced a significant drop in vitality after prejudice regulation on the IAT, $M_D$ = -.17; $SD$ = .43, $t_{(54)}$=2.93, $p < .01$. On the other hand, those with a self-determined motivation to be nonprejudiced did not experience a change in vitality after completing the IAT, $t < 1$. No motivational differences in Stroop interference were found.

### *Chapter Summary and Brief Discussion*

The current study was expected to reveal the extent to which one's level of self-determined prejudice regulation moderates the relationship between perceived intergroup threat and prejudice. Nonself-determined motivation to control prejudice was expected to yield a significantly greater effect of threat on prejudice, compared to self-determined motivation to control prejudice. Meaningful support for this hypothesis was obtained.

Verification of the experimental threat manipulation demonstrated that participants were reliably threatened by the target threat induction. Perceived realistic threat was highest in the realistic threat condition and symbolic threat was highest in symbolic threat condition. Moreover, all participants believed the news story described actual threatening events pertaining to Arab-Muslims relations.

The moderating effect of motivation on the relationship between intergroup threat and outgroup attitudes was tested using overall ANOVAs and a series of planned comparisons. These methods generated similar results. For all explicitly-measured indicators of outgroup attitudes (i.e., modern racism, negative affect, interracial anxiety, and racial discrimination),

nonself-determined prejudice regulators displayed heightened prejudice when threatened, compared to when not threatened. Moreover, this threat effect held across both types of intergroup threat: realistic and symbolic. In contrast, neither realistic nor symbolic intergroup threat influenced any type of prejudice for those with self-determined motivation to regulate prejudice. It appears that self-determined prejudice regulation protects against the negative effects of intergroup threat on outgroup attitudes, whereas nonself-determination exacerbates this effect. Although I indeed expected that the effect of threat on prejudice would be greater for nonself-determined prejudice regulators than for self-determined prejudice regulators, it is interesting to note that self-determined motivation to be nonprejudiced fully protected against the effect of threat on all dependent variables. That is, there were no meaningful differences between threatened and non-threatened individuals in the self-determined prejudice regulation group.

Corresponding to expectations, intergroup threat did not influence automatic prejudice for either group of prejudice regulators. Thus, implicit race bias scores on the IAT were not affected, regardless of whether participants were realistically threatened, symbolically threatened, or not threatened. It is unlikely that a one-time threat exposure like the one induced in the current study would impact ingrained and automatic attitudes. Implicit associations are often the result of entrenched attitudes and learning, and immediate or novel threats may not be strong enough to alter this pattern of response (Greenwald et al., 2003). Unlike Study 3, the threat induction in the current study was not designed to deplete self-regulation. Presumably, only manipulations that impair self-regulation are likely to modulate IAT scores because the IAT requires prejudice-regulation on prejudice-incongruent test trials. In line with the vast majority of validation studies on the IAT, IAT responses appear to be difficult to alter (Greenwald et al., 1998; 2003).

Secondary analyses of depletion yielded mixed results. As expected, and in line with findings from Study 3, vitality analyses (as measured before and after IAT responding) suggest a depletion of vitality during prejudice-regulation on the IAT for nonself-determined prejudice regulators, but not for self-determined prejudice regulators. However, on the Stroop measure of depletion, self-determined and nonself-determined prejudice regulators did not differ. Unfortunately, it was not feasible to administer a baseline Stroop test (i.e., pre-IAT) for fear of influencing IAT responses by draining self-regulation. Thus, it was not possible to determine whether the null effect of motivation on Stroop interference was the result of actual similarities in depletion or whether baseline Stroop scores would have revealed a post-IAT drop in self-control for nonself-determined prejudice regulators. Results of Stroop response latencies do suggest, however, that both self-determined and nonself-determined prejudice regulators exhibit comparable executive control. Interestingly, this evidence is indicative that differences in implicit prejudice between self-determined and nonself-determined prejudice regulators are likely a function of prejudice regulation rather than general cognitive fluency.

In summary, results underscore the unique importance of both realistic and symbolic threat in producing (explicit) prejudice, supporting contemporary integrative theories of threat (e.g., Stephan et al., 1998). However, a novel contribution within the current findings highlights a new motivational moderator in the link between intergroup threat and outgroup attitudes. Thus, intergroup threat indeed predicts prejudice, but only when motivation to regulate prejudice is nonself-determined. An advantage of the current study is its internal validity – experimental control over motivation conditions and reliable manipulations of intergroup threat were employed to influence an array of outgroup attitudes. However, in order to increase the external validity of the current findings, Study 5 used a somewhat larger cross-sectional sample

in which motivation to regulate prejudice and perceptions of intergroup threat were measured, rather than manipulated.

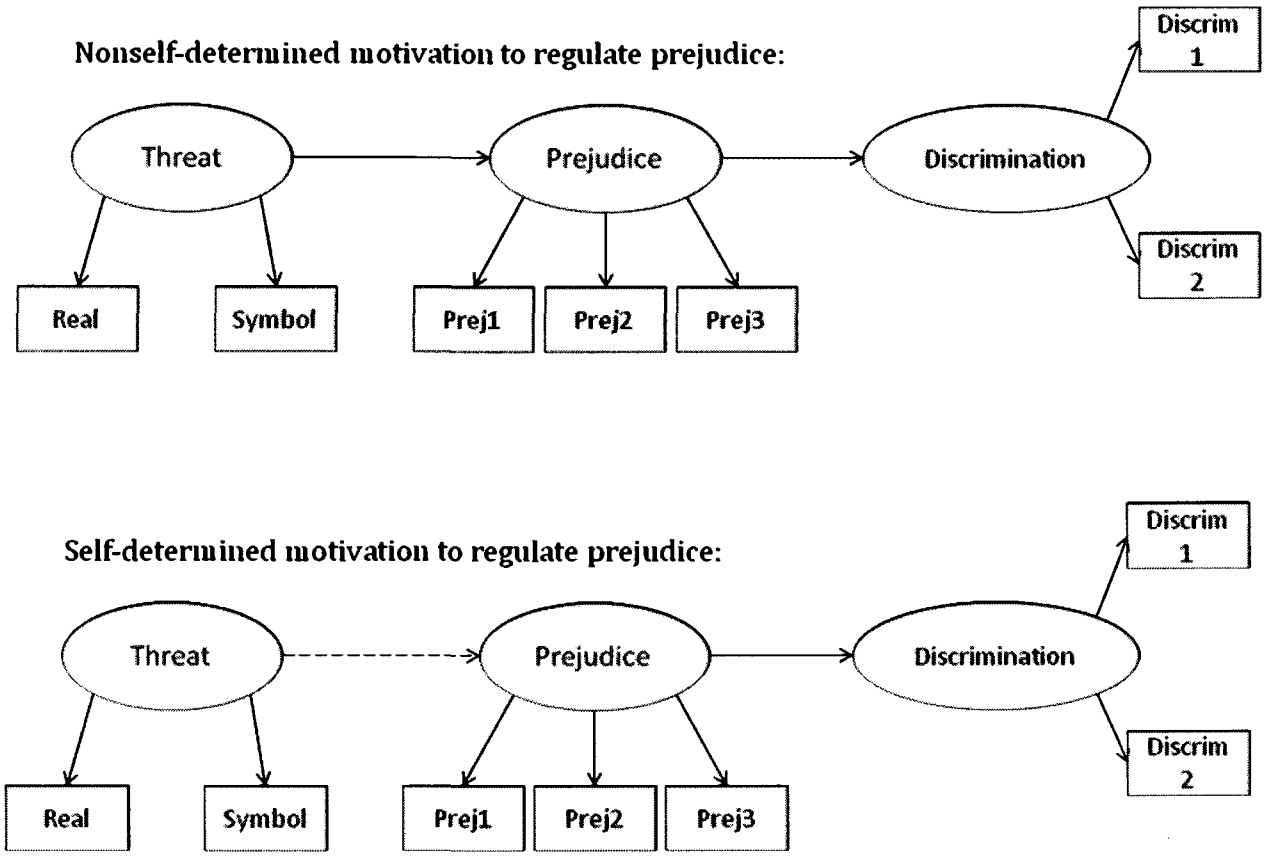
CHAPTER SIX

# STUDY 5

## *The Interactive Role of Motivation and Threat in Prejudice and Discrimination*

Study 5 was intended to serve as a cross-sectional validation and generalization of findings from Study 4. Specifically, the goal of Study 5 was to examine the relationship between intergroup threat and prejudice for two groups of prejudice regulators: self-determined and nonself-determined. Based on results of Study 4, it was expected that the perception of intergroup threat (including realistic and symbolic threat) would be positively related to prejudice, but that this association would be much stronger for nonself-determined prejudice regulators, than for those with a self-determined motivation to regulate prejudice. The hypothesized models are presented in *Figure 5*. Model assessment was performed using structural equation modeling (SEM) in EQS 6.1 (Bentler, 2006).

Beyond facilitating the generalization of findings from Study 4, the use of structural modeling techniques in the current study also permitted the specification of a more complex sequence of associations among latently-measured variables. Specifically, whereas both prejudice and discrimination were assessed as separate dependent variables in Study 4, the model proposed in Study 5 was able to ascertain the directional relationship between the dependent variables of prejudice and racial discrimination, in addition to testing the interplay between motivation to regulate prejudice and intergroup threat. Thus, the relationship between prejudice and intentions of racial discrimination was also assessed, and was expected to be positive for both groups (please see *Figure 5*).




*Note. Dashed line represents a hypothesized weak association*

*Figure 5.* Study 5: The Hypothesized Interactive Role of Motivation to Regulate Prejudice and Intergroup Threat in Predicting Prejudice and Discrimination

## *Method*

### *Participants*

In total, participants were 255 undergraduates from English-speaking classes in the faculties of arts, sciences, and social sciences at the University of Ottawa. In the sample of nonself-determined prejudice regulators (*N*=128), participants' age ranged from 17 to 54 years (*M*=21.22; *SD*=5.21), and 69% were female. The vast majority of respondents were Canadian (i.e., 91%) and Caucasian (75%; the remaining 25% varied in their cultural background). The sample of self-determined prejudice regulators consisted of 127 participants (78% female) with a mean age of 21.56 (*SD* = 4.10; *range*=17 to 46 years). Again, respondents were mostly Canadian (94%) and Caucasian (74%).

### *Procedure*

One-time questionnaires (*N*=450) were distributed in class, and students completed them during their own time. Completed questionnaires, containing the instruments described below (and presented in Appendix E), were returned to class the next week in sealable envelopes, which were provided. Using a median-split of motivation to regulate prejudice scores, the sample was divided into self-determined and nonself-determined prejudice regulators. Thus, as in Studies 1-4, global scores on self-determined motivation to regulate prejudice (SDRPI scores) were calculated using the standard formula that gives a weight to each dimension according to its position on the continuum (+3, +2, and +1 for self-determined forms of motivation to regulate prejudice and -1, -2, -3 for the nonself-determined forms).

### *Measures*

***Motivation to be Nonprejudiced Scale*** *(MNPS;* Legault et al., 2007). The MNPS was administered. In the present study, internal consistency (Cronbach alpha) ranged from .79 to .89.

***Perceived intergroup threat.*** The Realistic and Symbolic Threat Scales (Stephan et al., 1998) were adapted to provide measures of intergroup threat posed by Arab-Muslims, including job loss and economic costs (Realistic threat; 4 items; e.g., "Arab immigrants are taking jobs away from Canadians"), as well as threats derived from perceived differences in values and beliefs between Arab-Muslims and Canadians (Symbolic threat; 4 items; e.g., "Our way of life is being modified by Arab-Muslim immigration"). Respondents indicated the extent to which they felt concerned about the outgroup threat on a Likert scale from 1 to 9 (1=Strongly Disagree; 9=Strongly Agree). The psychometric properties of these scales have been shown to be adequate (Stephan et al., 1998). In the present study, realistic and symbolic threats yielded alphas of .90 and .91, respectively.

***Arab-Muslim prejudice.*** The Subtle Prejudice Scale (Pettigrew & Meertens, 1995), which was designed to measure modern prejudice toward Arabic people was adapted and used. The 9 item scale includes items such as "Arabic people living here should not push themselves where they are not wanted" and "There exists a lot of discrimination against Arab-Muslims, which limits their chances to get ahead" (1=Strongly Disagree; 9=Strongly Agree). The Subtle Prejudice Scale has demonstrated good reliability, as well as good construct validity (Pettigrew & Meertens, 1995). In the present study, Cronbach $\alpha$ = .82.

***Arab-Muslim discrimination.*** As per Study 4, four indicators of behavioural intention to discriminate against Arabic-Muslims were administered. Participants were asked to describe the extent to which they would engage in various behaviours (e.g. "Share my class notes with an Arab-Muslim person"; "Play on the same sports team as an Arab Muslim"). These items were used to approximate Arab-Muslim behavioural discrimination, and yielded a reliability of $\alpha$ =.90.

***Analyses***

Data analysis consisted of preliminary analyses and structural equation modeling (SEM). Preliminary analyses addressed issues related to missing data and the basic statistical assumptions underlying SEM. In addition, descriptive statistics were conducted for each observed variable under study. Using SEM, the hypothesized threat-prejudice model was estimated for each group of prejudice regulators using the criteria and parameters presented next. Furthermore, the dissimilarity of the factorial structure of the hypothesized threat-prejudice model was tested across groups using multigroup invariance testing.

***Program and estimation procedure.*** The hypothesized models (*Figure 5*) were tested using SEM with the EQS 6.1 program. The maximum likelihood (ML) estimation method was used in model-fitting. ML refers to the method that estimates the parameters specified in the model, and these estimates are made based on the maximum likelihood that the data were drawn from the population of interest. ML is the most widely used method of estimation (Kline, 2005). Given that data in the current analyses were measured on a scale with many data points (i.e., 9 point Likert scale), and given that data approximated multivariate normality, the covariance matrix was used in the estimation of model parameters and model fit. Zero-order correlations among the observed variables, error variances of the endogenous variables, and standard errors of the parameter estimates were also assessed. For the purposes of statistical identification, the first factor loading for each latent variable in the proposed models was fixed to 1.

***Model-testing criteria.*** Size and statistical significance of estimated path coefficients were assessed. In addition, the degree of model fit between the observed and model covariance matrices was assessed using several criteria (i.e., the $\chi^2$ likelihood ratio statistic; the comparative fit index [CFI; Bentler, 1990]; the root mean square error of approximation

[RMSEA; Steiger, 1989]; and the standardized root mean-squared residual [SRMR; Jöreskog & Sörbom, 1993]). These criteria bring into focus issues of statistical and practical meaningfulness, as well as parsimony. They were used to measure model fit in the present study because they are not redundant with one another and are widely and currently recommended (Cheung & Rensvold, 2002). Bentler (2007) also advocates the use of the SRMR, RMSEA, CFI.

The $\chi^2$ measures the closeness of fit between the sample covariance and the proposed covariance (the model) – it is based on the null hypothesis that the proposed model corresponds to the data. Thus, with the goodness of fit $\chi^2$ test in SEM, a rejection of the null hypothesis suggests that the hypothesized model is significantly discrepant from the sample data. In theory, a non-significant $\chi^2$ suggests a model that fits the data. However, not only does a non-significant $\chi^2$ rarely occur in practice, but it is also implausible. This is due to the fact that the $\chi^2$ is a product of sample size - in other words, given a large sample size, any a priori hypothesis, even if unfalse, may be rejected. Furthermore, $\chi^2$ is also very sensitive to distributional misspecification – it is not robust enough to account for violations of its underlying assumptions. Adherence to the model $\chi^2$ test is therefore likely to result in overrejection of potentially meaningful models. After all, the hypothesis tested by the $\chi^2$ demands that the model fit the data perfectly – which is unlikely.

Because of the difficulty in construing the $\chi^2$ test, researchers have developed goodness of fit indices which transform the $\chi^2$ into more interpretable values. For instance, the ***CFI*** ranges from 0 to 1, and represents the comparison between the restricted model (i.e. the model that the researcher is imposing/proposing for the data) and the independence model (the model in which all correlations among variables are zero). Desirable CFI values are above .90. Indeed, Hu and Bentler (1999) note that values close to .95 suggest a well-fitting model. The ***RMSEA***

considers the error of approximation in the population. It measures the fit-discrepancy between the model with optimally chosen (but unknown) parameters and the proposed model (Byrne, 1994). Expressed per degree of freedom, values of .05 indicate good fit, and values as high as .08 are indicative of reasonable errors of approximation (Browne & Cudeck, 1995). Finally, the ***SRMR*** is a standardized summary of the average covariance residuals (difference between the observed and restricted, a.k.a. postulated covariances). When the fit of the model is perfect, the SRMR equals zero. As the average discrepancy between the observed and predicted covariances increases, so does the SRMR. A favourable SRMR value is less than .10 (Kline, 2005).

## *Results*

### *Preliminary Analyses*

***Missing data and statistical assumptions.*** Of the 278 returned questionnaires, 23 (8.3%) were excluded due to substantive patterns of missing values. Of the remaining 255 questionnaires, missing data points were few. Among items, missing data points ranged from 0.5% to 1.5%, and were judged to be missing completely at random (Tabachnick & Fidell, 2007). Because missing data are compounded by computing observed variables with missing indicators, missing data was replaced *before* global observed variables were computed, using maximum likelihood estimation in SPSS missing values analysis. This approach was chosen to maximize data and reduce substitution error.

Descriptive statistics (please see *Table 9*) and histograms for each indicator under study revealed that data were, on average, univariately normal, with the exception of mild positive skewness and kurtosis for some of the prejudice and discrimination variables in the self-determined prejudice regulation group. Given that these items measured racism and, in some

Table 9

*Study 5: Summary Statistics for Observed Variables in Threat-Prejudice Model*

| *Variables* | *Nonself-determined (n=128)* | | *Self-Determined (n=127)* | |
|---|---|---|---|---|
| | Mean *(SD)* | Skewness *(Kurtosis)* | Mean *(SD)* | Skewness *(Kurtosis)* |
| Intergroup Threat | | | | |
| Realistic | 3.22 | .69 | 2.41 | 1.46 |
| | *(1.61)* | *(.14)* | *(1.36)* | *(2.45)* |
| Symbolic | 3.02 | 1.19 | 2.43 | 1.60 |
| | *(1.75)* | *(1.33)* | *(1.37)* | *(2.08)* |
| Arab-Muslim Prejudice | | | | |
| Prejudice 1 | 3.73 | .88 | 1.96 | 1.95 |
| | *(2.05)* | *(.43)* | *(1.12)* | *(1.75)* |
| Prejudice 2 | 4.56 | .41 | 2.53 | .93 |
| | *(1.92)* | *(-.38)* | *(1.22)* | *(1.29)* |
| Prejudice 3 | 5.66 | -.26 | 4.15 | -.25 |
| | *(1.62)* | *(-.27)* | *(2.43)* | *(-1.03)* |
| Discrimination | | | | |
| Discrim 1 | 4.94 | .03 | 3.48 | .93 |
| | *(2.88)* | *(-1.37)* | *(2.43)* | *(-.07)* |
| Discrim 2 | 2.50 | 1.68 | 1.57 | 3.81 |
| | (2.22) | *(1.89)* | *(1.24)* | *(5.15)* |

*Note.* Item scores range theoretically from 1 to 9.

cases, blatant discrimination, it is not surprising that self-determined prejudice regulators tended to disagree with these items in a rather uniform matter. It is reasonable that sensitive items like those reflecting racism are more positively skewed and kurtotic than less sensitive items. Nonetheless, item scores demonstrated acceptable variability. Moreover, multivariate kurtosis was low (under 14.0) and an inspection of z-score frequencies demonstrated an absence of univariate outliers. In terms of multivariate outliers, Mahalanobis' distance statistic, in addition to Mardia's coefficient, showed an absence of multivariate outliers. Because the reliability of ML estimation is only threatened under excessive multivariate kurtosis (Browne, 1984), the data were judged to fit the statistical assumptions underlying ML. In addition, bivariate scatterplot analysis did not reveal departures from the assumptions of linearity or homoscedasticity, and inspection of correlations for all pairs of variables suggested an absence of multicollinearity (i.e., variable correlations did not exceed .90; Kline, 2005). Overall, descriptive statistics revealed a modest to moderate amount of perceived threat, Arab-Muslim prejudice, and racial discrimination, for both groups of prejudice regulators.

***Sample size.*** Although SEM is generally a large-sample technique, it has been suggested that 100 cases is an acceptable minimum cut-off (Kline, 2005; MacCallum & Austin, 2000). Indeed samples between 100 and 200 cases are deemed "medium" in size, by SEM standards (Kline, 2005). An additional consideration in the issue of sample size is model complexity. Complex models require larger samples. Given that the proposed models contain relatively few parameters, with 7 observed variables and 3 latent variables, it is argued that the present sample sizes ($N$=127 self-determined; $N$=128 nonself-determined) are adequate for the current study.

***Structural Equation Modeling***

***Testing the measurement models.*** Before testing the structure among latent variables, the measurement models were assessed from several angles, for each group of prejudice regulators, in order to correct any measurement misspecification. Confirmatory factor analyses (CFA) were performed to determine the extent to which indicators loaded onto their target latent variables.

For the nonself-determined group, factor loadings (displayed in *Table 10*) were of acceptably high magnitude, in the expected direction, and statistically significant at $p < .001$. *Table 10* also presents the standardized error term variances. Standard errors of the parameter estimates appeared in order, ranging from .07 to .28. Furthermore, explained variance of each of the 7 indicators (on the part of the latent factors) was high, ranging from .35 to .93. Inspection of fit indices revealed the following: $\chi^2$ (11) = 19.11, $p$ = .06; CFI = .98; RMSEA = .07 (90% C.I. = .01 – .11); SRMR = .04. Assessment of modification indices demonstrated an absence of cross-loadings or correlated error terms. Corroborating these criteria, standardized residuals were very low (i.e., .00-.07; $M$=.02). Also, with at least two indicators per factor, the CFA model was overidentified. Given that a nonsignificant $\chi^2$ was obtained, and alternative fit indices were more than adequate, the measurement model was deemed a very good fit to the sample data, and post-hoc modifications were not required nor implemented.

For the group of self-determined prejudice regulators, an initial CFA revealed misfit due to the presence of one significant cross-loading (Prejudice 3 on Discrimination; please see *Table 10*). This was not surprising given that prejudice and intentions to discriminate are highly related constructs. After unconstraining this cross-loading, the final measurement model for the self-determined group demonstrated significantly better (and acceptable) fit, $\chi^2$ (10) = 19.93, $p$ = .01;

Table 10

*Study 5: Standardized Factor Loadings of Indicators on Latent Variables (Final Measurement Models)*

| *Observed Variable* | Intergroup Threat | | Arab-Muslim Prejudice | | Discrimination | |
|---|---|---|---|---|---|---|
| | NSD | SD | NSD | SD | NSD | SD |
| Realistic | .97 | .81 | | | | |
| | (.26) | (.45) | | | | |
| Symbolic | .80 | .77 | | | | |
| | (.61) | (.64) | | | | |
| Prejudice 1 | | | .86 | .57 | | |
| | | | (.50) | (.62) | | |
| Prejudice 2 | | | .91 | .95 | | |
| | | | (.41) | (.60) | | |
| Prejudice 3 | | | .62 | .61 | | .39 |
| | | | (.69) | (.29) | | (.29) |
| Discrim 1 | | | | | .45 | .73 |
| | | | | | (.80) | (.61) |
| Discrim 2 | | | | | .60 | .35 |
| | | | | | (.80) | (.81) |

*Note. NSD* = Nonself-determined prejudice regulation model ($N$=128); *SD* = Self-determined prejudice regulation model ($N$=127). Standardized error term variances are in parentheses. All loadings are significant at $p < .001$.

CFI = .94; RMSEA = .09 (90% C.I. = .03 – .15); SRMR = .07. Assessment of modification indices demonstrated an absence of correlated error terms and standardized residuals were adequately low. Factor loadings were of acceptably high magnitude, in the expected direction, and statistically significant at $p < .001$. Standard errors of the parameter estimates appeared in order, ranging from .10 to .23. In addition, latent factors explained a substantial amount item variance (ranging from .32 to .79), and standardized residuals were acceptably low (.00-.13, $M$=.03).

For a summary of the zero-order correlations among the latent variables, please see *Table 11*. For the nonself-determined prejudice regulation model, correlations among all variables were strong and in the expected direction (i.e., positive). It should be noted that zero-order correlations among the 7 observed indicator variables were also of moderate to strong magnitude and in the expected direction. For the self-determined prejudice regulation model, intergroup threat was not correlated with prejudice and only marginally correlated with discrimination. The association between prejudice and discrimination was moderate-strong and in the expected direction. Similarly, correlations among the indicator variables for this group showed weak associations among threat and prejudice items, and among threat and discrimination items. Correlations among prejudice and discrimination items were moderate to strong.

***Testing the hypothesized models.*** The hypothesized models (presented in *Figure 5*) were specified according to the above-mentioned measurement models, and including the addition of paths between latent variables. For nonself-determined prejudice regulators, the association between threat and prejudice was expected to be positive and substantial. Conversely, it was expected that this association would be much weaker, and perhaps even nonsignificant, for self-determined prejudice regulators. For both models, prejudice was

Table 11

*Study 5: Correlations among Latent Variables*

| | Perceived Intergroup Threat | Arab-Muslim Prejudice | Discrimination |
|---|---|---|---|
| Perceived Intergroup Threat | | .06$^{ns}$ | .20$^{ns}$ |
| Arab-Muslim Prejudice | .75 | | .57 |
| Discrimination | .64 | .84 | |

*Note.* Correlations are presented below the diagonal for the nonself-determined group, and above the diagonal for the self-determined group. Values are significant at $p<.01$, except where indicated (ns=nonsignificant).

expected to be substantially and positively related to racial discrimination. The final models are presented in *Figure 6*[1].

Fit indices for the nonself-determined prejudice regulation model revealed a very well-fitting model, $\chi^2$ (12) = 19.12, $p$ = .09; CFI = .98; RMSEA = .06 (90% C.I. = .00 – .12); SRMR = .04. Thus, the restricted (i.e., hypothesized) model covariance was not statistically different from the sample covariance. As can be seen in Figure 6, parameter estimates were plausible, as expected, and significant at p <.001; and the variance explained for each endogenous latent variable was substantial. Thus, the direct effect of intergroup threat on prejudice was strong, as was the direct effect of prejudice on discrimination.

The model fit for self-determined prejudice regulators was also satisfactory, $\chi^2$ (11) = 21.69, $p$ < .05; CFI = .94; RMSEA = .08 (90% C.I. = .03 – .15); SRMR = .08. In line with hypotheses, the direct effect of intergroup threat on prejudice was negligible (see Figure 6) and the direct effect of prejudice on discrimination was positive and substantial. No post hoc modifications were indicated for either model.

A test of factorial invariance was conducted to underscore the difference in the relationship between threat and prejudice for self-determined and nonself-determined prejudice regulators. In other words, the proposed latent structure among threat, prejudice, and discrimination was constrained across groups, after releasing the noninvariant factor loadings.

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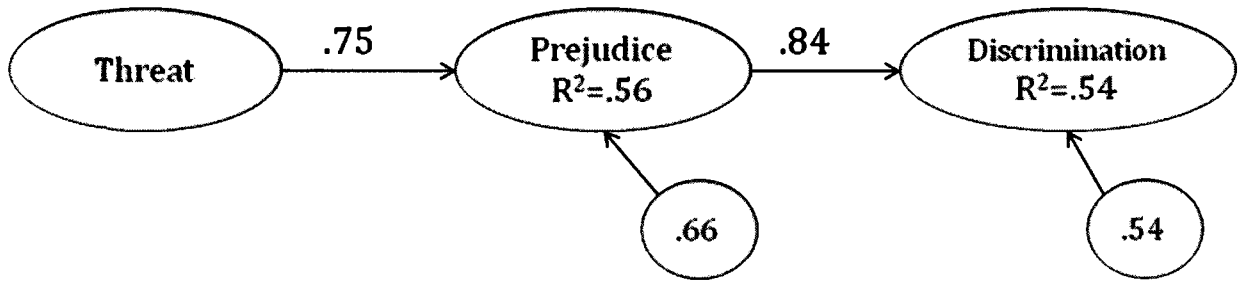
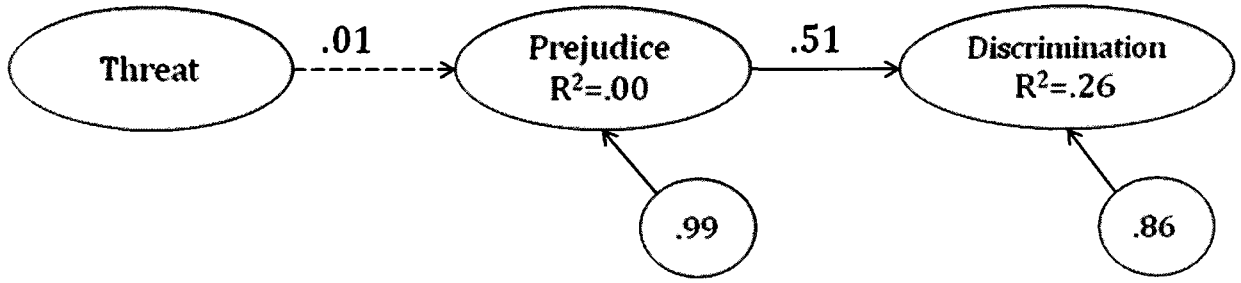
[1]For both models of prejudice regulation, the direct path from threat to discrimination was estimated in the spirit of testing alternative models. This path was not expected to be significant for either model, and indeed post hoc model estimation suggested that it was not. Moreover, the inclusion of this parameter did not improve model fit for either model. It is unlikely that threat would explain unique variance in discrimination after controlling for the influence of prejudice; theoretically, prejudice is the most proximal indicator of racial discrimination, and is liable to fully mediate the effect of intergroup threat.

**Non-self-determined motivation to regulate prejudice:**




**Self-determined motivation to regulate prejudice:**




*Note. Dashed line represents negligible relationship.*

*Figure 6.* Study 5: The Interactive Role of Motivation to Regulate Prejudice and Perceived Intergroup Threat in Predicting Prejudice and Discrimination (Final Models)

Unsurprisingly, when the threat-prejudice link was constrained across groups, it was found to be noninvariant, Lagrange Multiplier $\chi^2 = 9.42, p < .01$.

### *Chapter Summary and Discussion*

The objective of Study 5 was to extend Study 4 by comparing a cross-sectional threat-prejudice model across two groups of prejudice regulators – those high and low in self-determined motivation to regulate prejudice. Thus, interrelations among intergroup threat, prejudice, and discrimination were assessed for both groups using SEM. It was expected that the perception of intergroup threat would be strongly related to prejudice for those with a nonself-determined motivation to regulate prejudice. In contrast, because self-determined prejudice regulation is expected to act as a buffer against the influence of threat on prejudice, the threat-prejudice association was expected to be weak or negligible for this motivation group. Results fully supported these predictions. Thus, when the hypothesized model was tested for self-determined and nonself determined prejudice regulators, it was found to be an acceptable fit to the data for both groups; however, the association between intergroup threat and prejudice was significant only for those with nonself-determined motivation to regulate prejudice. Among self-determined prejudice regulators, the relationship between intergroup threat and prejudice was close to zero. Further analysis of this difference was sought through a test of structural invariance. Results underscored that the link between intergroup threat and prejudice is indeed significantly different across groups.

Results of the current study help to extend Study 4's findings beyond the laboratory. Thus, self-determined and nonself-determined prejudice regulators respond differently to both situation-evoked and stable/dispositional perceptions of intergroup. Taken together, results of Studies 4 and 5 suggest that self-determined prejudice regulation moderates the relationship

between perceived intergroup threat and prejudice. Although self-determined prejudice regulators in the current study report a reasonable amount of perceived intergroup threat (both realistic and symbolic), it was not related to prejudice. It is plausible that those with a self-determined motivation to be nonprejudiced are not influenced by intergroup threats when making outgroup evaluations. For nonself-determined prejudice regulators, however, feeling threatened is likely to elicit greater negative response to the outgroup.

CHAPTER SEVEN

# GENERAL DISCUSSION

## *Summary of Findings*

Using a series of four experiments and one cross-sectional survey, the current dissertation proposed to address the role of self-determined motivation to be nonprejudiced in predicting various indicators of outgroup attitudes (i.e., modern racism, negative outgroup affect, implicit prejudice, stereotype activation and application, intergroup anxiety, and outgroup discrimination). More decisively, the processes by which motivation to be nonprejudiced influences prejudice were ascertained. To this end, differences in the automatization of prejudice regulation were assessed for self-determined and nonself-determined prejudice regulators. Furthermore, these two groups of prejudice regulators were compared in terms of their tendency to resist the effects of intergroup threat when rating an outgroup threat target. Four broad hypotheses were tested, which are recalled below.

### *Hypothesis 1*

As a first step, it was expected that self-determined prejudice regulators would demonstrate significantly less prejudice than would nonself-determined prejudice regulators. More specifically, this association was expected to hold at both the explicit (i.e., self-report) and implicit (i.e., automatic) level of measurement.

### *Hypothesis 2*

In search of support for the internalization-automatization hypothesis, it was suggested that self-determined prejudice regulators are better equipped to regulate prejudice than are nonself-determined prejudice regulators because their self-regulation of prejudice has been automatized. It was expected that differences in prejudice would be attributable to differences

in prejudice regulation rather than differences in stereotype accessibility. Two paradigms jointly tested this general hypothesis.

***Hypothesis 2a.*** Both self-determined and nonself-determined prejudice regulators were expected to demonstrate automatic stereotype activation in response to a prime. Thus, the relative effectiveness of self-determined prejudice regulation in generating less racial bias than nonself-determined prejudice regulation was *not* expected to be the result of absent or weakened stereotypes or reduced stereotype accessibility. However, it was hypothesized that those with a self-determined regulation of prejudice would exert automatic control over the *application* of racial stereotypes, relative to nonself-determined individuals.

***Hypothesis 2b.*** Prejudice regulation was expected to be automatic among self-determined prejudice regulators, relative to nonself-determined prejudice regulators. Thus, it was expected that self-determined prejudice regulation would be less vulnerable to self-regulatory depletion than would nonself-determined prejudice regulation, resulting in comparatively less racial bias. In other words, when depleted of self-regulatory resources, self-determined prejudice regulators were expected to show similarly low levels of prejudice as non-depleted controls. Conversely, when nonself-determined prejudice regulators were depleted of self-regulatory strength, they were hypothesized to show significantly more racial bias than their non-depleted counterparts.

***Hypothesis 3***

An additional key predictor of prejudice was incorporated – the role of intergroup threat. It was hypothesized that motivation to regulate prejudice would moderate the association between intergroup threat and outgroup attitudes (i.e., modern prejudice, negative outgroup affect, interracial anxiety, and racial discrimination). Among nonself-determined prejudice regulators, it was expected that intergroup threat would significantly increase negative outgroup

attitudes, compared to non-threatened controls. This proposed effect, however, was expected to be substantially smaller in magnitude for self-determined prejudice regulators.

Five studies were conducted to test these general hypotheses. The specific hypotheses and results of each study are presented next.

***Study 1***

Study 1 consisted of a preliminary step to ascertain the relationship between motivation to regulate prejudice and prejudice itself. It was expected that self-determined prejudice regulators would demonstrate less prejudice than nonself-determined prejudice regulators on a measure of self-reported affective prejudice, as well as on the Race IAT. Indeed, these hypotheses were supported, offering substantiation for Hypothesis 1. Of particular interest, automatic racial bias was twice as strong for the nonself-determined prejudice regulators, compared to self-determined prejudice regulators. Supplementary analyses examined the pattern of correlations between motivational subtypes and prejudice. In line with expectations, correlations revealed that, as the self-determined regulation of prejudice increased, explicit and implicit racial bias systematically decreased. This trend corresponded appropriately with SDT's continuum of internalization, which suggests that as regulation becomes more internalized and self-congruent, it concurrently becomes more effective.

***Study 2***

The goal of Study 2 was to provide support for the internalization-automatization hypothesis by assessing the role of motivation to regulate prejudice in the automatic stereotyping process. More specifically, Study 2 sought to determine whether self-determined and nonself-determined prejudice regulators possess differences in stereotype accessibility or, rather, differences in the ability to control the application of stereotypes. This distinction was expected to be important in establishing that stereotypes are present and available among self-

determined prejudice regulators, but the application of such stereotypes (i.e., in making prejudiced evaluations) is automatically inhibited. In terms of stereotype activation, a main effect of prime revealed that stereotype activation indeed occurred, as both groups of prejudice regulators demonstrated significantly greater activation of Asian stereotypes when primed with the target category (i.e. Asian) compared to when primed with the non-target category (i.e., Caucasian). In line with expectations, results indicated that both groups of prejudice regulators demonstrated statistically similar levels of automatic stereotype activation following the prime.

In the stereotype application phase, participants were assigned to either a no-prime or an African-Canadian prime condition, and then read about and evaluated a character named Mike. In line with expectations, a significant motivation x prime interaction revealed that, for the self-determined prejudice regulators, no differences were found between those who were primed and those who were not. For the nonself-determined prejudice regulators, the effect of prime was significant; primed participants showed greater stereotype application than no-prime participants. Thus, nonself-determined prejudice regulators showed an increase in prejudice when primed with stereotypes, whereas self-determined prejudice regulators inhibited prejudice when primed with stereotypes. It should be noted that stereotype inhibition was considered to be automatic because participants were naïve about the association between the prime stimulus and their response (e.g., Sinclair & Kunda, 1999).

Taken together, results of the two-part Study 2 generated support for Hypothesis 2a. Both self-determined and nonself-determined prejudice regulators shared similar implicit stereotypes, but only self-determined prejudice regulators inhibited the application of stereotypes when making evaluations about a target.

***Study 3***

The objective of Study 3 was to provide further support for the internalization-automatization hypothesis by assessing the automaticity of prejudice regulation from a different angle. Specifically, Study 3 aimed to determine whether self-determined motivation to be nonprejudiced moderates the relationship between deficits in self-regulatory strength and racial bias on the IAT. Because IAT responding requires prejudice regulation on prejudice-congruent trials, the depletion of self-regulatory capacity should, theoretically, predict a decrease in self-control on the IAT, resulting in increased racial bias. This trend was anticipated for nonself-determined prejudice regulators. That is, depleted participants were expected to show an increase in prejudice compared to non-depleted controls. However, because the regulation of racial bias is theorized to be automatic for self-determined prejudice regulators, depletion of their self-regulation was not expected to influence prejudice regulation on the IAT. Indeed, it was hypothesized that depleted self-determined prejudice regulators would show similar levels of bias as their non-depleted counterparts.

These hypotheses were fully supported, revealing that nonself-determined regulatory efforts were indeed impaired by depletion, whereas self-determined prejudice regulation was not. In fact, self-determined prejudice regulators showed less prejudice when depleted, compared to non-depleted controls – suggesting spontaneous prejudice suppression. Results from Study 3 support Hypothesis 2b, and in doing so, offer validation for the internalization-automatization hypothesis by appeasing the query of whether lower implicit prejudice among self-determined prejudice regulators reflects an effective and automatic inhibition of prejudice.

Supplementary analyses complemented the main findings of Study 3 by showing that, although self-determined and nonself-determined prejudice regulators were equally low in vitality after depletion, self-determined prejudice regulators' vitality was fully restored to

baseline during prejudice regulation on the IAT. This was not the case for non self-determined prejudice regulators, who did not recover their vitality during the IAT. These findings further suggest that prejudice regulation on the IAT is not depleting for self-determined prejudice regulators (in fact it is vitalizing), presumably because prejudice suppression is relatively authentic and automatic.

***Study 4***

The role of self-determined motivation to be nonprejudiced in moderating the impact of intergroup threat on outgroup attitudes was assessed in Study 4. Self-determined motivation to be nonprejudiced was anticipated to provide a buffer against the effects of perceived intergroup threat. Specifically, it was hypothesized that nonself-determined prejudice regulators would experience an increase in negative outgroup attitudes when faced with realistic and symbolic threats, compared to when not threatened. In contrast, this effect was expected to be of substantially smaller magnitude for self-determined prejudice regulators. As hypothesized, nonself-determined prejudice regulators displayed a significant increase in negative outgroup attitudes when faced with intergroup threat, including greater modern racism, negative affect, interracial anxiety, and racial discrimination. This effect was observed in both realistic and symbolic threat conditions. In contrast, neither realistic nor symbolic intergroup threat influenced any measure of outgroup attitudes among those with self-determined motivation to regulate prejudice. Results reveal that self-determined prejudice regulation protects against the negative effects of intergroup threat on outgroup attitudes, whereas nonself-determination exacerbates them. Results of Study 4 yield strong support for Hypothesis 3. In fact, the protective influence of self-determined motivation to be nonprejudice in reducing the effects of intergroup threat on outgroup attitudes was more robust than expected. Although self-

determined prejudice regulators experienced intergroup threat induction, it had no impact on outgroup attitudes.

In parallel to findings from Study 3, vitality analyses – as measured before and after IAT responding – suggested that nonself-determined prejudice regulators experienced a depletion of vitality during prejudice-regulation on the IAT. Conversely, those with a self-determined motivation to be nonprejudiced did not experience a change in vitality from baseline to post-IAT. Again, prejudice regulation appears to be draining for nonself-determined prejudice regulators, but not for self-determined prejudice regulators. The second measure of depletion – the Stroop Test, did not reveal cognitive differences between the two groups of prejudice regulators. This null effect may be due to the fact that baseline Stroop Tests were not feasible to administer, and so changes in self-control could not be determined.

***Study 5***

Study 5 was intended to serve as a cross-sectional validation and generalization of findings from Study 4. Thus, the relationship between intergroup threat and prejudice was ascertained for self-determined and nonself-determined prejudice regulators, using two independent models. Based on results of Study 4, the association between perceived intergroup threat (including realistic and symbolic threat) and prejudice was expected to be positive and substantial for nonself-determined prejudice regulators. Conversely, it was expected that this association would be much weaker, and perhaps even nonsignificant, for self-determined prejudice regulators. For both models, prejudice was expected to be substantially and positively related to racial discrimination.

Results of structural equation modeling generated acceptably well-fitting models for both groups of prejudice regulators. However, in support of expectations, the association between intergroup threat and prejudice was significant only for those with nonself-determined

motivation to regulate prejudice. Among self-determined prejudice regulators, the relationship between intergroup threat and prejudice was close to zero. Results of structural invariance testing emphasized that the association between intergroup threat and prejudice was statistically different for the two groups. Hypothesis 3 was thus fully corroborated.

## *Theoretical Contributions*

### *Explaining Prejudice*

Results of Studies 1-5 mutually support the general hypothesis that self-determined motivation to be nonprejudiced is an important factor in the reduction of negative outgroup attitudes. Across all five studies, results revealed that individuals who are self-determined in the regulation of prejudice are more successful at upholding their nonprejudiced standards. This general trend is maintained across measures of modern racism, negative outgroup affect, automatic stereotyping, implicit prejudice, perceived intergroup threat, interracial anxiety, and outgroup discrimination. Thus, having self-determined goals to be nonprejudiced produces less prejudice and negative outgroup attitudes than does having a nonself-determined motivation to control prejudice.

Self-Determination Theory (Deci & Ryan, 1985, 2002) offers an explanation for these findings: The more internalized and self-endorsed the motivation, the more it is effectively and reliably regulated. People who have internalized the regulation of prejudice have grasped the personal significance of nonprejudice, and have synthesized its meaning with other aspects of their self-concept. Nonprejudice goal-striving is congruent with their self-view. For these individuals, maintaining nonprejudiced attitudes is accompanied by a sense of choice, volition, and freedom from external demands or standards. On the other hand, nonself-determined prejudice regulation may be focused toward external demands or contingent on social outcomes

and is thus less reliable (i.e., prejudice regulation only occurs when external cues are present, and lapses when social control is relinquished).

In general, the current findings are consistent with previous research on the relationship between motivation and the successful self-regulation of prejudice, which suggests that personal reasons for prejudice suppression are more effective than external reasons (Devine et al., 2002; Klonis, Plant, & Devine, 2005; Legault et al., 2007; Moskowitz et al., 1999; Ratcliff, Lassiter, Markman, & Snyder, 2006; Wyer, 2007).

### *Toward a Self-Determination Theory of (Intergroup) Attitudes*

An important novel contribution of the current thesis is its extension of self-determination theory to the realm of prejudice regulation. Thus, unlike previous research that simplifies and dichotomizes motivation to control prejudice (i.e., Dunton & Fazio, 1997; Plant & Devine, 1998; Devine et al., 2002), the current findings are based on the consideration and measurement of the full range of SDT factors. With this theoretical contribution, prejudice regulation can be more aptly understood through a self-determination lens.

Such an implication also suggests that attitudes in general, and not just behaviours, can be self-determined, self-endorsed, and self-regulated. With a few exceptions, SDT has been chiefly interested in the factors underlying motivated *behaviours*. In other words, SDT focuses to a large extent on the degree to which human behaviours are volitional, self-determined, and engaged with a sense of choice, and the impact of these features on goal satisfaction and well-being. The present research, however, offers a rationale for extending SDT into the domain of attitudes (in this case, intergroup attitudes). Of course, there has been interesting discussion of the role of self-determination in life goals, values, and aspirations in general (e.g., Kasser, 2002; Sheldon & Kasser, 1995; Sheldon, Ryan, Deci, & Kasser, 2004), and this research speaks

to the importance of goal-seeking that reflects an authentic self. The (self) regulation of goals and behaviour becomes less complex, more reliable and beneficial, and easier to maintain when it stems from autonomous choice. Attitudes, which represent the organization of values and beliefs in relation to specific objects (such as prejudice, social dominance, conservatism, etc), can also be more or less self-determined and autonomously regulated. The consideration of the nature of self-determination is liable to contribute to our understanding of the attitude-behaviour relationship. I propose that self-determined attitudes, like self-determined behaviours, are marked by motivational, ego, and cognitive resilience.

On a related note, the current project also broadens the scope of SDT to include intergroup processes. While motivation researchers currently consider the individual and interpersonal factors involved in self-determination, the current research suggests that SDT also has a bearing on the understanding of intergroup relations. That is, self-determined intergroup attitudes promote intergroup harmony. Aside from its direct negative association with prejudice, self-determined motivation to be nonprejudiced also protects against the ill-effects of intergroup threat. This finding bears implications for intergroup relations research as well. While intergroup process researchers mainly focus on intergroup-level variables, the consideration of self-determined attitudes toward outgroups appears to be an important factor in reducing intergroup conflict.

### *The Automaticity of Self-Determination*

This research is among the very first to explore the notion that the automatization of self-regulation is facilitated by self-determination. Thus, in addition to furthering our understanding of the factors that influence prejudice and stereotyping, this work has broad implications for the role of automatic processes in self-determination theory. Results from

Studies 2 and 3 offer new evidence of automatic self-determined regulation. From the present findings we can infer that the suppression of prejudice and inhibition of stereotypes does not require conscious attention, energy, or effort among individuals with self-determined egalitarian goals. The implication of this finding for SDT is the possibility that self-determined motivation (in any domain) can become internalized to the extent that its self-regulation occurs at the automatic level. The automatic operation of self-determined motives helps to explain their potent influence in daily life (i.e., motivation is not affected by cognitive fatigue or decreases in self-control).

Corresponding evidence does suggest that motivation can be, at least in part, automatically activated and regulated by nonconscious processes (Gollwitzer & Bargh, 2005). As described in Bargh's Auto-Motive model (Bargh, 1990, 1997, Bargh & Chartrand, 1999), automatic motivational processes refer to goal pursuits that are consistently and frequently engaged by the mere presence of relevant environmental cues. When goals are repeatedly associated with their related stimuli, they become automatically activated and subsequently influence behaviour. Appropriately, researchers have referred to this process as 'automatic motivation' (Gollwitzer & Bargh; Hassin, et al., 2005). Glaser and Knowles (2008) have recently proposed that goals to be egalitarian may indeed operate outside conscious awareness and control, and serve to inhibit unintended and automatic prejudice and behaviour. It has also been demonstrated that motivation can be unconsciously primed to influence behaviour. For instance, Levesque and Pelletier (2003) primed participants with intrinsic and extrinsic motivation and found that those primed with intrinsic motivation showed greater interest and persistence on a subsequent puzzle task. Similarly, individuals primed with intrinsic motivation have been shown to experience greater psychological well-being compared to no-prime controls (Burton, Lydon, D'Alessandro, & Koestner, 2006). Burton et al. also note that identified

regulation operates implicitly, which is likely to explain its powerful influence over behaviour; they found that people with implicit identified regulation experienced greater academic performance six weeks later, compared to those without such motivation. Indeed, research underscores the presence and power of unconscious motives, especially self-determined ones.

Although it is validating that studies are beginning to show that self-determined motivation can be automatic, it is important to note that the current research goes a step further in providing an empirical explanation for how self-determined regulation facilitates automatization, whereas nonself-determined regulation does not. Indeed, the process of internalization helps to explain why attitudes and behaviours become automatized. Self-determined motivation is associated with more persistent adherence to one's values and goals. Regulation that is practiced more consistently is more likely to be overlearned and habitualized (Bargh & Chartrand, 1999). Indeed, Moskowitz et al. (1999) have shown that one's chronic commitment to egalitarian goals can lead to control over the preconscious stages in which categorization occurs and stereotypes are activated (whereas nonegalitarians do not automatize stereotype inhibition). Reciprocally, the automatization of attitudes and behaviours does indeed help to explain why self-determined regulation is more effective, efficient, and reliable than nonself-determined regulation.

It is of interest to consider additional factors contributing to the process of the automatization of self-determined motivation. Indeed, it has been theorized herein that motivational pursuits are more likely to become automatized when they are chronically rehearsed, personally self-endorsed, and associated with desired outcomes or goal-objects. In line with the Auto-Motive Model (Bargh & Chartrand, 1999) and classic learning theories (e.g., Hull, 1943; Skinner, 1969), the automatization of motivation is facilitated through successful goal attainment – when motives have been repeatedly associated with desirable end-states, they

are liable to become habitualized. Self-determined motivation to be nonprejudiced is much more likely to achieve its end-state of prejudice reduction than is nonself-determined motivation to be nonprejudiced. Thus, the reinforcing properties of self-determined motivation may help to mediate its automatization. In contrast, there is no adaptive benefit to automatizing ineffective motivational strategies.

Similarly, another manner in which internalized motivation may become automatic is through its relationship with positivity. Custers and Aarts (2005) have argued that the amount of positivity in a goal determines whether that goal is nonconsciously regulated. Self-determined goals are more likely to be consistent with positive feelings, vitality, and well-being (e.g., Reis, Sheldon, Gable, Roscoe, & Ryan, 2000) and, as such, they may be spontaneously adopted. Because goal-seeking steeped in positivity is likely to be reinforcing, it is more likely to become a chronically accessible behaviour.

In sum, the advancement of self-determination theory into automatic motivational processes is an important new direction. Unconscious goals and self-regulations are extremely relevant and useful in our daily lives. Arguably, they are more determining of our thoughts and behaviours than are conscious motives. Moreover, the automatization of self-determined motivation is highly adaptive. Desired end-states are more easily achieved through automatic self-determined motivation. The current research offers improved theoretical understanding of the potential of internalization, and indicates that the principles and motivational processes of self-determination theory are compatible with the theoretical tenets of automaticity.

### *Conscious versus Unconscious Volition*

Although research supports the automaticity of higher order mental processes such as goals, motivation, and self-regulation, this is not to say that conscious processes are not crucial

for our daily existence. Indeed, self-determined motivation has traditionally been regarded as being consciously initiated and guided, and an extension of free will and purposeful choice. The role of conscious motivational intentions is fundamental to SDT inasmuch as automatic processes are. However, being self-determined in a motivational pursuit promotes the automatic assimilation of that motivation, in addition to mindful and deliberate striving. This raises a key issue. That is, the internalization-automatization process is developmental in nature; consciously valued motives that stem from within the self will eventually become automatically regulated. When goals are highly important, their autonomous pursuit develops into an automatic alertness for obstacles to goal attainment (e.g., unintended prejudiced thoughts). Such unconscious vigilance for bias can lead to corrective processes that also operate without awareness or conscious intent. Thus, in the words of Jack Glaser and John F. Kilstrom (2005), "unconscious volition is not an oxymoron" (p. 171).

### *Self-Determination and the Strength Model of Self-Regulation*

The current findings suggest that when regulating goal pursuit toward a target goal object, self-determined motivation is more likely to be effective, requiring less cognitive, motivational, and emotional resources. In contrast to the assertion made by Baumeister and his colleagues (e.g. Baumeister et al., 1998), not *all* acts of self-regulation are depleting. Rather, being self-determined in one's goals and attitudes may not only spare self-regulatory resources, but be vitalizing as well. Indeed, the current findings suggest that prejudice regulation has a vitalizing effect for those high in self-determined motivation to be nonprejudiced.

On the reverse-side of the self-determination coin, another key insight offered herein is that the relative inadequacy of nonself-determined extrinsic motivation may stem, at least in part, from the toll this form of regulation takes on regulatory or executive functioning. Given

the depleting nature of motivation and behaviour that has not been integrated within the self, it is not surprising that extrinsic goal pursuit increases cognitive and emotional demands that render goal attainment less feasible. Thus, in accordance with previous studies, self-determination is a key factor in improving self-control (Moller, et al., 2006; Muraven, et al., 2008; Ryan & Deci, 2008; Sharp et al., 2003; Sharp & Pelletier, 2004). Yet, unlike previous studies, the present findings indicate that the self-regulation skill associated with self-determined motivation is attributable to automatic regulatory processes.

### *Self-Determination and Threat*

Studies 4 and 5 offer insight into the link between self-determined prejudice regulation and intergroup threat. Although, the relationship between self-determination and intergroup processes has been largely neglected in the past, results of Studies 4 and 5 suggest that motivation to be nonprejudiced and intergroup threat interact in important ways, such that having self-determined goals to be nonprejudiced absorbs the negative effects of intergroup threat, whereas nonself-determined prejudice regulation amplifies the impact of threat on prejudice. Findings align with recent evidence on general motivational style and threat susceptibility, which suggests a link between nonself-determined motivation and reaction to ego-threats (e.g., Hodgins, 2007, 2008; Hodgins et al., 2006; Hodgins & Knee, 2002; Majstorovic et al., 2008). It is plausible that the present findings are symptomatic of a fundamental link between self-determination (in general) and susceptibility or reactivity to external threat.

The current findings also add to our understanding of the link between threat and prejudice. Firstly, although threat is a theoretical cause of prejudice, relatively few studies have provided more than correlational evidence of their association. Based on the results of Study 4,

it can be concluded that the introduction of intergroup threat causes an increase in intergroup prejudice – but only for those with nonself-determined motivation to regulate prejudice. This highlights the presence of individual differences in intergroup processes. In social psychology, we often categorize the study of phenomena at a particular level of generality. For instance, threat research has scarcely examined individual differences in intergroup threat. However, both individual (i.e., motivational) and interpersonal factors influence intergroup attitudes and processes, and vice versa. The current research is important in that it bridges two distinct camps of research – the individual and the intergroup. In addition to the above-mentioned theoretical contributions, the current work bears some applied considerations as well.

## *Applied Implications*

### *Reducing Prejudice*

The practical benefits of internalizing motivation to be nonprejudiced should be underscored. To the extent that people are able to restructure their motivation (and sufficient research on goal-setting and self-regulation says that we are) it is advisable that we shift motivation to control prejudice from externally enforced to internally endorsed. An important application of the current project is the personal development of strategies to reduce prejudice. If people are able to spend some effort identifying their motivation toward the control of racial bias, and subsequently improve and recast their motives, vast strides in prejudice reduction may be feasible. Indeed, research shows that when people take the time to reconsider their goals in more self-determined terms, they are more likely to attain them (Sheldon, Kasser, Smith, & Share, 2002; Vansteenkiste, Simons, Lens, Sheldon, & Deci, 2004). Although much more work needs to be done, future applications might focus on the development of prejudice regulation

interventions aimed at educating and supporting people in their motivational pursuit of egalitarian ideals.

Prejudice reduction strategies have important implications at the socio-political level as well. Given that Canada is a land of diversity, with one of the world's highest immigration rates per capita (United Nations, 2006), the challenges of annually incorporating hundreds of thousands of immigrants and visible minorities into the Canadian workforce—and into society at large—require that we stamp out barriers to integration. With the rise of multiculturalism, operationalized concepts like "affirmative action" and "equal opportunity employment" have imprinted a prominent path in our political and economic system. However, the mandate of Canada's integrative multicultural mosaic, while offering marked advantages over other assimilative strategies, is far from perfect. Prejudice abounds in this country, and even those with comparatively less of it find themselves responding with bias from time to time. The results of this work suggest that having a controlled regulation of bias *causes* prejudice. In other words, pressuring students, workers, and citizens to abide by external standards of political correctness may be counterproductive when the inherent value of these standards is not emphasized. This may be a valuable piece of information for both educators and policy-makers. Prejudice reduction requires support not just from our immediate social environment – like our teachers and parents, but also from our social institutions and government.

### *Reducing Intergroup Threat*

The current findings underscore the causal role of intergroup threat in prejudice among nonself-determined prejudice regulators. Given that intergroup threat increases negative intergroup attitudes for these individuals, one way to decrease prejudice is to decrease threat. This notion also has important implications at the legislative and policy level. Based on the

current evidence, for those with nonself-determined motivation to control prejudice, affirmative action and equal opportunity employment advertisements may serve only to emphasize intergroup competition and increase intergroup threat salience, thereby increasing prejudice. Although the virtue in equality policies should be underscored, it is important to bear in mind that promoting self-determined values about equality precedes social enforcement.

### *Limitations*

Despite clear support for the main hypotheses proposed in the current studies, certain limitations should nevertheless be noted. A major methodological limitation involves the omission of longitudinal studies. Because the process of internalizing nonprejudice is developmental in nature, it would have been prudent to study such growth over time. Similarly, the trajectory from internalization to automatization would have been better observed from a developmental perspective.

Moreover, although the current experiments benefitted from internal validity on one hand, they lack external validity on the other. A greater use of field studies would have been advantageous in order to complement the laboratory experiments. Because prejudice is an important contemporary social problem, it would have been appropriate to study its intensifying and attenuating factors in real-world settings, such as the classroom and the workplace – or in the context of realistic events such as employment interviews and hiring processes. On a related note, another drawback to the current research is its lack objective measures of racial discrimination. Although attempts were made to include an array of measures of prejudice, the role of motivation to regulate prejudice in predicting actual discrimination would have been worthy of investigation.

## *Future Studies*

### *Self-Determination, Self-Regulation, and Automaticity*

Self-determination is pivotal in improving self-regulation because it can be automatized. This important finding and theoretical assumption requires further attention, and future studies may want to continue to explore the nature of the relationship between self-determined motivation and automatic self-regulation (i.e., the internalization-automatization hypothesis). Evidence suggests that automatic goals and attitudes are better predictors of behaviour toward corresponding stimuli than are explicit goals and attitudes. For instance, those who automatically evaluate group members in a positive fashion tend to display more friendliness, warmth, and relationship satisfaction with actual group members, compared to those who only express positive explicit attitudes (Fazio & Olson, 2003; Poehlman, Uhlmann, Greenwald, & Banaji, 2005). Furthermore, automatic goals are especially predictive of those behaviours that are hard to monitor or difficult to control (e.g., Asendorpf et al., 2002; Ferguson, 2007). Given that behaviour is more likely to persist, and goals more likely to be met, when motivation is automatic, notions of how to actively automatize motivation (i.e., through self-determination) are highly useful. Thus, future research may want to continue the examination of the automaticity of self-determined motivation in other relevant domains, such as exercise and eating behaviours – where automatic self-regulation might have particularly important benefits.

Correspondingly, it may be of importance for forthcoming studies to refine our knowledge of the point at which self-determination becomes automatic. Results of the current study suggest that the volitional endorsement of motivation by the self is sufficient to automatize a goal pursuit, however, the comparison of alternative types of self-determined motivation maybe interesting and relevant. For instance, research suggests that the distinction

between intrinsic and identified self-regulation is important. Whereas identified self-regulation may be contingent on external reinforcement, intrinsic pursuits do not rely on outcome, but rather tend to develop from the satisfaction and positive feelings associated with the intrinsic experience (Burton et al., 2006). It may be the case that, when self-determined motivation is not intrinsic, the automatization of prejudice regulation depends on the successful pairing of prejudice regulation efforts with actual prejudice reduction, or feelings of competence in prejudice regulation ability. This line of research is liable to offer more concrete strategies for decreasing prejudice; even if people do not hold intrinsic values about egalitarianism, they may practice identified self-regulation and develop regulatory self-efficacy; which could ultimately result in the automatization of nonprejudiced motives.

Evidence suggests that motives can be reframed. As previously noted, when people take the time to reassess their goals in more self-determined terms, they are more likely to attain them (Sheldon et al., 2002; Vansteenkiste et al., 2004). Thus, initial guidance and support in the quest to value motivation to be nonprejudiced may help people re-shape their cognitions regarding their personal goal-striving. Although it may be difficult to instil intrinsic motivation to be nonprejudiced through any external influence, the restructuring of identified and integrated prejudice regulation is feasible. Indeed, the ability to identify with a goal pursuit is extremely helpful when the goal is challenging. Thus, those factors that can move prejudice regulation from external to identified are highly deserving of future empirical attention. As Devine et al. (2003) note, ingrained prejudiced habits are hard to break. It follows that identification with a goal (rather than intrinsic motives of satisfaction and enjoyment) is crucial in order to overcome the obstacles and derive the personal meaningfulness associated with reducing prejudice and reaching egalitarianism.

### *A Full-Context Perspective of Prejudice Regulation and Self-Determination Theory*

In order to fully affix prejudice regulation within self-determination theory, it is necessary to consider the theoretical antecedents of self-determined and nonself-determined prejudice regulation. From a developmental perspective, self-determined prejudice regulation can be taught and learned. The nurturance of self-determination has long been a central goal of SDT research. When social environments promote intrinsic values (e.g., Kasser, 2002) that are upheld autonomously, research –including that presented here– demonstrates that outcomes are wholly positive (e.g., Fortier, Vallerand, & Guay, 1995; Hill & Sibthorp, 2006; Pelletier et al., 1995, 1996; Thogerson-Ntoumani & Ntoumanis, 2006; Vallerand et al., 1997; Wilson et al., 2006). The examination of the social precursors of prejudice regulation is an important step for future research. Based on the SDT perspective, as children and adults are encouraged to become more self-determined in their nonprejudiced attitudes, it would be expected that motivation to be nonprejudiced should be internalized and thus predictive of successful prejudice regulation. An understanding of the role of significant others in supporting and hindering the self-determined regulation of prejudice might prove useful in reducing and even preventing prejudice. New work might begin by developing measures of the interpersonal support of self-determined egalitarianism in order to better understand the antecedents of prejudice.

Thus, future research might ask: how do teachers promote and undermine successful prejudice regulation? Do parents who encourage their children to adopt nonprejudiced values facilitate the internalization of motivation to be nonprejudiced? What happens when managers place personal importance on equality and diversity in the workplace? Indeed, the workplace is a particularly relevant environment in which to understand the effects of interpersonal style in supporting self-determined prejudice regulation. Firstly, there is a severe dearth of research on

workplace prejudice and discrimination, despite the fact that both are abundant. Workers' perceptions that colleagues or managers dislike them (i.e., are prejudiced) or treat them badly (i.e., discriminate) because of their ethnicity have been proposed to lead to turnover, lawsuits, conflict, poor performance, and psychological and physical health problems (Burkard, Boticki, & Madson, 2002). As such, the analysis of prejudice, discrimination, and attitudes toward diversity in the workplace is becoming evermore important, and business and industry are increasingly recognizing the need to address diversity and multicultural issues in workplace practices (e.g., Daly, 1998). As this demographic shift occurs, consulting psychologists are designing and implementing training programs to increase cross-cultural sensitivity, tolerance, and appreciation of diversity in the workplace. Therefore, it would be practical for future studies to investigate the interpersonal style of workplace leaders and managers toward nonprejudice and diversity – to what extent are they supportive of self-determined motivation to be nonprejudiced?

Along similar lines, the support of self-determination in motivation to be nonprejudiced could be assessed in the context of workplace cultural sensitivity training workshops. SDT-infused diversity education is liable to have important workplace benefits. Accountable research should thus underscore the social – and organizational - support of nonprejudice. It is also desirable that the teaching and dissemination of self-determined prejudice regulation reach the level of social policy. Through rearing and education, as well as workplace and national leadership, a self-determined regulation of prejudice can be cultivated, learned, and valued.

### *Future Studies on Intergroup Threat*

Research often conceptualizes threat in unitary terms (e.g., Wagner, Christ, & Pettigrew, 2008). Yet, results of Studies 4 and 5 indicate that both types of threat (realistic and symbolic)

are important predictors of prejudice, supporting integrated threat theory. Thus, future studies examining intergroup threat and intergroup attitudes should be advised to always include both symbolic and realistic threat in an effort to increase comprehensiveness. Moreover, most intergroup threat research, including the research presented here, has ignored the possible associations between different types of threats and different types of intergroup reactions. For instance, Cottrell and Neuberg's (2005) bicultural model proposes that different intergroup contexts lead to different emotional reactions and different behavioural outcomes. As an example, it may be that Black people pose a greater realistic threat toward White people (e.g., threats relating to crime and safety) than cultural threat. The experience of realistic threat may, consequently, yield feelings of fear and anger toward African Canadians. Conversely, Native Americans may be more likely to pose a threat to White people's values and thus invoke feelings such as pity and guilt. Stereotypes may also play a role in threat perception; Outgroups that are considered highly competent (e.g., Asians) may be more likely to elicit realistic threat (e.g., job competition) than cultural threat. Emotional and behavioural outcomes that vary as a function of type of threat may thus be a worthwhile course of future study in order to determine the sources of specific types of intergroup discrimination.

The continued integration of self-determination theory with integrated threat theory is likely to be a generative area of future study. While not examined in the current studies, integrated threat theory delineates an important role of intergroup contact in reducing threat (Corenblum & Stephan, 2001). For instance, negative intergroup contact tends to exacerbate threat and prejudice (Bobo, 1999). On the other hand, intergroup friendship has been shown to reduce intergroup threat and improve intergroup attitudes (Pettigrew, 1997). It may help to understand positive intergroup contact from an SDT perspective. Those with a self-determined motivation to be nonprejudiced not only believe in the virtues of social justice and

egalitarianism, but also derive interest and satisfaction relating to other groups. This motivation toward harmonious intergroup contact may explain differences in the nature of intergroup contact and prejudice. Therefore, the relationship between intergroup contact and motivation to be nonprejudiced might warrant further investigation.

### *Conclusion*

Evidence that the self-regulatory demands of day-to-day life can interfere with attempts at prejudice reduction is, at first glance, rather discouraging. On a more positive note, however, my findings also suggest that when self-determined prejudice regulation is high, people are more resilient to depleting conditions and thus closer to achieving their egalitarian ideals. The definitive goal of prejudice research is to contribute to the development of practical strategies for prejudice reduction. From a SDT perspective, one such solution may rest in the process of internalization. Not only does the internalization of motivation to be nonprejudiced protect against intergroup threat, but it succeeds, ultimately, in the automatization of prejudice regulation. As a result, self-determined goal striving is more likely to be impervious to barriers. Notions of how to foster the internalization of egalitarian goals, attitudes, and values are thus important, and to this end, the role of socio-political networks should be targeted.

One way in which social and political institutions (e.g., school and government) may implement self-determined motivation about prejudice and tolerance is through social values. Social values are powerful sources of social change. Legislation and education are two ways in which social values about prejudice regulation in particular, and self-determination in general, can infiltrate mainstream society to reduce the harmful effects of prejudice. On the other hand, although many people conform to social constraints of anti-prejudice and standards of political correctness in their social groups, these external restrictions do not appear to support consistent

and effective prejudice regulation. As we approach a better theoretical understanding of how, through self-determination, prejudice regulation can be internalized and automatized rather than externally enforced, we also come closer to eliminating prejudice.

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# Appendix A:

## Measures used in Study 1

# *WHY DO YOU INHIBIT PREJUDICE?*

There are several reasons why we would want to refrain from prejudiced attitudes. On a scale from 1-9, please rate the extent to which the following reasons correspond to **your own personal reasons** for withholding racial or cultural prejudice. Please answer carefully, honestly, and truthfully.

**Why do you inhibit/suppress cultural prejudice?** ***Please note: you are NOT rating the extent to which you simply agree or disagree with these statements, but rather **the extent to which they represent your ultimate reasons for avoiding prejudiced attitudes.***

| | Does not Correspond at all | | | | Corresponds Moderately | | | | Corresponds Exactly |
|---|---|---|---|---|---|---|---|---|---|
| **1. Because I feel that I must refrain from stereotyping** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **2. For the satisfaction of discovering new and interesting individuals or groups** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **3. For the interest I feel when learning about others** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **4. Because I appreciate what being understanding adds to my life** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **5. I don't know; It's not a priority** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **6. Because I would feel bad about myself if I were prejudiced** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **7. Because tolerance is important to me** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **8. Because racist people are not well-liked** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **9. Because I don't want people to think I'm narrow-minded** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **10. I don't know; I don't really bother trying to avoid it** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **11. Because I place importance on having egalitarian beliefs** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **12. For the joy I feel when relating to new people** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **13. I don't know why; I think it's pointless** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **14. Because overcoming prejudice is part of who I am** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **15. Because I would feel guilty if I were prejudiced** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **16. Because I admire people who are egalitarian** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **17. Because I get more respect/acceptance when I act in an unprejudiced fashion** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **18. Because I am tolerant and accepting of differences** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **19. I don't know, inhibiting prejudice is not important to me** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **20. For the pleasure of being open-minded** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **21. Because striving to understand others is part of who I am** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **22. Because I would feel ashamed if I were prejudiced** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **23. Because I value nonprejudice** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **24. So that people will admire me for being tolerant** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

# InterGroup Emotions

Please rate the extent to which you feel the following towards African Canadians (i.e., Black Canadians). Please answer honestly.

**1. Dislike**

None at all Extremely
1 2 3 4 5 6 7 8 9

**2. Acceptance**

None at all Extremely
1 2 3 4 5 6 7 8 9

**3. Resentment**

None at all Extremely
1 2 3 4 5 6 7 8 9

**4. Respect**

None at all Extremely
1 2 3 4 5 6 7 8 9

**5. Approval**

None at all Extremely
1 2 3 4 5 6 7 8 9

**6. Anger**

None at all Extremely
1 2 3 4 5 6 7 8 9

**7. Happiness**

None at all Extremely
1 2 3 4 5 6 7 8 9

**8. Disgust**

None at all Extremely
1 2 3 4 5 6 7 8 9

**9. Sympathy**

None at all Extremely
1 2 3 4 5 6 7 8 9

**10. Terror**

None at all Extremely
1 2 3 4 5 6 7 8 9

**11. Fear**

None at all Extremely
1 2 3 4 5 6 7 8 9

**12. Security**

None at all Extremely

1 2 3 4 5 6 7 8 9

**13. Guilt**

None at all Extremely

1 2 3 4 5 6 7 8 9

**14. Anxiety**

None at all Extremely

1 2 3 4 5 6 7 8 9

**15. Safety**

None at all Extremely

1 2 3 4 5 6 7 8 9

**16. Peace**

None at all Extremely

1 2 3 4 5 6 7 8 9

**17. Hatred**

None at all Extremely

1 2 3 4 5 6 7 8 9

**18. Affection**

None at all Extremely

1 2 3 4 5 6 7 8 9

**19. Superiority**

None at all Extremely

1 2 3 4 5 6 7 8 9

20. In general, how positive would you say your feelings are toward Black Canadians?

**Very Negative** **Very Positive**

-5 -4 -3 -2 -1 0 1 2 3 4 5

# Appendix B:

# Materials used in Study 2

# *WHY DO YOU INHIBIT PREJUDICE?*

There are several reasons why we would want to refrain from racial prejudice. Think about why you are motivated to avoid racial prejudice (e.g., toward Blacks and Asians).

On a scale from 1-9, please rate the extent to which the following reasons correspond to **your own personal reasons** for withholding racial or cultural prejudice. Please answer carefully, honestly, and truthfully.

**Why do you inhibit/suppress cultural prejudice?** ****Please note: you are NOT rating the extent to which you simply agree or disagree with these statements, but rather **the extent to which they represent your ultimate reasons for avoiding prejudiced attitudes.***

| | Does not Correspond at all | | | | Corresponds Moderately | | | | Corresponds Exactly |
|---|---|---|---|---|---|---|---|---|---|
| **1. Because I feel that I must refrain from stereotyping** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **2. For the satisfaction of discovering new and interesting individuals or groups** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **3. For the interest I feel when learning about others** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **4. Because I appreciate what being understanding adds to my life** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **5. I don't know; It's not a priority** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **6. Because I would feel bad about myself if I were prejudiced** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **7. Because tolerance is important to me** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **8. Because racist people are not well-liked** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **9. Because I don't want people to think I'm narrow-minded** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **10. I don't know; I don't really bother trying to avoid it** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **11. Because I place importance on having egalitarian beliefs** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **12. For the joy I feel when relating to new people** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **13. I don't know why; I think it's pointless** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **14. Because overcoming prejudice is part of who I am** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **15. Because I would feel guilty if I were prejudiced** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **16. Because I admire people who are egalitarian** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **17. Because I get more respect/acceptance when I act in an unprejudiced fashion** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **18. Because I am tolerant and accepting of differences** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **19. I don't know, inhibiting prejudice is not important to me** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **20. For the pleasure of being open-minded** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **21. Because striving to understand others is part of who I am** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **22. Because I would feel ashamed if I were prejudiced** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **23. Because I value nonprejudice** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **24. So that people will admire me for being tolerant** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

**Complete the word fragments shown on the screen. Write your answers in the spaces provided below.**

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____

**Word Comprehension Test - A**

This is a test of language ability administered in conjunction with the Department of Linguistics at the University of Ottawa. The task is intended to measure word comprehension based on ***people's first immediate impressions***.

For each item below, write down a ***grammatically correct 4 word sentence*** using any of the 5 words listed. Complete the task as quickly as possible.

To repeat: As quickly as you can, use 4 of the 5 words to create a grammatically correct sentence.

1. bag found her I lost _____
2. cloud white the was car _____
3. day his full free was _____
4. the wore sandals girl glasses _____
5. they to lunch went town _____
6. the boy hungry was finished _____
7. dress is blue computer her _____
8. drove they to town went _____
9. walked he the line jumped _____
10. she blue uses old soap _____
11. vintage fast the cars are _____
12. party there was a scheduled _____
13. the ate pie children steak _____
14. dead the grass wet was _____
15. the loves family pets owned _____
16. the student math studied rarely _____
17. quickly the light season changed _____
18. boys play blocks with you _____

19. I the finished game cake _____

20. question we house have a _____

21. many there talking are people _____

22. soda drinks he juice orange _____

23. there scoops are two sides _____

24. is restaurant busy the closed _____

25. broke the car down van _____

26. I swim to work bike _____

27. necessity is beverage a coffee _____

28. day busy was long the _____

29. it sounds like thunder fun _____

30. come party to the club _____

31. run group with cheer the _____

32. crayon broken is red the _____

**Word Comprehension Test - B**

This is a test of language ability administered in conjunction with the Department of Linguistics at the University of Ottawa. The task is intended to measure word comprehension based on ***people's first immediate impressions***.

For each item below, write down a ***grammatically correct 4 word sentence*** using any of the 5 words listed. Complete the task as quickly as possible.

To repeat: As quickly as you can, use 4 of the 5 words to create a grammatically correct sentence.

1. was shirt black his green _____
2. people those are poor mad _____
3. his big was afro shirt _____
4. listens birds to he jazz _____
5. night was the black dark _____
6. day busy was long the _____
7. the people workers are lazy _____
8. he blues the cried sang _____
9. teacher a he criminal was _____
10. come the gang join never _____
11. played outside they basketball inside _____
12. rhythm man the girl has _____
13. is thin boy tall the _____
14. they the take bus ride _____
15. cool hip-hop bad music sounds _____
16. is he out flat broke _____
17. the violent father group is _____
18. he arm broke leg his _____

19. work home she at slaves _____

20. it like rap sounds thunder _____

21. athletes won two game the _____

22. coffee he black drinks tea _____

23. the he watch stole ring _____

24. the woman man was forceful _____

25. pumped her muscles sore were _____

26. she Harlem in lived Florida _____

27. welfare she on fire was _____

28. the angry gone dealer was _____

29. poor was lady the dirty _____

30. drove they further down south _____

31. black the kettle crow is _____

32. kids the balls rocks threw _____

The following is a short piece of prose writing about a man named Mike. It describes a series of events occurring during the course of one afternoon.

I ran into my old acquaintance Mike the other day, and I decided to go over and visit him, since by coincidence we took our vacations at the same time. Soon after I arrived, a salesman knocked at the door, but Mike refused to let him enter. He also told me that he was refusing to pay his rent until the landlord repaints his apartment. We talked for a while, had lunch, and then went out for a ride. We used my car, since Mike's car had broken down that morning, and he told the garage mechanic that he would have to go somewhere else if he couldn't fix his car that same day. We went to the park for about an hour and then stopped at a hardware store. I was sort of preoccupied, but Mike bought some gadget, and then I heard him demand his money back from the sales clerk. I couldn't find what I was looking for, so we left and walked a few blocks to another store. The Red Cross had set up a stand by the door and asked us to donate blood. Mike lied by saying he had diabetes and therefore could not give blood. It's funny that I hadn't noticed it before, but when we got to the store we found that it had gone out of business. It was getting kind of late so I took Mike to pick up his car and we agreed to meet again as soon as possible.

Please rate your feelings about Mike using the scale provided.

**Considerate**

| Not at all | | | | | | | | | Extremely |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

**Dislikeable**

| Not at all | | | | | | | | | Extremely |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

**Interesting**

| Not at all | | | | | | | | | Extremely |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

**Boring**

| Not at all | | | | | | | | | Extremely |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

**Kind**

| Not at all | | | | | | | | | Extremely |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

**Lazy**

| Not at all | | | | | | | | | | Extremely |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

**Hostile**

| Not at all | | | | | | | | | | Extremely |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

**Dependable**

| Not at all | | | | | | | | | | Extremely |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

**Narrow-minded**

| Not at all | | | | | | | | | | Extremely |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

**Thoughtful**

| Not at all | | | | | | | | | | Extremely |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

**Aggressive**

| Not at all | | | | | | | | | | Extremely |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

**Intelligent**

| Not at all | | | | | | | | | | Extremely |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

**Unfriendly**

| Not at all | | | | | | | | | | Extremely |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

**Conceited**

| Not at all | | | | | | | | | | Extremely |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

To what extent did you think the African-American stereotype was conveyed in the sentence unscrambling task?

| Not at all | | | | | | | | | | Extremely |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

**Background Information**

Gender: Male □ Female □ Age: _____

Mother tongue: English □ French □ Other (PLEASE specify!):_____

Citizenship: Canadian □ Other (PLEASE specify!): _____

Ethnicity/ Cultural Background (e.g. Caucasian, Black, Hispanic, Native, etc.):_____

Do you study full-time? Yes □ No □

Do you work full-time? Yes □ No □ If so, how many years have you been in the job market?_____ What is your profession?_____

Please indicate the highest educational degree you have received:

High School □ College □ B.A. □ Master's □ PhD □

Thank you for your time!

# Appendix C:

## Materials used in Study 3

# *WHY DO YOU INHIBIT PREJUDICE?*

There are several reasons why we would want to refrain from prejudiced attitudes. On a scale from 1-9, please rate the extent to which the following reasons correspond to **your own personal reasons** for withholding racial or cultural prejudice. Please answer carefully, honestly, and truthfully.

**Why do you inhibit/suppress cultural prejudice?** ****Please note: you are NOT rating the extent to which you simply agree or disagree with these statements, but rather* ***the extent to which they represent your ultimate reasons for avoiding prejudiced attitudes.***

| | Does not Correspond at all | | | | | | | Corresponds Moderately | Corresponds Exactly |
|---|---|---|---|---|---|---|---|---|---|
| **1. Because I feel that I must refrain from stereotyping** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **2. For the satisfaction of discovering new and interesting individuals or groups** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **3. For the interest I feel when learning about others** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **4. Because I appreciate what being understanding adds to my life** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **5. I don't know; It's not a priority** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **6. Because I would feel bad about myself if I were prejudiced** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **7. Because tolerance is important to me** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **8. Because racist people are not well-liked** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **9. Because I don't want people to think I'm narrow-minded** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **10. I don't know; I don't really bother trying to avoid it** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **11. Because I place importance on having egalitarian beliefs** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **12. For the joy I feel when relating to new people** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **13. I don't know why; I think it's pointless** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **14. Because overcoming prejudice is part of who I am** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **15. Because I would feel guilty if I were prejudiced** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **16. Because I admire people who are egalitarian** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **17. Because I get more respect/acceptance when I act in an unprejudiced fashion** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **18. Because I am tolerant and accepting of differences** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **19. I don't know, inhibiting prejudice is not important to me** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **20. For the pleasure of being open-minded** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **21. Because striving to understand others is part of who I am** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **22. Because I would feel ashamed if I were prejudiced** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **23. Because I value nonprejudice** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **24. So that people will admire me for being tolerant** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

The remaining estimable parameters in the model are the 17 factor loading paths (displayed earlier) and measurement error variances associated with the observed measures, together with the three factor loading paths and residual error variances (the Ds) associated with the first-order latent factors. The fit of this hypothesized second-order model was also well fitting as indicated by the following goodness-of-fit indexes: CFI = .932; SRMR = .046; RMSEA = .051; and RMSEA 90% CI ranged from .044 to .058. The overall $\chi^2$ value was 365.279, with 168 *df*.[8] That the CFI value is slightly less than the one associated with the first-order model may prompt some readers to believe that the data are better represented by the latter specification. However, given that (a) the higher order model represents a well-fitting model; (b) the discrepancy in CFI fit between the first- and second-order models is minimal, albeit the fit of the remaining fit indexes remains basically the same; (c) correlation among the three factors is substantial; and (d) there is theoretical justification to consider General Depression as a higher order construct that causes the three lower order dimensions of Depression, I contend that the higher order model of BDI–II structure best represents the data for American adolescents.

Having shown the reader both a lower order and a higher order CFA model of hypothesized BDI–II structure, the question arises as to why a researcher might choose one over the other. Before discussing these advantages, however, it is important that I reiterate an important point made earlier regarding the specification of second-order models: that these models are only feasible when the lower order factors are substantially correlated. Furthermore, the higher order factor must be theoretically defensible in accounting for relations among the lower order factors. In the event that these conditions are met, there are at least three advantages of postulating a higher order CFA model. First, because its specification imposes structure on the pattern of correlations among the first-order factors, a higher order model is more parsimonious than its lower order counterpart (Rindskopf & Rose, 1988). Second, a higher order model can test the extent to which the second-order factor accounts for this pattern of correlations among the first-order factors. Finally, a higher order model can distinguish between residual error associated with prediction of the lower order factors by the second-order factor and measurement error associated with the observed variables. In other words, it can take into account the unique variance associated with each first-order factor that is not shared in common with each of the other first-order factors and partition this variance from measurement error variance.

[8]The additional degree of freedom for the second-order model arises from the specification of an equality constraint between two residuals for purposes of model identification at the higher-order level ($D1 = D2$).

## ISSUES AND CAVEATS

Using an empirically well-validated, three-factor structure of the BDI–II as a pedagogical springboard, I have shown how this factor analytic structure can be conceptualized within the framework of an EFA model, a first-order CFA model, and a second-order CFA model. Each of these three perspectives demands that certain conditions be met to achieve optimal credibility of analytic findings. I now address some of these issues and extend a few caveats pertinent to the application of both EFA and CFA.

### EFA

Appropriate use of EFA demands that researchers make a series of careful decisions as they proceed in the process of determining the most appropriate number of factors to explain the pattern of covariation among a set of observed variables. As noted by Preacher and MacCallum (2003), however, "despite attempts by Floyd and Widaman (1995), Fabrigar, Wegener, MacCallum, and Strahan (1999), and others, to elucidate critical issues involved in these decisions, examples of questionable use of EFA are still common in the applied factor analysis literature" (p. 13). Most blatant among these dubious practices are (a) use of principal components analysis (PCA) under the guise of EFA and (b) typical, almost mechanical use of orthogonal rather than oblique rotation in seeking simple structure. Thumbnail descriptions of the issues and related caveats are as follows.

*PCA versus EFA.* A common misunderstanding in psychological research is that PCA is a type of EFA. The prevalence of this misconception can be readily evidenced from a review of the psychological literature. However, "although PCA is often referred to and used as a method of factor analysis, it is *not* [emphasis added] factor analysis at all" (Fabrigar et al., 1999, p. 275). Indeed, EFA and PCA represent two entirely distinct statistical methods designed to achieve distinctly different objectives. Given the critical need for researchers and practitioners to both recognize and understand these differences, and drawing heavily from the works of Fabrigar et al. (1999) and Preacher and MacCallum (2003), I now highlight several conceptual distinctions between these two techniques.

First, whereas the goal of EFA focuses on structural explanation, the goal of PCA focuses on data reduction. More specifically, the intent of EFA is to explain the pattern of covariance underlying a set of observed (i.e., measured) variables, thereby identifying the latent construct(s) to which it is linked. In contrast, the intent of PCA is simply to reduce a large set of observed variables to a smaller set of composite variables while concomitantly maximizing the amount of variance accounted for by the original variables. The reason for such variable reduction might be to eliminate collinearity (at least two observed variables are highly correlated with

**Vitality**

Please rate the extent to which each of the following statements is true for you, at this current moment (i.e., right now). At this moment:

| | Not at all | | | | | | Completely |
|---|---|---|---|---|---|---|---|
| 1. I feel alive and vital | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2. I do not feel very energetic | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3. I feel so alive I just want to burst | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4. I have energy and spirit | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5. I am looking forward to each new day | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6. I feel energized | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 7. I feel alert and awake | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8. I feel drained | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Using the scale provided, please answer the following questions about the task you just completed.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **How difficult was the task?** | | | | | | | | | | |
| Not at all difficult | | | | | | | | | | Extremely difficult |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| **How unpleasant was the task?** | | | | | | | | | | |
| Not at all unpleasant | | | | | | | | | | Extremely unpleasant |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| **How tiring was the task?** | | | | | | | | | | |
| Not at all tiring | | | | | | | | | | Extremely tiring |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| **How frustrating was the task?** | | | | | | | | | | |
| Not at all frustrating | | | | | | | | | | Extremely frustrating |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| **How much were you fighting against an urge while completing the task?** | | | | | | | | | | |
| Not fighting at all | | | | | | | | | | Constantly fighting |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| **How demanding was the task?** | | | | | | | | | | |
| Not at all demanding | | | | | | | | | | Extremely demanding |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| **How interesting was this task?** | | | | | | | | | | |
| Not at all interesting | | | | | | | | | | Extremely interesting |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| **Did you find the task to be draining?** | | | | | | | | | | |
| Not draining at all | | | | | | | | | | Extremely draining |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| **Did this task get on your nerves?** | | | | | | | | | | |
| Not at all | | | | | | | | | | Completely |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| **Did you have to exercise self-control in completing this task?** | | | | | | | | | | |
| Not at all | | | | | | | | | | Completely |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| **Did you find that the task was easy?** | | | | | | | | | | |
| Extremely easy | | | | | | | | | | Not at all easy |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **How boring was this task?** | | | | | | | | | | | |
| Not at all boring | | | | | | | | | | | Extremely boring |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | |
| | | | | | | | | | | | |
| **Did the task require a lot of energy and attention?** | | | | | | | | | | | |
| Not at all | | | | | | | | | | | Extremely |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | |
| | | | | | | | | | | | |
| **How annoying was this task?** | | | | | | | | | | | |
| Not at all annoying | | | | | | | | | | | Extremely annoying |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | |
| | | | | | | | | | | | |
| **Did this task require you to put in a lot of effort to stay on track?** | | | | | | | | | | | |
| Not at all | | | | | | | | | | | Extreme effort |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | |
| **How motivated were you to get through this task?** | | | | | | | | | | | |
| Not at all motivated | | | | | | | | | | | Extremely motivated |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | |

Please rate the extent to which the following adjectives describe your **present** mood.

| | Does not correspond at all | | | | Corresponds Moderately | | | | Corresponds Exactly |
|---|---|---|---|---|---|---|---|---|---|
| Happy | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Calm | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Gloomy | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Lively | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Tense | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Blue | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Good | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Frustrated | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Sad | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Anxious | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Angry | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

**Vitality**

Please rate the extent to which each of the following statements is true for you, at this current moment (i.e., right now). At this moment:

| | Not at all | | | | | | Completely |
|---|---|---|---|---|---|---|---|
| 1. I feel alive and vital | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2. I do not feel very energetic | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3. I feel so alive I just want to burst | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4. I have energy and spirit | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5. I am looking forward to each new day | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6. I feel energized | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 7. I feel alert and awake | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8. I feel drained | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

**Vitality**

Please rate the extent to which each of the following statements is true for you, at this current moment (i.e., right now). At this moment:

| | Not at all | | | | | | Completely |
|---|---|---|---|---|---|---|---|
| 1. I feel alive and vital | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2. I do not feel very energetic | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3. I feel so alive I just want to burst | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4. I have energy and spirit | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5. I am looking forward to each new day | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6. I feel energized | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 7. I feel alert and awake | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8. I feel drained | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Using the scale provided, please answer the following questions about the task you just completed.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **How difficult was the task?** | | | | | | | | | | |
| Not at all difficult | | | | | | | | | | Extremely difficult |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| | | | | | | | | | | |
| **How unpleasant was the task?** | | | | | | | | | | |
| Not at all unpleasant | | | | | | | | | | Extremely unpleasant |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| | | | | | | | | | | |
| **How tiring was the task?** | | | | | | | | | | |
| Not at all tiring | | | | | | | | | | Extremely tiring |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| | | | | | | | | | | |
| **How frustrating was the task?** | | | | | | | | | | |
| Not at all frustrating | | | | | | | | | | Extremely frustrating |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| | | | | | | | | | | |
| **How much were you fighting against an urge while completing the task?** | | | | | | | | | | |
| Not fighting at all | | | | | | | | | | Constantly fighting |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| | | | | | | | | | | |
| **How demanding was the task?** | | | | | | | | | | |
| Not at all demanding | | | | | | | | | | Extremely demanding |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |

**How interesting was this task?**

Not at all interesting — Extremely interesting

1 2 3 4 5 6 7 8 9 10 11

**Did you find the task to be draining?**

Not draining at all — Extremely draining

1 2 3 4 5 6 7 8 9 10 11

**Did this task get on your nerves?**

Not at all — Completely

1 2 3 4 5 6 7 8 9 10 11

**Did you have to exercise self-control in completing this task?**

Not at all — Completely

1 2 3 4 5 6 7 8 9 10 11

**Did you find that the task was easy?**

Extremely easy — Not at all easy

1 2 3 4 5 6 7 8 9 10 11

**How boring was this task?**

Not at all boring — Extremely boring

1 2 3 4 5 6 7 8 9 10 11

**Did the task require a lot of energy and attention?**

Not at all — Extremely

1 2 3 4 5 6 7 8 9 10 11

**How annoying was this task?**

Not at all annoying — Extremely annoying

1 2 3 4 5 6 7 8 9 10 11

**Did this task require you to put in a lot of effort to stay on track?**

Not at all — Extreme effort

1 2 3 4 5 6 7 8 9 10 11

**How motivated were you to get through this task?**

Not at all motivated — Extremely motivated

1 2 3 4 5 6 7 8 9 10 11

**Background Information**

Gender: Male □ Female □ Age: _____

Mother tongue: English □ French □ Other (PLEASE specify!):_____

Citizenship: Canadian □ Other (PLEASE specify!): _____

Ethnicity/ Cultural Background (e.g. Caucasian, Black, Hispanic, Native, etc.):_____

Do you study full-time? Yes □ No □

Do you work full-time? Yes □ No □ If so, how many years have you been in the job market?_____ What is your profession?_____

Please indicate the highest educational degree you have received:

High School □ College □ B.A. □ Master's □ PhD □

What is your annual income?_____ What is your total household income?_____

# Appendix D:

# Materials used in Study 4

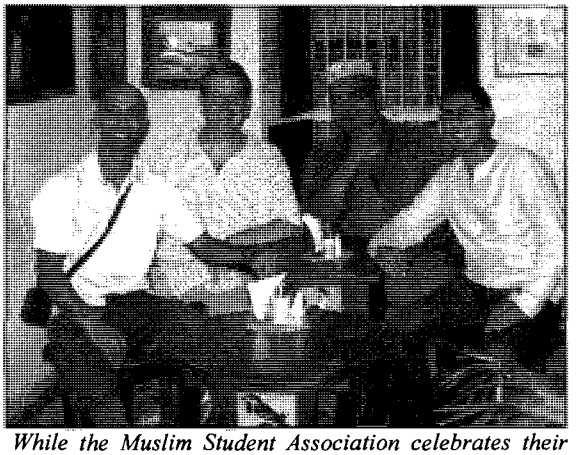
# Canadians Adopting Arab-Muslim Values?

**Brad McFerren**
*Municipal Bureau*

Whereas many Canadians have expressed rising resentment toward the Arab-Muslim community in recent years, new evidence from the latest poll by "Canada and Culture Today" suggests that a growing number of Canadians are beginning to adopt an appreciation for Arab-Muslim values, such as the forbidding of music, dancing, sexual relationships, and drug/alcohol consumption, and the enforcing of things like frequent prayer and modest conduct. As a result, the remainder of Canadians are left with the concern that some of the more extreme and foreign Arab-Muslim attitudes highly contrast Canadian values, such as equality, freedom, and respect.

This concern is felt by Joseph Patterson, 36, owner and operator of a local coffee house. Patterson opened his Lansbridge University campus bar and coffee shop, "Dream Bean", back in 2000. He envisioned a place where students could sip coffee by day and cocktails by night. But in March 2006, a vote by the Arab-Muslim Student Association forced him to turn off the music and give up his liquor license. Even though the coffee house is still busy with students sipping espresso, Patterson says that, for him, the frightening thing is that he was forced to dramatically alter his original vision for the place. Many Lansbridge University students and faculty share his sentiment: "I had wanted a place where all students could hang out, listen to music, and have a beer. But the recent complaints and subsequent legislation have changed the environment of the bar – well it's not actually bar anymore."

Patterson says he's not alone in his concern. The majority of his previous regular customers are left worried and upset about what this could mean for the future. For now, Patterson hopes they can still call his place home even if they can no longer listen to music or drink alcohol.



*While the Muslim Student Association celebrates their new coffee house, other students are left worried about changing values.*

Helping to explain some of the shift in values, recent UN reports show that there are currently 800,000 Muslims residing in Canada – 85% of whom are Arab. Canada accepts more immigrants per capita than any other nation (United Nations, 2006). In particular, Canada accepts 30,000 Arab-Muslim immigrants per year, with 200,000 more Arab-Muslims expected to migrate to Canada over the next 5-10 years.

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# Boom in Jobs Held by Arab-Muslim Immigrants

**Brad McFerren**
*Municipal Bureau*

There are currently 800,000 Muslims residing in Canada – 85% of whom are Arab. Recent trends reported by Statistics Canada show that Arab-Muslim immigrants are now occupying a disproportionate percentage of the local job market. While the employment rate for Caucasian Canadians has been steadily decreasing over the last five years, employment of Arabic Muslims in Canada continues to increase. This trend has had a huge impact for some Canadians.

James Patterson, 36, is a computer information specialist for a local IT company, and he also sits on the company's hiring committee. This past June the company was seeking to hire a new IT project manager, and was eager to find the right person for the job. The application process eventually came down to two candidates – one Arab-Muslim and one Canadian Caucasian. Of the three hiring committee members, both Patterson and a second member were strongly in favour of offering the position to the Canadian Caucasian applicant because he had a Master's degree in Computer Information Systems as well as a programming certificate. In addition, the Caucasian applicant had 5 years of experience in a previous management position. The Arab-Muslim candidate, on the other hand, had only the programming certificate, and relatively little experience. Yet, despite having lower qualifications, the position was awarded to the Arab-Muslim candidate. While the aim of equal opportunity employment policies is purportedly to award jobs to visible minorities when qualifications among candidates are equal, James Patterson wonders if this is ever actually done in practice. He reports that companies continue to hire lesser qualified minorities –Arab-Muslim workers in particular– even when there are more skilled people applying for the job.

*Arab-Muslim employment is on the rise Canada-wide, according to recent reports by Stats Canada.*

Recent immigration reports by the United Nations suggests that Canada accepts more immigrants per capita than any other nation. In particular, Canada accepts 30,000 Arab-Muslim immigrants per year, with 200,000 more Arab-Muslims expected to migrate to Canada over the next 5-10 years.

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OTTAWA SUN NEWS TUESDAY, OCTOBER 2, 2007

# Super-sized lotto win

## Thousands turn into millions

IAN ROBERTSON
Sun Media

TORONTO — Paul Cooper was happy enough expecting a $4,000 cheque in his mail until a lottery official told him it would be a tad more — 1,000 times greater, in fact.

Still stunned by what Ontario Lottery and Gaming Corp. supervisor Sharon Johnson called the biggest-ever upgraded win, Cooper picked up his $4 million yesterday surrounded by family.

"I didn't believe it," said the 62-year-old Elmira grandfather of five. "I was thrilled with the $4,000."

That's what he thought was the figure on a store terminal.

The clerk who checked the Super 7 ticket after the Sept. 7 draw also told him "you've won $4,000," Cooper said.

No explanation was given nor was the name of the staffer who, Johnson said, alerted her to the real value of the ticket.

A manager and salesman for 23 years with Team Truck Centre in Kitchener, Cooper was having lunch with a client when Johnson reached his cellphone.

"She said, 'Are you sitting down? I have some great news!' " he recalled. "I couldn't eat at all ... I was a little shaky."

After buying small stuffed bears for the three grandchildren with him at the prize centre, Cooper said "this will stay in the bank.

"I just want to take some time to think," he said.

Cooper bought a new Chrysler 300C three weeks before getting Johnson's call, as the family was planning an autumn colours trip to Pennsylvania.

"That's what I wanted," he said, adding there are no plans for another car.

Cooper also plans to keep working with Team Truck.

"They couldn't carry on without me," he said with a grin.

ian.robertson@sunmedia.ca

## 1. About the news article...

*A.* In general, to what extent are you concerned about the changes that could be brought about as a result of Arab-Muslim immigrants entering this country?

*Not at all concerned* *Very concerned*

1 2 3 4 5 6 7 8 9

*B.* What concerns you the most about the situation described in this article?

...That Canadians' jobs may be threatened

*Not at all concerned* *Very concerned*

1 2 3 4 5 6 7 8 9

...That Canadian ways of life may be threatened

*Not at all concerned* *Very concerned*

1 2 3 4 5 6 7 8 9

...That crime rates in Canada will rise

*Not at all concerned* *Very concerned*

1 2 3 4 5 6 7 8 9

...That Canadian values, such as freedom, will be jeopardized

*Not at all concerned* *Very concerned*

1 2 3 4 5 6 7 8 9

...That economic opportunity for Canadians will decrease

*Not at all concerned* *Very concerned*

1 2 3 4 5 6 7 8 9

...That Canadian culture will be damaged

*Not at all concerned* *Very concerned*

1 2 3 4 5 6 7 8 9

**2. Please rate the extent to which each of the following statements is true for you, at this current moment (i.e., right now). At this moment:**

| | Not at all | | | | | | Completely |
|---|---|---|---|---|---|---|---|
| 1. I feel alive and vital | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2. I do not feel very energetic | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3. I feel so alive I just want to burst | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4. I have energy and spirit | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5. I am looking forward to each new day | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6. I feel energized | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 7. I feel alert and awake | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8. I feel drained | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

# Attitudes Questionnaire

*Please rate the extent to which you feel the following towards Arab-Muslims. Please answer honestly.*

**1. Dislike**

None at all 1 2 3 4 5 6 7 8 9 Extremely

**2. Acceptance**

None at all 1 2 3 4 5 6 7 8 9 Extremely

**3. Resentment**

None at all 1 2 3 4 5 6 7 8 9 Extremely

**4. Fear**

None at all 1 2 3 4 5 6 7 8 9 Extremely

**5. Anger**

None at all 1 2 3 4 5 6 7 8 9 Extremely

**6. Warmth**

None at all 1 2 3 4 5 6 7 8 9 Extremely

**7. Disgust**

None at all 1 2 3 4 5 6 7 8 9 Extremely

**8. Terror**

None at all 1 2 3 4 5 6 7 8 9 Extremely

**9. Security**

None at all 1 2 3 4 5 6 7 8 9 Extremely

**10. Guilt**

None at all 1 2 3 4 5 6 7 8 9 Extremely

**11. Safety**

None at all 1 2 3 4 5 6 7 8 9 Extremely

**12. Hatred**

None at all 1 2 3 4 5 6 7 8 9 Extremely

**13. Affection**

None at all 1 2 3 4 5 6 7 8 9 Extremely

**14. Pity**

None at all 1 2 3 4 5 6 7 8 9 Extremely

**15. Respect**

None at all 1 2 3 4 5 6 7 8 9 Extremely

**16. Disdain**

None at all 1 2 3 4 5 6 7 8 9 Extremely

**17. Repulsion**

None at all 1 2 3 4 5 6 7 8 9 Extremely

**Please rate your level of agreement with the following statements, according to the scale provided. Please answer truthfully and honestly.**

| | Disagree Completely | | | | | | | | Agree Completely |
|---|---|---|---|---|---|---|---|---|---|
| 1. Canadian people and Arabs can never be really comfortable with each other, even if they are close friends. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 2. Most politicians in Canada care too much about Arabic people and not enough about the average Canadian person. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 3. Many other groups have come to Canada and overcome prejudice and worked their way up. Arab-Muslims should do the same. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 4. I would NOT mind if a suitably qualified Arabic person was appointed as my boss. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 5. Arabic people living here should not push themselves where they are not wanted. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 6. Many other groups have come to Canada and overcome prejudice and worked their way up. Arabic people should do the same without special favour. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 7. Arabic people living here teach their children values and skills different from those required to be successful in Canada. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 8. There exists a lot of discrimination against Arab-Muslims, which limits their chances to get ahead | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 9. Over the past few years, Arab-Muslims have gotten less than they deserve. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

**Please indicate your level of agreement with the following opinions:**

| | Disagree Completely | | | | | | | | Agree Completely |
|---|---|---|---|---|---|---|---|---|---|
| 10. Arabic-Muslim immigrants should not receive social assistance destined for Canadians | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 11. Arabic-Muslims are increasing the amount of crime in Canada | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 12. Arabic-Muslims have work ethic quite similar to that of Canadians | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 13. Arabic-Muslims are taking jobs away from Canadians | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 14. Social services for Arabic-Muslims are an economic burden on Canadians | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 15. It isn't fair that Arabic-Muslim immigrants have access to free Canadian health care | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 16. Arab-Muslims pose a threat to economic opportunity | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 17. The religion of Arabic-Muslims is not compatible with the religion of Canadians | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 18. Our way of life is being modified by Arabic-Muslim immigration | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 19. Arabic-Muslim culture damages Canadian culture | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 20. The values and beliefs of Arabic-Muslims are a threat to Canadian values and beliefs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 21. Arab-Muslims pose a threat to our personal rights and freedoms. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

Please rate the extent to which each of the following statements is true for you, at this current moment (i.e., right now). At this moment:

| | Not at all | | | | | | Completely |
|---|---|---|---|---|---|---|---|
| 1. I feel alive and vital | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2. I do not feel very energetic | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3. I feel so alive I just want to burst | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4. I have energy and spirit | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5. I am looking forward to each new day | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6. I feel energized | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 7. I feel alert and awake | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8. I feel drained | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

*How would you feel when interacting with Arab-Muslims?*

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Anxious** | | | | | | | | |
| Not at all | | | | | | | | Extremely |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **Uncertain** | | | | | | | | |
| None at all | | | | | | | | Extremely |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **Apprehensive** | | | | | | | | |
| None at all | | | | | | | | Extremely |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **Worried** | | | | | | | | |
| None at all | | | | | | | | Extremely |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

| **What do you think will happen as a result of more Arab-Muslim immigrants coming to this country?** | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Higher unemployment | 1<br>Not at all likely | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9<br>Very likely |
| Higher economic growth | 1<br>Not at all likely | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9<br>Very likely |
| It will be harder to keep the country united | 1<br>Not at all likely | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9<br>Very likely |
| My own job may be threatened | 1<br>Not at all likely | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9<br>Very likely |
| I may become unemployed | 1<br>Not at all likely | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9<br>Very likely |
| There will be an increase in the number of minorities in my community | 1<br>Not at all likely | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9<br>Very likely |
| **How likely would you be to engage in the following activities with an Arab-Muslim?** | | | | | | | | | |
| a. Share my class notes with an Arab-Muslim person. | 1<br>Not at all likely | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9<br>Very likely |
| b. Study with an Arab-Muslim student. | 1<br>Not at all likely | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9<br>Very likely |
| c. Play on the same sports team as an Arab Muslim. | 1<br>Not at all likely | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9<br>Very likely |
| d. Eat a meal with an Arab-Muslim. | 1<br>Not at all likely | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9<br>Very likely |

Listed below are a number of statements concerning personal attitudes and traits. Read each item and decide how true the statement is for you personally.

| | totally | | | | | | not at all |
|---|---|---|---|---|---|---|---|
| 1. I never hesitate to go out of my way to help someone in trouble. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2. I have never intensely disliked anyone. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3. There have been times when I was quite jealous of the good fortune of others. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4. I would never think of letting someone else be punished for my wrong doings. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5. I sometimes feel resentful when I don't get my way. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6. There have been times when I felt like rebelling against people in authority even- though I knew they were right. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 7. I am always courteous, even to people who are disagreeable. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8. When I don't know something I don't at all mind admitting it. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 9. I can remember "playing sick" to get out of something. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 10. I am sometimes irritated by people who ask favours of me. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

**Please rate the extent to which you agree with the following statements.**

| | Disagree | | | | | | Agree |
|---|---|---|---|---|---|---|---|
| 1. Laws have to be strictly enforced if we are to preserve our way of life. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2. People should pay less attention to the Bible and other old traditional forms of religious guidance. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3. Women should always remember the promise they make in marriage to obey their husbands. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4. Our customs and national heritage are things that have made us great, and people should be made to show greater respect for them. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5. National anthems, flags, and glorification of one's country should all be de-emphasized. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6. The facts on crime, sexual immorality, and the recent public disorder all show that we have to crack down harder on deviant groups and troublemakers if we are to save our moral standards and preserve law and order. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 7. Our prisons are a shocking disgrace. Criminals are unfortunate people who deserve much better care, instead of so much punishment. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8. Obedience and respect for authority are the most important virtues children should learn. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 9. Organizations like the army and priesthood have a unhealthy effect on people because they require strict obedience. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 10. One good way to teach certain people right from wrong is to give them a good stiff punishment when they get out of line. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 11. In these troubled times laws have to be enforced without mercy, especially when dealing with the agitators. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 12. Young people sometimes get rebellious ideas, but as they grow up, they ought to get over them. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 13. Rules about being "well-mannered" and respectable are chains from the past that we should question very thoroughly before accepting. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 14. The courts are right in being easy on drug offenders. Punishment would not do any good in cases like these. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 15. If a child starts becoming a little too unconventional, his/her parents should see to it that s/he returns to the normal ways expected by society. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 16. "A woman's place" should be wherever she wants to be. The days when women are submissive to their husbands and social conventions belong strictly in the past. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

**Please rate the extent to which you agree with the following statements.**

| | **Strongly Disagree** | | | | | | **Agree Strongly** |
|---|---|---|---|---|---|---|---|
| 1. Some groups of people are simply not the equals of others. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2. Some people are just more worthy than others. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3. This country would be better off if we cared less about how equal all people are. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4. Some people are just more deserving than others. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5. It is not a problem if some people have more of a chance in life than others. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6. Some people are just inferior to others. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 7. To get ahead in life, it is sometimes necessary to step on others. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8. There should be increased economic equality. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 9. There should be increased social equality. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 10. There should be equality. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 11. If people were treated more equally we would have fewer problems in this country. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 12. We should try to treat one another as equals as much as possible. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Do you consider yourself to be prejudiced? | 1 Not at all | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 Extremely |
| Do you aim to reduce prejudice in your daily life? | 1 Not at all | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 Extremely |
| Do you consider yourself to be a non-prejudiced person? | 1 Not at all | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 Extremely |
| Do you consider yourself to be an egalitarian? | 1 Not at all | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 Extremely |

**Background Information**

Gender: Male □ Female □ Age: _____

Mother tongue: English □ French □Other (PLEASE specify!):_____

Citizenship: Canadian □ Other (PLEASE specify!): _____

Ethnicity/ Cultural Background (e.g. Caucasian, Black, Hispanic, Native, etc.):_____

Do you study full-time? Yes □ No □

# Appendix E:

## Measures used in Study 5

# *WHY DO YOU INHIBIT PREJUDICE?*

There are several reasons why we would want to refrain from prejudiced attitudes. On a scale from 1-9, please rate the extent to which the following reasons correspond to **your own personal reasons** for withholding racial or cultural prejudice. Please answer carefully, honestly, and truthfully.

**Why do you inhibit/suppress cultural prejudice?** ****Please note: you are NOT rating the extent to which you simply agree or disagree with these statements, but rather **the extent to which they represent your ultimate reasons for avoiding prejudiced attitudes.***

| | Does not Correspond at all | | | | Corresponds Moderately | | | | Corresponds Exactly |
|---|---|---|---|---|---|---|---|---|---|
| **1. Because I feel that I must refrain from stereotyping** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **2. For the satisfaction of discovering new and interesting individuals or groups** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **3. For the interest I feel when learning about others** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **4. Because I appreciate what being understanding adds to my life** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **5. I don't know; It's not a priority** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **6. Because I would feel bad about myself if I were prejudiced** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **7. Because tolerance is important to me** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **8. Because racist people are not well-liked** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **9. Because I don't want people to think I'm narrow-minded** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **10. I don't know; I don't really bother trying to avoid it** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **11. Because I place importance on having egalitarian beliefs** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **12. For the joy I feel when relating to new people** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **13. I don't know why; I think it's pointless** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **14. Because overcoming prejudice is part of who I am** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **15. Because I would feel guilty if I were prejudiced** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **16. Because I admire people who are egalitarian** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **17. Because I get more respect/acceptance when I act in an unprejudiced fashion** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **18. Because I am tolerant and accepting of differences** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **19. I don't know, inhibiting prejudice is not important to me** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **20. For the pleasure of being open-minded** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **21. Because striving to understand others is part of who I am** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **22. Because I would feel ashamed if I were prejudiced** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **23. Because I value nonprejudice** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **24. So that people will admire me for being tolerant** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

**Please rate your level of agreement with the following statements, according to the scale provided. Please answer truthfully and honestly.**

| | Disagree Completely | | | | | | | | Agree Completely |
|---|---|---|---|---|---|---|---|---|---|
| 1. Canadian people and Arabs can never be really comfortable with each other, even if they are close friends. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 2. Most politicians in Canada care too much about Arabic people and not enough about the average Canadian person. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 3. I would be willing to have sexual relations with an Arabic-Muslim person. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 4. I would NOT mind if a suitably qualified Arabic person was appointed as my boss. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 5. Arabic people living here should not push themselves where they are not wanted. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 6. Many other groups have come to Canada and overcome prejudice and worked their way up. Arabic people should do the same without special favour. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 7. Arabic people living here teach their children values and skills different from those required to be successful in Canada. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 8. There exists a lot of discrimination against Arab-Muslims, which limits their chances to get ahead | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 9. Over the past few years, Arab-Muslims have gotten less than they deserve. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

**Please indicate your level of agreement with the following opinions:**

| | Disagree Completely | | | | | | | | Agree Completely |
|---|---|---|---|---|---|---|---|---|---|
| 1. Arabic-Muslim immigrants should not receive social assistance destined for Canadians | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 2. Arabic-Muslims are increasing the amount of crime in Canada | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 3. Arabic-Muslims are taking jobs away from Canadians | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 4. Social services for Arabic-Muslims are an economic burden on Canadians | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 4. It isn't fair that Arabic-Muslim immigrants have access to free Canadian health care | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 5. Arab-Muslims pose a threat to economic opportunity | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 6. The religion of Arabic-Muslims is not compatible with the religion of Canadians | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 7. Our way of life is being modified by Arabic-Muslim immigration | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 8. Arabic-Muslim culture damages Canadian culture | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 9. The values and beliefs of Arabic-Muslims are a threat to Canadian values and beliefs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 10. Arab-Muslims pose a threat to our personal rights and freedoms. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

| What do you think will happen as a result of more Arab-Muslim immigrants coming to this country? | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Higher unemployment | 1<br>Not at all likely | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9<br>Very likely |
| Higher economic growth | 1<br>Not at all likely | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9<br>Very likely |
| It will be harder to keep the country united | 1<br>Not at all likely | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9<br>Very likely |
| My own job may be threatened | 1<br>Not at all likely | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9<br>Very likely |
| I may become unemployed | 1<br>Not at all likely | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9<br>Very likely |
| There will be an increase in the number of minorities in my community | 1<br>Not at all likely | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9<br>Very likely |
| **How likely would you be to engage in the following activities with an Arab-Muslim?** | | | | | | | | | |
| a. Share my class notes with an Arab-Muslim person. | 1<br>Not at all likely | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9<br>Very likely |
| b. Study with an Arab-Muslim student. | 1<br>Not at all likely | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9<br>Very likely |
| c. Play on the same sports team as an Arab Muslim. | 1<br>Not at all likely | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9<br>Very likely |
| d. Eat a meal with an Arab-Muslim. | 1<br>Not at all likely | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9<br>Very likely |

**Please rate the extent to which you agree with the following statements.**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1. Laws have to be strictly enforced if we are to preserve our way of life. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2. People should pay less attention to the Bible and other old traditional forms of religious guidance. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3. Women should always remember the promise they make in marriage to obey their husbands. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4. Our customs and national heritage are things that have made us great, and people should be made to show greater respect for them. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5. National anthems, flags, and glorification of one's country should all be de-emphasized. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6. The facts on crime, sexual immorality, and the recent public disorder all show that we have to crack down harder on deviant groups and troublemakers if we are to save our moral standards and preserve law and order. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 7. Our prisons are a shocking disgrace. Criminals are unfortunate people who deserve much better care, instead of so much punishment. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8. Obedience and respect for authority are the most important virtues children should learn. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 9. Organizations like the army and priesthood have a unhealthy effect on people because they require strict obedience. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 10. One good way to teach certain people right from wrong is to give them a good stiff punishment when they get out of line. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 11. In these troubled times laws have to be enforced without mercy, especially when dealing with the agitators. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 12. Young people sometimes get rebellious ideas, but as they grow up, they ought to get over them. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 13. Rules about being "well-mannered" and respectable are chains from the past that we should question very thoroughly before accepting. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 14. The courts are right in being easy on drug offenders. Punishment would not do any good in cases like these. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 15. If a child starts becoming a little too unconventional, his/her parents should see to it that s/he returns to the normal ways expected by society. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 16. "A woman's place" should be wherever she wants to be. The days when women are submissive to their husbands and social conventions belong strictly in the past. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

**Please rate the extent to which you agree with the following statements.**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1. Some groups of people are simply not the equals of others | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2. Some people are just more worthy than others | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3. This country would be better off if we cared less about how equal all people are | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4. Some people are just more deserving than others | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5. It is not a problem if some people have more of a chance in life than others | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6. Some people are just inferior to others | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 7. To get ahead in life, it is sometimes necessary to step on others | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8. There should be increased economic equality | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 9. There should be increased social equality | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 10. There should be equality | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 11. If people were treated more equally we would have fewer problems in this country | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 12. We should try to treat one another as equals as much as possible | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

# THE END.