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# On the Self-Regulation of Implicit and Explicit Prejudice: A Self-Determination Theory Perspective

**Lisa Legault**

*University of Ottawa, Canada*

**Isabelle Green-Demers**

*Université du Québec en Outaouais*

**Protius Grant**

*University of Ottawa, Canada*

**Joyce Chung**

*University of Ottawa, Canada*

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*The present study identifies a broad taxonomy of motives underlying the desire to regulate prejudice and assess the impact of motivation to regulate prejudice on levels of explicit and implicit prejudice. Using self-determination theory as the foundation, six forms of motivation to regulate prejudice are proposed. In Study 1 (N = 257), an exploratory factor analysis reveals evidence for the six proposed dimensions. In Study 2 (N = 198), the six-factor taxonomy of motivation to regulate prejudice is further validated using a confirmatory factor analysis, and construct validity is obtained. In Study 3 (N = 62), motivation to regulate prejudice is manipulated before participants complete the Implicit Association Test (IAT) and explicit measures of prejudice. Results reveal that those with highly self-determined regulation of prejudice demonstrate lower implicit and explicit prejudice than their less self-determined counterparts. Results are discussed in terms of an increased understanding of the motivation to control prejudice.*

**Keywords:** *prejudice; self-determination; motivation; self-regulation; prejudice-regulation; implicit prejudice; IAT*

Prejudice and the use of negative stereotypes often have detrimental ramifications for stereotyped

groups and individuals. 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 may be motivated to circumvent prejudice and reduce discrimination. Moreover, people may have differing reasons for the control and/or avoidance of prejudice. Although some individuals may strive to be egalitarian for self-endorsed and personal reasons, others may try to curb prejudiced feelings because of perceived social or political standards. Indeed, current evidence suggests that motivation plays a role in the expression and suppression 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). However, current

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explanations of motivation to be nonprejudiced or egalitarian may benefit from greater elaboration. Because different motivations to refrain from prejudice may have substantially differential impacts on the level of prejudice one experiences or expresses, a more comprehensive analysis of motivation to be nonprejudiced is necessary.

### MOTIVATION TO BE NONPREJUDICED

Evidence suggests that people are indeed motivated to suppress prejudice (Crandall, Eshleman, & O'Brien, 2002). Such motivation has been shown to moderate the extent to which stereotypes are activated and applied. For example, it has been noted that stereotype activation can be controlled by having chronic egalitarian goals. That is, individuals displaying strong and persistent adherence to nonprejudiced standards and principles have been shown to display less automatic biases than those without chronic, nonprejudiced personal standards (Moskowitz, et al., 1999). Dunton and Fazio (1997) also developed a measure of motivation to control prejudice. However, this measure assessed 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. Despite some theoretical and methodological shortcomings (e.g., items that did not isolate the source underlying the motivation; difficulty stabilizing a factor structure representing their hypothesized internal-external motivational conceptualization), Dunton and Fazio's (1997) study did propel the notion that motivation plays a role in prejudice: Those scoring high on motivation to control prejudice also demonstrated lower racism scores.

In their innovative article 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 toward Black people. Internal motivation in this case referred to internalized and personally important nonprejudiced standards, whereas external motivation reflected social pressure to comply with nonprejudiced norms. Plant and Devine discovered that internal motivation to respond without prejudice was associated with lower self-reported racism scores, whereas external motivation to respond without prejudice was associated with higher self-reported racism scores. 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 more implicit racial bias compared to those with an external motivation.

These studies represent important steps in delineating some of the 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 remains dichotomous and therefore may not paint a complete picture of motivation to be nonprejudiced.

Thus, it seems plausible 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). But most important, the existing conceptualization of motivation to be nonprejudiced overlooks a whole range of motivational orientations that we now know to have important implications. Indeed, the complexity of prejudice regulation has been severely limited. Understanding the role of motivation in the process of prejudice reduction begins with the development of more comprehensive ways to conceptualize it.

### THE ROLE OF SELF-DETERMINATION THEORY IN PREJUDICE REGULATION

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, 2002), a theory that explains the process of internalizing goals and values. 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. SDT highlights the importance of feeling free and autonomous to foster self-determined motivation. 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. These are described below from most to least self-determined.

#### Intrinsic Motivation

Intrinsically motivated behavior 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 despite external barriers. The individual with an intrinsic motivation to be nonprejudiced freely and earnestly chooses nonprejudice because it feels enjoyable or satisfying; s/he may strive to be egalitarian because of the enjoyment and interest s/he feels when relating to other groups or because of the satisfaction

s/he feels when being open-minded. Of course, not all behaviors and values are maintained out of enjoyment or satisfaction. External forces often come into play.

### Extrinsic Motivation

Extrinsic motivation is a broad categorization of four different classes of motivation, which range greatly in their level of self-determination. "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 behaviors with which one identifies become integrated and 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 behaviors are performed because they are construed as natural extensions of identity. Integrated regulation shares commonalities with intrinsic motivation (e.g., feelings of free choice and autonomy are salient) but is still considered extrinsic because behavior is performed to obtain personally valued outcomes rather than as an end in itself. An individual with an integrated motivation to be nonprejudiced would view him/herself as an unbiased and tolerant person. Beyond simply agreeing with or appreciating nonprejudice, the individual with an integrated regulation of prejudice feels that being egalitarian is part of who s/he is.

Slightly less entrenched within the self-concept is "identified regulation," which refers to goals that are sought because they are valued or seen as important. The individual recognizes the relevance or significance of the goal, behavior, value, or standard. It is a personal endorsement; the point at which externally governed behavior becomes self-governed and the perceived locus of causality shifts to internal. Although the value of a goal is genuinely acknowledged, it is not yet part of one's core personal beliefs (as per integrated regulation). Although significant to the individual, identified motives are not yet harmonized with the individual's overarching value system. Compared to an integrated regulation, someone with an identified regulation admires egalitarianism, but does not feel defined by it. An individual with an identified regulation of prejudice may regulate prejudice because s/he values egalitarianism, and believes it to be an important standard to uphold.

"Introjected regulation" denotes the point on the SDT continuum where motivation begins to have an external perceived locus of causality. Behavior regulation is not completely external but rather proceeds through internal pressure and restraint. External incentives (e.g., nonprejudice) have been turned inward but not truly accepted as one's own, and thus this type of self-regulation feels quite controlling. Introjected behaviors are ego involved and

are performed to avoid guilt or to enhance contingent self-worth. Internal pressure is salient, but it does not feel self-endorsed. Thus, this form of motivation is not self-determined. An individual with an introjected regulation of prejudice suppresses prejudice out of feelings of obligation or because s/he would feel guilty or embarrassed if s/he did not.

"External regulation," the least autonomous form of extrinsic motivation (completely non-self-determined, in fact), refers to motivation that is purely instrumental; that is, behaviors are performed to obtain rewards or to avoid negative consequences. Such behaviors serve external or social demands first and foremost, and this motivation feels forced and 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.

### Amotivation

Finally, 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 behavior and that behavior's subsequent outcome. Amotivated individuals may feel disintegrated or detached from their behaviors and goals and may feel a sense of learned helplessness. The individual who is amotivated in the regulation of prejudice will not know why s/he tries to refrain from being prejudiced, either because s/he cannot perceive the behavior-consequence contingency or because s/he feels helpless in effectuating an outcome.

This continuum of self-determined motivation that serves as the theoretical foundation for the current conceptual and psychometric validation of a taxonomy of motivation to be nonprejudiced has previously been verified in several domains, including work (Blais, Brière, Lachance, Riddle, & Vallerand, 1993), education (Vallerand, Pelletier, Blais, Brière, Sénécal, & Vallières, 1992, 1993; Vallerand, Fortier, & Guay, 1997), physical activity and sports (Pelletier, Fortier, Vallerand, Tuson, Brière, & Blais, 1995), sexuality (Green-Demers, Séguin, Legault, & Pelletier, 2007), leisure (Pelletier, Vallerand, Green-Demers, Blais, & Brière, 1995, 1996), and pro-environmental behaviors (Pelletier, Tuson, Green-Demers, Noels, & Beaton, 1998).

## CONSEQUENCES OF SELF-DETERMINATION

Within SDT, motivation ranges on a continuum from non-self-determined to self-determined, and thus the

psychological and behavioral 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 behavior is non-self-determined, regulation is weak and negative feelings are experienced. A lack of self-determination is linked to an aversive experience of the motivation. As behavior 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.

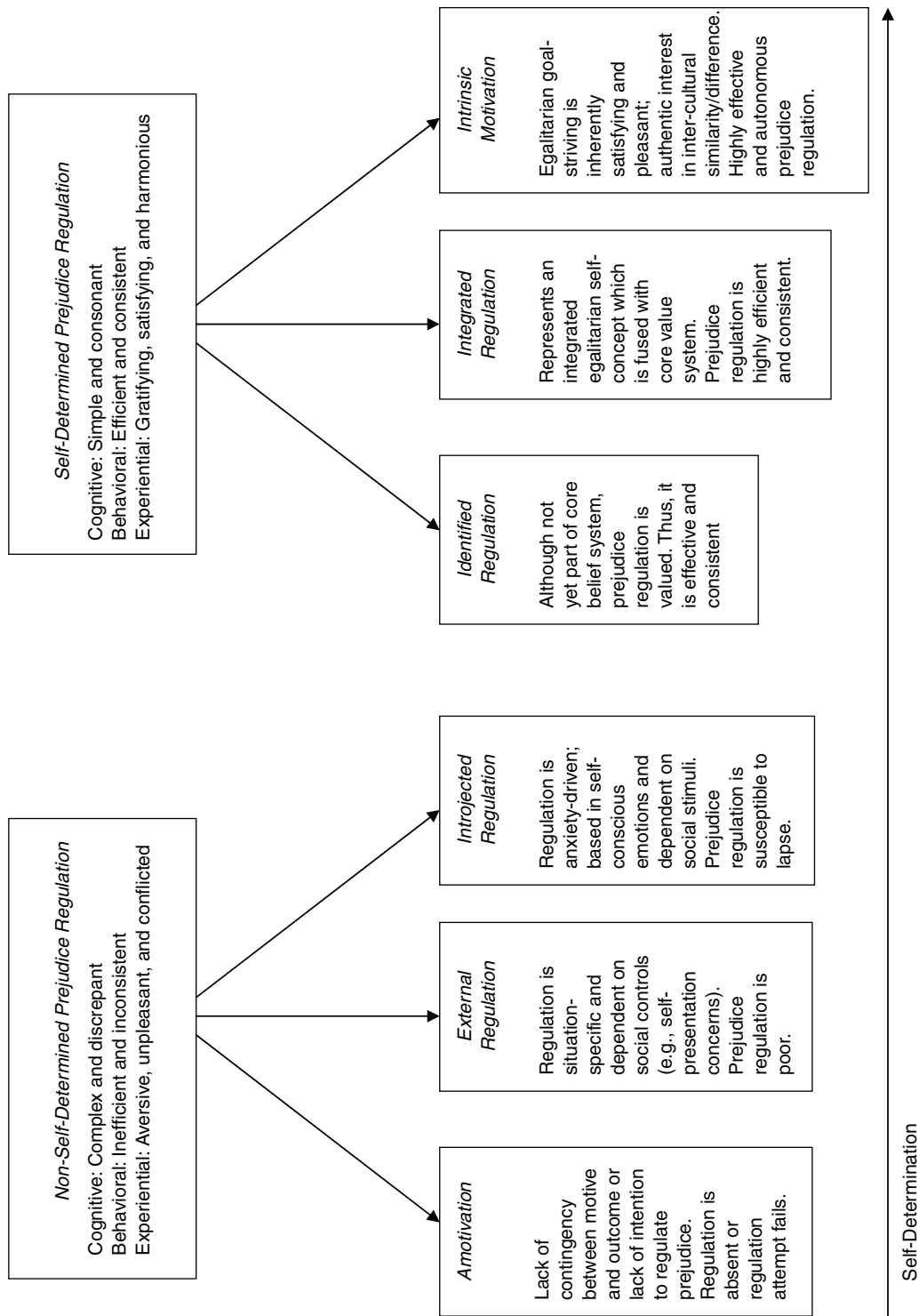
The pattern of outcomes associated with the various forms of self-determination has also received much empirical support. In education, self-determination has been shown to relate positively to perceived competence, positive emotion, concentration, performance, and satisfaction with school (Vallerand 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., 2007); self-determined leisure motivation with psychological well-being (Pelletier et al., 1995, 1996); and self-determined environmental motivation with proecological behaviors (Green-Demers, Pelletier, & Menard, 1997). Although SDT has traditionally remained in the science of explaining motivation for *behaviors*, it is our hope that this well-established continuum of motivation will be successfully extended into the new territory of prejudice regulation, thereby paving a road for the study of a self-determination theory of *attitudes*.

### Nonprejudice as a Consequence of Self-Determination

Given the prior pattern of consequences associated with degrees of self-determination, we propose that as one moves toward greater self-determination on the SDT continuum, prejudice should steadily diminish. Figure 1 summarizes each of the six forms of motivation and its implication for the regulation of prejudice. Theoretically, as a result of self-determined prejudice regulation, people should reduce prejudice more frequently and reliably and should be able to 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. Self-determined motivation to be nonprejudiced can occur when people enjoy relating to others (intrinsic), when they define themselves as nonprejudiced (integration), and when they freely choose egalitarian goals (identification). Similar positive outcomes can be expected for these motives, but they are brought about by different reasons. Although people with self-determined motivations are well-equipped to thwart prejudice because they autonomously and proactively seek to do so, non-self-determined people are liable to falter. Indeed, when people feel obligated to maintain egalitarian standards that they do not truly care about (introjection), or when they feel socially pressured to stifle prejudice and bigotry (external regulation), prejudice regulation will likely be weak and inconsistent. When people feel alienated from equality strivings (amotivation), prejudice regulation is unlikely to occur.

The role of self-determination in prejudice regulation is expected to apply to both traditional explicit measures of prejudice as well as more implicit measures. Social cognition research has long been interested in developing measures of attitudes that circumvent the self-presentation and social desirability effects inherent in self-report methods, especially in socially sensitive domains such as stereotyping and prejudice. As such, the last decade has seen an influx of implicit techniques (e.g., the Implicit Association Test; IAT; Greenwald, McGhee, & Schwartz, 1998) for measuring the less controllable aspects of attitudes. The IAT is designed to measure automatic evaluative associations between concepts in memory (such as an attribute and a racial category). The IAT is currently one of the most reliable tools for measuring implicit attitudes and is admired for its yield of large effect sizes (Greenwald et al., 1998; Hofmann, Gawronski, Gschwendner, Le, & Schmitt, 2005; Rudman, Greenwald, Mellott, & Schwartz, 1999). Moreover, responses on the IAT have not only been linked to racial preference but to behavioral discrimination as well (McConnell & Leibold, 2001). In line with our reasoning about the role of self-determination in the regulation of implicit prejudice, recent evidence shows that having an internal motivation to respond without prejudice yields less racially biased responses on the IAT compared to having an external motivation to respond without prejudice (Devine et al., 2002; Gordjin, Hindriks, Koomen, Dijksterhuis, & Knippenberg, 2004; Hausmann & Ryan, 2004). It thus remains to be seen whether having a self-determined regulation of prejudice is related to decreases in implicit prejudice on the IAT.



**Figure 1** Continuum of Self-Determined Motivation to Regulate Prejudice.

## THE PRESENT STUDIES: GOALS AND HYPOTHESES

There were two focal aims of the present investigation. The first was to develop and validate a taxonomy of motivation to be nonprejudiced that is based on the motivational continuum of SDT. This taxonomy comprises six dimensions of motivation to regulate prejudice: intrinsic motivation, integrated regulation, identified regulation, introjected regulation, external regulation, and amotivation. Two studies were conducted to achieve this first goal. In Study 1, an exploratory factor analysis was performed with the aim of obtaining preliminary support for the six-factor taxonomy of motivation to be nonprejudiced. In Study 2, the factorial structure of motivated prejudice regulation was further corroborated using a confirmatory factor analysis. It was expected that the presence of six types of motivations to regulate prejudice would be verified. In both studies, associations between motivation to regulate prejudice and related constructs were also assessed for construct validity purposes. Moreover, concurrent validity was examined in Study 2. Specific hypotheses concerning construct and concurrent validity are stated at the onset of Studies 1 and 2.

The second main goal of the current investigation was to assess the impact of the level (high vs. low) of self-determination to regulate prejudice on explicit and implicit prejudice. This was the objective of Study 3. We hypothesized that those with a highly self-determined prejudice regulation would show less prejudice at both an explicit and implicit level compared to those with a less self-determined regulation of prejudice. Complementary information was obtained by ascertaining correlations between each subtype of motivation to regulate prejudice and both explicit (Studies 1, 2, and 3) and implicit (Study 3 only) prejudice. It was expected that the self-determined forms of motivation to regulate prejudice would be negatively related to explicit and implicit prejudice because SDT posits that these types of regulations be successful and persistent. Associations between forms of non-self-determined extrinsic motivation (i.e., introjected and external regulation) and prejudice were not expected given the socially contingent nature of these motivational orientations. Finally, because amotivation represents an absence of prejudice regulation, we anticipated positive associations between this dimension and implicit and explicit prejudice.

### STUDY 1

An exploratory factor analysis of the six types of motivation to regulate prejudice was conducted. Correlations between the subtypes of motivation to regulate prejudice

were also assessed and, as purported by the SDT continuum, were expected to reveal a general simplex pattern of associations. That is, dimensions of motivation are theorized to display the strongest correlations with theoretically adjacent dimensions, and associations should become weaker and negative as the respective distance between dimensions on the SDT continuum increases. In addition, correlations between these dimensions and related constructs (i.e., racism, sexism, fear of negative evaluation, locus of control, and conservatism) were assessed. As previously explained, it was expected that self-determined forms of motivation (intrinsic, integrated, identified) would be negatively associated with prejudice (both racism and sexism), whereas non-self-determined forms (introjected and external) would be unrelated to prejudice, and amotivation would be positively associated with racism and sexism. Also, because the fear of negative evaluation is theoretically a component of low extrinsic self-determination, correspondence was expected between introjected and external regulation and fear of negative evaluation. Furthermore, self-determination theory traditionally identifies an internal locus of control as being a core feature of high self-determination and an external locus of control as being central to low self-determination. Thus, we expected positive associations between highly self-determined forms of prejudice regulation and internal locus of control and negative associations between this variable and non-self-determined dimensions. Finally, a measure of conservatism was included because stronger conservative attitudes have been linked to lower tolerance and more prejudice (Dunton & Fazio, 1997), and thus we predicted that a low self-determined motivation to withhold prejudice would be correlated with conservatism.

### Method

#### *Participants and Procedure.*

The sample consisted of 257 undergraduates, including 48 males (18.7%) and 209 females (81.3%). The average age of participants was 21 years ( $M = 21.2$ ;  $SD = 5.1$ ). Most were Caucasian (78.6%), although 18.3% reported an ethnic background other than Caucasian (e.g., Arabic, Asian, Black, Hispanic). Questionnaires were distributed in class, and students completed them in their own time and returned them in sealed envelopes, which were provided.

#### *Measures*

*Motivation to be nonprejudiced.* The measure under current investigation, the Motivation to be Nonprejudiced Scale (MNPS), developed to assess motivation underlying the regulation of prejudice, was designed during focus

**TABLE 1** Exploratory Factor Analysis of Items of the Motivation to be Nonprejudiced Scale

Items	IM	Integ	Iden	Intro	Ext	Amo
Enjoyment relating to other groups	-.85					
Pleasure of being open-minded	-.79					
For the joy I feel when learning about new people	-.73					
For the interest I feel when discovering people/groups	-.67					
I appreciate what being understanding adds to my life		.89				
Striving to understand others is part of who I am		.74				
Because I am tolerant and accepting of differences		.58				
Because I am an open-minded person		.37				
Because I value nonprejudice			.81			
Because I admire people who are egalitarian			.68			
I place importance on having egalitarian beliefs		.36	.41			
Because tolerance is important to me			.36			-.33
Because I feel like I should avoid prejudice				.52		
Because I would feel guilty if I were prejudiced				.43		
Because I would feel ashamed if I were prejudiced				.43		
Because I would feel bad about myself if I were prejudiced				—		
So that people will admire me for being tolerant					.90	
Because I don't want people to think I'm narrow-minded					.86	
Because biased people are not well-liked					.72	
Because I get more respect/acceptance when I act unbiased					.65	
I don't know; it's not a priority						.82
I don't know; I don't really bother trying to avoid it						.49
I don't know why; I think it's pointless						.38
I don't know, it's not very important to me						.25
% variance explained	6.59	21.49	3.17	2.71	14.78	5.11
Eigenvalue	1.87	5.44	1.21	1.08	3.79	1.69

NOTE: *IM* = intrinsic motivation; *Integ* = integrated regulation; *Iden* = identified regulation; *Intro* = introjected regulation; *Ext* = external regulation; *Amo* = amotivation.

groups with experts in the field of human motivation and self-determination theory. Our goal was to represent the six motivational dimensions of the SDT continuum as motivations to self-regulate prejudice. Participants were asked to rate the extent to which items corresponded to their "ultimate reasons for avoiding prejudice" on a 7-point Likert scale (1 = *does not correspond at all*; 4 = *corresponds moderately*; 7 = *corresponds exactly*). The first version contained a total of 70 items (i.e., 11 to 12 items per subscale). Examples of items can be found in Table 1.

The six types of regulation reflect a continuum of self-determined motivation, ranging from non-self-determined to self-determined. To represent this continuum as a single score for each participant, we computed an index of overall self-determined regulation of prejudice. That is, values for each motivational dimension of the MNPS were entered into a computation of a global self-determined regulation of prejudice index (SDRPI),<sup>1</sup> with higher scores indicating greater self-determination to regulate prejudice.

**Racism.** Racism was measured using the Symbolic Racism 2000 Scale (Henry & Sears, 2002). The goal of this 16-item scale is to measure symbolic or subtle racism against Black people. Contextual and political features

have caused a shift from overt to subtle expressions of racism, and this scale is designed to measure more current and covert racist attitudes. Thus, desirable responding has been noted to be less of a problem with these measures as compared to traditional measures of racism (McConahay, 1986). Symbolic and subtle racism reflects people's negative feelings toward Black people as well as the imagined threat they pose to Western values. The items of McConahay's (1986) well-known Modern Racism Scale are included in the Symbolic Racism 2000 Scale as well as additional items. Items are self-reported on a 5-point Likert-type scale. The Symbolic Racism 2000 Scale has demonstrated reliability as well as good construct validity (Henry & Sears, 2002).

**Sexism.** The Modern Sexism Scale (Swim, Aiken, Hall, & Hunter, 1995) is an eight-item scale that measures subtle sexist attitudes toward women. The scale reflects denial of women's present-day discrimination, rejection of women's demands for political and economic power, and disapproval of policies designed to promote gender equality. It uses a 5-point Likert-type scale, where high scores indicate high levels of modern sexism. The Modern Sexism Scale has demonstrated adequate reliability and

construct validity (Morrison, Morrison, Pope, & Zumbo, 1999; Morrison et al., 1999; Swim et al., 1995).

*The Fear of Negative Evaluation Scale.* The Fear of Negative Evaluation Scale (Brief FNE; Leary, 1983) measures one aspect of social anxiety: the fear of being negatively evaluated by others. Higher scores on the 5-point scale are indicative of greater fear of losing social approval. The Brief FNE (12 items) has demonstrated adequate internal consistency and test-retest reliability (Leary, 1983).

*The Internal Control Index.* The Internal Control Index (ICI; Duttweiler, 1984), a 28-item instrument, is designed to measure where a person looks for or expects to obtain reinforcement. An individual with an external locus of control believes that reinforcement is based on luck or chance. Someone with an internal locus of control believes that reinforcement stems from his/her own behavior. Items of the ICI are scored on a 5-point scale, with higher scores reflecting more internal locus of control. The ICI has been shown to demonstrate good reliability and concurrent validity.

*The Conservatism-Liberalism Scale.* The Conservatism-Liberalism Scale (Wilson & Patterson, 1968) is designed to measure respondents' immediate affective response to various social, political, and interpersonal issues. That is, respondents' degree of conservatism or liberalism is measured by way of asking them whether they favor or believe in controversial issues such as the death penalty, patriotism, legalized abortion, divorce, and so forth. There are 40 such catchphrases to which the participant can respond "yes," "no," or "?"

## Results and Discussion

### *Exploratory Factor Analysis*

To investigate the factorial structure of motivation to regulate prejudice, an exploratory factor analysis was performed using maximum likelihood extraction and direct oblimin rotation. A six-factor solution was imposed on the data, representing intrinsic motivation, integrated regulation, identified regulation, introjected regulation, external regulation, and amotivation. Items were factor analyzed to eliminate cross-loaded and weak indicators. The final solution contained a total of 23 items, representing each dimension of motivation to be nonprejudiced. This solution is presented in Table 1. An analysis of the scree plot revealed the presence of six factors with eigenvalues greater than 1 ( $1.08 < \lambda < 5.44$ ). These six factors accounted for a substantial portion (53.85%) of the sample variance. Factor loadings displayed a satisfactory

six-factor structure, with the exception of two cross-loadings. Thus, these two items required minor revision. By and large, the magnitude of the factor loadings was also satisfactory (i.e., magnitude of at least .32; Tabachnick & Fidell, 2001), with an exception in the amotivation dimension and a missing item in the introjection dimension. Overall, the factor solution revealed substantive preliminary evidence for motivation to be nonprejudiced that follows a self-determination theory perspective.

### *Internal Consistency and Correlations Among Dimensions*

As can be observed in Table 2, internal consistency (Cronbach's alpha) was good for the intrinsic, integrated, identified, and external subscales. For introjected regulation, the less than adequate reliability is likely because of the fact that we were unable to isolate more than three indicators for the subscale, and thus, the development of an additional indicator should improve this shortcoming. For amotivation, the weak indicator and the low reliability are presumably a function of more-than-typical variability among amotivation items. It is surmised that a more homogenous operationalization of amotivation will improve internal consistency. Generally, correlations among the factors revealed a simplex pattern of associations concordant with self-determination theory and our expectations (see Table 2).

### *Correlations With Prejudice and Other Related Constructs*

To extend the construct validity of the subscales of the MNPS, correlations between the subscales and related attitudinal constructs were assessed. These results are presented in Table 3. As was expected, intrinsic, integrated, and identified regulations of prejudice were negatively correlated with racism and sexism. Presumably, these three forms of motivation to regulate prejudice are most effective in reaching and maintaining their egalitarian goals. Conversely, amotivation, representing deficient regulation of prejudice, was positively correlated with both racism and sexism. Interestingly, although introjected regulation was uncorrelated with prejudice, external regulation displayed a modest positive association with racism. Also in line with our expectations, introjected and external regulations were positively associated with a fear of being negatively evaluated by others, positively associated with having conservative attitudes, and negatively associated with having an internal locus of control (as was amotivation). Amotivation also displayed negative convergence with internal control. Finally, identified regulation of prejudice displayed the only negative association with



**TABLE 2:** Validating the Structure of Motivation to be Nonprejudiced: Correlations Between Dimensions

	<i>IM</i>	<i>Integ</i>	<i>Iden</i>	<i>Intro</i>	<i>Ext</i>	<i>Amo</i>
Dimension						
<i>IM</i>		.31***	.41***	.32***	.23**	-.12
<i>Integ</i>	.72***		.59***	.05	.01	-.15*
<i>Iden</i>	.48***	.70***		.24***	.05	-.31***
<i>Intro</i>	.28***	.30***	.48***		.49***	-.04
<i>Ext</i>	.27***	.18*	.38***	.59***		.12
<i>Amo</i>	-.14	-.31***	-.21**	-.04	.06	
Cronbach's $\alpha$						
Study 1	.84	.79	.82	.63	.87	.56
Study 2	.90	.76	.83	.82	.84	.80

NOTE: Pearson correlations between the dimensions are presented above the diagonal (Study 1), and correlations between latent factors are presented below the diagonal (Study 2). Correlations are significant at \*\*\* $p < .001$ ; \*\* $p < .01$ ; \* $p < .05$  levels. *IM* = intrinsic motivation; *Integ* = integrated regulation; *Iden* = identified regulation; *Intro* = introjected regulation; *Ext* = external regulation; *Amo* = amotivation.

conservatism. This makes sense given that identified motivation is based on recognition and endorsement of values. Perhaps those with identified regulation aim to subscribe to principles of freedom and tolerance. An examination of the global SDRPI in Table 3 offers a summary of the aforementioned correlations.

## STUDY 2

Although the psychometric results of Study 1 are substantively meaningful, they are exploratory in nature and thus remain to be cross-validated. Therefore, in Study 2, the problematic items of Study 1 were revised with the aim of producing a superior measure of the six forms of motivation to regulate prejudice. Statistical validation of the improved structure of motivation to regulate prejudice was expected by means of a confirmatory factor analysis. We also anticipated that the six forms of prejudice regulation would show a simplex pattern of association. Furthermore, to replicate and extend Study 1, correlations between dimensions of motivation to regulate prejudice and explicit prejudice constructs (i.e., symbolic racism and modern sexism) were assessed. Hypotheses were identical to those of Study 1. Concurrent validity for dimensions of motivation to regulate prejudice was also examined via correlations with Plant and Devine's (1998) measures of internal (IMS) and external (EMS) motivation to respond without prejudice as well as with the Global Motivation Scale (Haddad, 1999). It was expected that our three self-determined forms of motivation to regulate prejudice would be moderately associated with the IMS and that only our external regulation dimension would be associated with the EMS, given that the items of the EMS are unidimensionally external. We anticipated that dimensions of motivation to regulate prejudice would correlate

with global motivation in a theoretically meaningful way, that is, with low self-determined forms of prejudice regulation correlating negatively with global motivation and high self-determined forms correlating positively.

## Method

### *Participants and Procedure*

Participants were 198 university undergraduates who filled out questionnaires at school during class time. The sample consisted of 161 females and 33 males, although four students did not reveal their gender. Participants reported a mean age of 21.6 years ( $SD = 5.09$ ). As per Study 1, the vast majority of participants were Caucasian (81%).

### *Measures*

*Motivation to be nonprejudiced.* The revised 24-item version of the MNPS was administered to students.

*Prejudice.* As per Study 1, racism was measured using the Symbolic Racism 2000 Scale (Henry & Sears, 2002), and subtle sexist attitudes toward women were measured by means of the Modern Sexism Scale (Swim et al., 1995).

*Internal and external motivation to respond without prejudice.* Plant and Devine (1998) distinguished between motivation to control prejudice that stems from personal standards and that which is influenced by social norms. Their Internal Motivation Scale (IMS) assesses a desire to be nonprejudiced toward Black people that is consistent with one's values and beliefs. Their External Motivation Scale (EMS) measures attempts to be nonprejudiced that stem from conformity or sensitivity to social norms and standards. Items were rated on a 7-point Likert scale. The IMS and EMS have also demonstrated satisfactory psychometric properties, including

adequate internal consistency and construct validity (Plant and Devine, 1998; Devine et al., 2002). In the present analysis, internal consistency was .76 for the IMS and .92 for the EMS.

*Global motivation.* The Global Motivation Scale (GMS; Haddad, 1999) assesses general motivational orientation according to self-determination theory's continuum of internalization. Participants were asked, "Why do you do things, in general?" to which they rated items reflecting global intrinsic motivation, integrated regulation, identified regulation, introjected regulation, external regulation, and amotivation. The Global Motivation Scale has demonstrated adequate psychometric properties, including sound factorial structure, high internal consistency, and construct validity (Haddad, 1999). In the present sample, internal consistency of the GMS subscales ranged from .77 to .91. For the sake of pithiness in obtaining concurrent validity for the taxonomy under investigation, MNPS subscales were compared to a global compute of self-determination.

*Desirable responding.* To detect socially desirable responses in our sample, the Balanced Inventory of Desirable Responding (BIDR; Paulhus, 1984) was administered. The BIDR is a 40-item inventory containing 20 true-key and 20 false-key items. With reverse scoring on the false-key items, higher scores on the BIDR reflect greater desirable responding. The BIDR has shown to be a viable measure of socially desirable responding, demonstrating adequate external validity (Kroner & Weekes, 1996).

## Results and Discussion

### *Preliminary Analyses: Desirable Responding*

The standardized student norm on the BIDR ( $M = 4.33$ ;  $SD = .84$ ; Paulhus, 1984) was compared to that of the present sample ( $M = 3.95$ ;  $SD = .54$ ) to detect overall desirable responding. Participants did not display significantly higher than average scores for desirable responding.

### *Confirmatory Factor Analysis, Internal Consistency, and Correlations Among Dimensions*

The factorial validity of motivation to be nonprejudiced was assessed using the confirmatory factor analytic (CFA) model with a maximum likelihood estimation method. The hypothesized model imposed on the sample data was a six-factor structure of motivation to regulate prejudice that is representative of self-determination theory's continuum of internalization. Target factor loadings, item uniqueness, and factor variances and covariances were estimated. This model is presented in

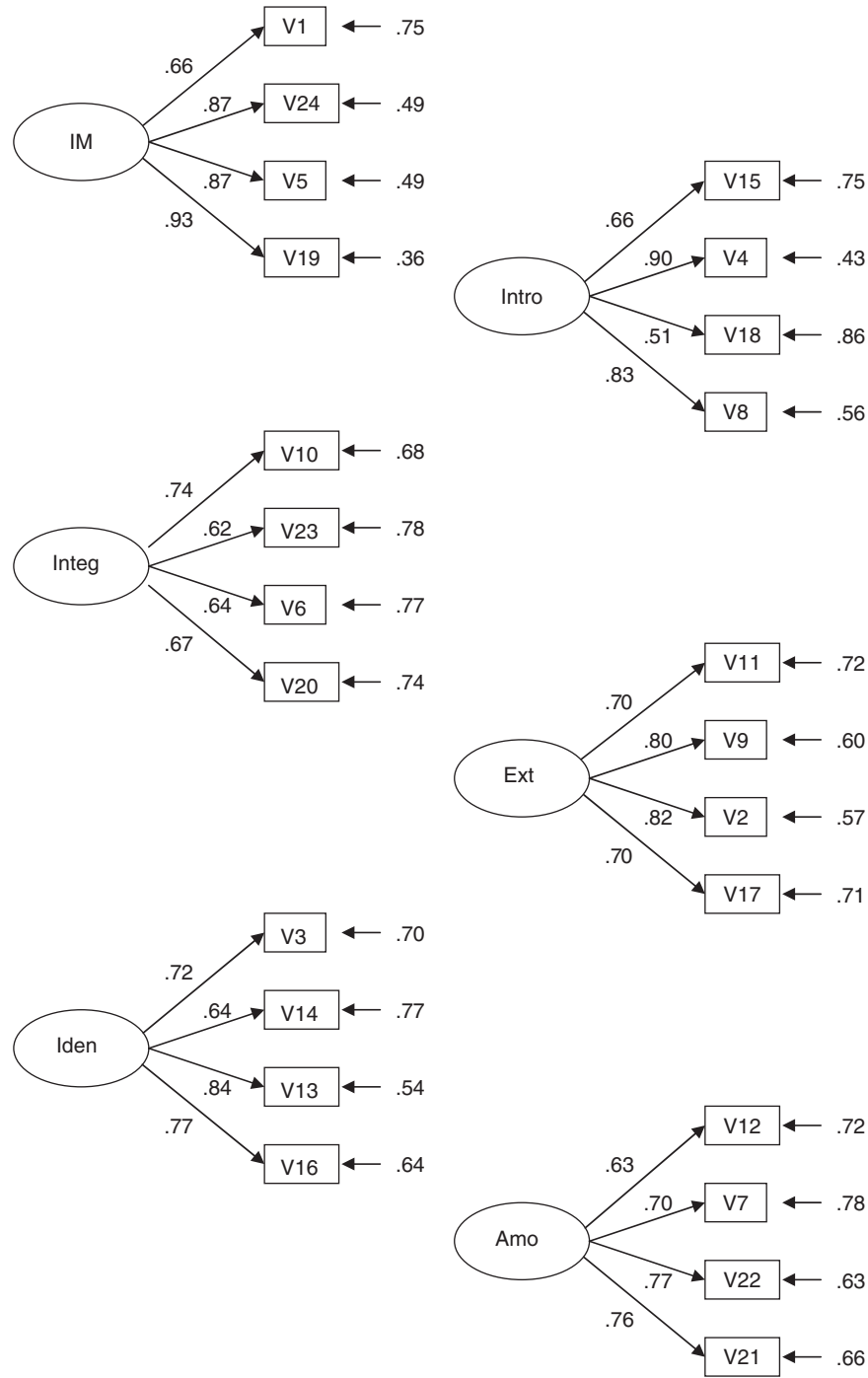
Figure 2. Using the EQS program (version 6.1.; Bentler, 1995), the degree of model fit was assessed from several angles, using several criteria (i.e., Satorra-Bentler Scaled Chi-Square Statistic ( $S-B\chi^2$ ; Satorra & Bentler, 1988); the comparative fit index (CFI; Bentler, 1990); the root mean square error of approximation (RMSEA; Steiger, 1989); and the standardized root mean-squared residual (SRMR; Jöreskog & Sörbom, 1993). Results of the CFA yielded the following fit indices:  $S-B\chi^2_{(237)} = 347.52$ ,  $p < .001$ , CFI = .95; RMSEA = .05 (confidence intervals: .04 – .06); and SRMR = .07. The fit indices obtained here demonstrate that the hypothesized model fits the data quite well. Thus, no post hoc model respecifications were required. Correlations between the latent factors are reported in Table 2, and reveal a general simplex pattern of associations that is concordant with self-determination theory and our expectations. Additionally, the internal consistency of the MNPS subscales improved over Study 1, ranging from  $\alpha = .76$  to  $\alpha = .90$ .

### *Construct Validity: Correlations With Prejudice*

As expected, intrinsic, integrated, and identified regulations of prejudice were negatively associated with explicit racism and sexism (see Table 3). The strength of these associations was moderate. This finding parallels that of Study 1 as well as existing research, which demonstrates that more internalized, personally endorsed reasons for regulating prejudice lead to less prejudice (e.g., Devine et al., 2002; Hausmann & Ryan, 2004; Moskowitz et al., 1999; Plant & Devine, 1998). Introjected and external regulations were not related to racism or sexism. Given that these latter regulatory styles are subject to social and situational influence, it makes sense that these individuals are sometimes able to marginally suppress or manage prejudice on explicit measures. However, because their nonprejudice is not freely chosen, these subtypes fail to display egalitarian attitudes through negative associations with prejudice. The lack of association between external motivation and racism has also been reported in past research (i.e., Plant & Devine, 1998). Amotivation was positively associated with both racism and sexism. This is unsurprising given that amotivation depicts an inability to regulate behavior and goal pursuit.

### *Concurrent Validity*

*Internal/external motivation to respond without prejudice.* The three self-determined dimensions of motivation to be nonprejudiced displayed moderate positive associations with Plant and Devine's (1998) IMS, suggesting concurrent validity of the internal construct but also indicating that the self-determined subscales of the MNPS measure something other than what is measured



**Figure 2** Standardized Factor Loading Estimates and Item Uniqueness Values From the Confirmatory Factor Analysis of Motivation to Regulate Prejudice.  
 NOTE: All parameters are significant at the .001 level. No post hoc respecifications were required.

by the IMS. Presumably, the items on the MNPS isolate specific motivational distinctions that the IMS overlooks. A review of Plant and Devine’s IMS items reveals that they do indeed reflect internal standards but are

vague in terms of the motivational source of these standards (e.g., “I am personally motivated by my beliefs to be nonprejudiced”). It seems that the intrinsic, integrated, and identified reasons presented in the current

**TABLE 3** Correlations Between Dimensions of Motivation to Be Nonprejudiced, Prejudice, and Related Constructs

		<i>IM</i>	<i>Integ</i>	<i>Iden</i>	<i>Intro</i>	<i>Ext</i>	<i>Amo</i>	<i>SDRPI</i>
<i>Construct Validity: Explicit and Implicit Prejudice</i>								
Racism	<i>Study 1</i>	-.11	-.15*	-.29***	-.07	.15*	.25***	-.30***
	<i>Study 2</i>	-.27***	-.34***	-.20**	-.11	.13	.20**	-.38***
Sexism	<i>Study 1</i>	-.14*	-.01	-.17**	-.11	-.03	.18**	-.15*
	<i>Study 2</i>	-.12	-.26***	-.14*	-.12	.05	.23***	-.25***
Affective Prejudice	<i>Study 3</i>	-.22 <sup>§</sup>	-.44***	-.41***	-.07	.09	.33**	-.45***
Race IAT	<i>Study 3</i>	-.40***	-.38**	-.35**	-.09	.06	.40***	-.53***
<i>Construct Validity: Other Related Constructs</i>								
Fear of negative evaluation	<i>Study 1</i>	.06	-.11	-.01	.31***	.30**	.08	-.18**
Internal locus control	<i>Study 1</i>	-.03	.15*	.13	-.19**	-.22***	-.22***	.25***
Conservatism	<i>Study 1</i>	.03	-.08	-.18**	.15*	.20**	.10	-.16*
<i>Concurrent Validity</i>								
IMS (Plant & Devine, 1998)	<i>Study 2</i>	.34**	.38***	.36**	.20	.07	-.15	.36**
EMS (Plant & Devine, 1998)	<i>Study 2</i>	-.07	-.01	-.08	.21	.35**	.13	-.26*
Global self-determination	<i>Study 2</i>	.29**	.38***	.17	-.22*	-.19*	-.33***	.52***

NOTE: *IM* = intrinsic motivation; *Integ* = integrated regulation; *Iden* = identified regulation; *Intro* = introjected regulation; *Ext* = external regulation; *Amo* = amotivation; *SDRPI* = Self-Determined Regulation of Prejudice Index; IAT = Implicit Association Test; IMS = Internal Motivation Scale; EMS = External Motivation Scale.

\*\*\**p* < .001; \*\**p* < .01; \**p* < .05; <sup>§</sup>*p* < .10.

measure capture precise variations in internalized motivation to be nonprejudiced. Unsurprisingly, the self-determined subscales of the MNPS were uncorrelated with the EMS. The three non-self-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 external regulation from an SDT perspective. That none of the other non-self-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 self-determined and non-self-determined perspective.

*Global motivation.* It is of further conceptual interest to note that associations with global self-determination were positive for the three self-determined forms of motivation to be nonprejudiced and negative for the three non-self-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 specific aspect of self-regulation (e.g., nonprejudice).

In sum, Study 2 depicted an adequate, well-fitting model of motivation to regulate prejudice grounded in SDT. That is, according to all relevant and substantively meaningful fit indices discussed herein, the imposed hypothesized model fit the covariance matrix observed in the sample. Theoretically, CFA results lend evidence to the conceptual validation of the six-dimensional structure of motivation to be nonprejudiced. In more practical terms, it appears that people may indeed be regulating their prejudice for six distinct classes of reasons. It also appears that different motivational orientations have significant associations with explicit prejudice, suggesting that the level of self-determination may play a role in predicting prejudice. Overall, subscales of the MNPS display unique associations with related constructs, which helps in highlighting the relevance of such a classification of prejudice regulation.

### STUDY 3

In Study 3, participants scoring high and low on 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? In complement to the previous two studies, the main purpose of Study 3 was to assess both explicit and implicit racial bias among those with high and low self-determined regulation of prejudice. Because of the 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, we 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. Akin to the predictions of Studies 1 and 2, 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, whereas introjected and external regulation would be unrelated to prejudice, and amotivation would be positively associated with both explicit and implicit prejudice.

## Method

### *Participants and Procedure*

Participants ( $N = 150$ ) completed the MNPS early in the academic year. A global SDRPI was calculated. SDRPI scores were subjected to a tercile split, and only those from the top and bottom terciles were considered for participation. Thus, 4 to 8 weeks after completing the MNPS, those from the top and bottom terciles, that is, those high and low 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 agreed to partake 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, because the goal of the current study was to assess differences in racial prejudice toward this target group.

### *Measures*

*Motivation to be nonprejudiced.* The newly validated MNPS was administered to students 4 to 8 weeks before the current lab study took place. For the present sample, Cronbach's alpha ranged from .85 to .91.

*Affective 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, to complement the symbolic racism measured in Studies 1 and 2 as well as the implicit racial bias measured in the current study, the affective component of prejudice toward Black people was assessed. 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*). 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). On 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 task and encouraged participants to respond as quickly as possible without making errors. The Race IAT was administered on a Pentium 4 computer using Windows XP.

**TABLE 4** Prejudice as a Function of Motivation to Regulate Prejudice

Type of Prejudice	High Self-Determined		Low Self-Determined		F	df	Partial Eta <sup>2</sup>
	M	SD	M	SD			
<i>Explicit prejudice</i>							
Symbolic racism							
Study 1	33.74	6.19	37.93	6.44	21.18***	1,189	.10
Study 2	41.24	8.66	47.83	9.82	21.16***	1,166	.11
Affective prejudice	39.00	18.15	52.07	15.73	8.97*	1,60	.13
<i>Implicit prejudice</i>							
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
Errors in congruent trials (%)	4.54	3.74	3.36	3.43	1.64	1,60	
Errors in incongruent trials (%)	5.74	3.64	7.84	6.16	2.78	1,60	
IAT score	107.10	121.40	268.20	173.56	18.40***	1,60	.24

NOTE: Theoretical range for symbolic racism: 16 to 107; for affective prejudice: 20 to 180. IAT = Implicit Association Test.  
\* $p < .01$ ; \*\* $p < .005$ ; \*\*\* $p < .0001$ .

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, Banaji, and Nosek, (2003), where response latency is recorded (in milliseconds) after the presentation of each stimulus until the correct response is specified. The IAT has been shown to display good reliability and good convergent and discriminant validity (Greenwald et al., 1998, 2003), as well as some predictive validity (McConnell & Leibold, 2001).

## Results and Discussion

### Level of Explicit Prejudice

*Symbolic racism.* Using data from Studies 1 and 2, a between-subjects analysis of variance (ANOVA) compared those with highly self-determined and less self-determined regulations of prejudice in terms of their symbolic prejudice scores. These results are presented in Table 4. For both samples, a main effect of motivation was observed, such that those with a highly self-determined regulation of prejudice displayed significantly less racism than those with less self-determined pre-judice regulation.

*Affective 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 (see Table 4).

Correlations between the six dimensions of motivation to regulate prejudice and affective prejudice were also assessed (correlations with symbolic prejudice were presented in

Studies 1 and 2). 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, whereas amotivation displayed a moderate positive association with this variable (see Table 3).

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 results of Studies 1 and 2, extending the predictive validity of motivation to regulate prejudice beyond symbolic 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. Although 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

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.

To first examine the classic IAT effect for both self-determined and non-self-determined individuals, scores on congruent and incongruent trials were subjected to a repeated-measures analysis. Not surprisingly, both groups displayed the typical IAT effect (i.e., shorter

latencies for congruent trials);  $t_{(27)} = -8.18$ ,  $p < .0001$ ,  $\eta^2 = .71$ , for the non-self-determined group, and  $t_{(33)} = -5.14$ ,  $p < .0001$ ,  $\eta^2 = .44$  for the self-determined group. However, this effect was much stronger among those with non-self-determined regulation of prejudice compared to those with self-determined regulation of prejudice,  $F_{(1,60)} = 16.06$ ,  $p < .0001$ , partial  $\eta^2 = .21$ .

For the focal analysis, IAT scores (in ms) 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 compared to those with low self-determination to regulate prejudice (see Table 4). 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 (see Table 4). Thus, the larger IAT effect observed among those with less self-determined prejudice regulation stems from weaker associations between Black-Pleasant and White-Unpleasant stimuli.

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 4). This may be because less self-determined participants 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 (see Table 4) revealed that individuals with high and low self-determined regulations of prejudice did not display significantly different numbers of errors on congruent or 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. 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, whereas 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 (see Table 3). 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 our hypotheses; those with a more self-determined, internalized regulation of prejudice were more successful in reducing their prejudice at the implicit level. Thus, even when the measure was difficult to control, these individuals were able to successfully regulate racial bias. Based on the foundation of SDT, the success of this regulation lies in the fact that it stems from the autonomous operation and expression of the self, whereas the relative increase in implicit racial bias among those with a non-self-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).

## GENERAL DISCUSSION

Findings from this set of studies speak to the usefulness of considering the nature of self-determination in describing motivation to control prejudice. Indeed, the taxonomy of motivation to be nonprejudiced was successfully validated, thus deepening our understanding of the motivation underlying prejudice regulation. Beyond simply dichotomizing motivation to control prejudice as internal or external, the present studies actually describe the absence of regulation (amotivation) and the presence of alternative forms of prejudice regulation (e.g., integrated, introjected) and offer reliable items to measure them. Although Devine et al. (2002) describe amotivation or the absence of prejudice regulation as that which is low in both internal and external motivation, the current conceptualization of amotivation measures it directly. The same can be said for Plant and Devine's (1998) high internal, high external dimension: It does not measure introjected regulation per se but merely a combination of internal and external reasons for suppressing prejudice (this is not introjection). Overall, the MNPS is argued to be more useful and elaborate than Plant and Devine's internal and external motivation scales because it directly targets more types of motivation

rather than assuming a lack of motivation by negation of other types or by inferring new types based on combinations of extant types.

Results support our contention that the assessment of motivation to regulate prejudice is a key variable in the prediction of successful prejudice regulation and reduction. Across three studies, four measures of prejudice, and two levels of consciousness, our findings indicate that the more self-determined one is in the regulation of prejudice, the more likely s/he will be successful in curbing it. Applying the broad framework offered by self-determination theory, the reason for this lies in the premise that internalized (i.e., self-determined) motivation to be nonprejudiced is more effectively regulated; it is more consistently maintained in the face of external barriers and in the absence of external incentives. To the extent that goal direction is autonomous, it is theorized to be enduring. After all, a highly self-determined regulation of prejudice represents an utmost expression of self—a demonstration of one's fundamental values and attitudes at the elemental level of the self. This is the level of unconstrained, uninhibited, autonomous self-regulation. Behaviors and attitudes reflective of this type of motivation are likely to persist through time and across situations. It thus makes sense that the three forms of self-determined motivation to regulate prejudice are reliably associated with reduced explicit and implicit prejudice; these individuals are freely choosing to be nonprejudiced.

Addressing the less tangible associations among the non-self-determined forms of extrinsic motivation (i.e., introjected and external regulation), classic SDT maintains that non-self-determined motivation is subject to situational and external influence, and therefore, related behaviors and attitudes may be harder to predict. It seems reasonable that less self-endorsed motivation is less stable. Once the external pressure controlling the motivation is removed, the regulation ceases. For instance, it has been documented that those with external motivation to respond without prejudice gave low-prejudiced responses when in the presence of nonprejudiced others; however, they responded with racial bias when reporting their attitudes in private (Plant & Devine, 1998). Evidence also suggests that such individuals are more likely to infringe their personal standards of nonprejudice (Plant, Devine, & Brazy, 2003). Given that non-self-determined prejudice regulation is experienced as controlled motivation, the degree to which prejudice is expressed or regulated may be situation specific; that is, it may depend on the presence or absence of the control in question. It would certainly be interesting to pursue this line of questioning in future studies.

Amotivation appears to play a very notable role in prejudice. Across all three studies, amotivation displayed

positive associations with both explicit and implicit prejudice. Our amotivation dimension represents an absence of prejudice regulation, just as SDT defines amotivation as the absence of behavioral regulation (Deci & Ryan, 2002). In contrast to intrinsic motivation and the various forms of extrinsic motivation, amotivation reflects a perceived helplessness vis-à-vis the activity in question and results in its abandonment (Deci & Ryan, 1985, 2002). Thus, prejudice surfaces because individuals are not able to see the usefulness in attempting to thwart prejudiced feelings and responses (cf. helplessness), or similarly, they lack the behavioral and attitudinal organization required to inhibit prejudice. Based on our conceptualization and the tenets put forth in SDT, the amotivated individual feels as though his/her prejudice arises from factors that are outside his/her control. Not surprisingly then, this lack of efficacy is reflected in an inability to control prejudiced responses. In line with this reasoning, our finding that amotivation is associated with both implicit and explicit prejudice is supported by previous self-regulation research which suggests that those who are low in motivation to respond without prejudice express race bias because they have not developed the personal incentive needed to begin the prejudice regulation process (Devine & Monteith, 1999; Devine, Plant, & Buswell, 2000; Monteith, Ashburn-Nardo, Voils, & Czopp, 2002). Ryan (1995) also highlights that amotivation ensues from devaluing. Although the identified regulation of prejudice entails placing value and importance on egalitarianism, the reverse is true of amotivation. Many individuals must overcome years of exposure to biases and stereotypical information to overcome prejudice. For those who are not motivated to engage in this process of overcoming, prejudice is free to emerge without inhibition. Because of this, the consideration of amotivation in identifying those most likely to falter in prejudice reduction might be a worthwhile future research avenue. Also, given that recent evidence suggests that amotivation is a multidimensional construct (Legault, Green-Demers, & Pelletier, 2006), it may be equally interesting to identify additional factors that lead to an absence of motivation to regulate prejudice.

In addition to its fundamental contribution to our knowledge of motivation to regulate prejudice, this research may also have important new implications for self-determination theory. First, the application of SDT's motivational taxonomy to the domain of attitudes has not previously been explored. Conventionally, SDT offers a motivational explanation for behavior. However, to the extent that individuals maintain goals for being and not only goals for doing, the consideration of motivation "to be" could highlight an intermediary step in understanding the motivation to behave (cf. the attitude-behavior link). Thus, one of the major implications of this particular set



of studies is that we propose that attitudes, not just behaviors, can be more or less self-determined. Given the findings presented herein, a self-determination theory of attitudes (such as nonprejudice or egalitarianism) may be feasible. A second implication of the current set of studies is that it may offer a way to understand the link between motivation and automaticity. Just as the rehearsal of goals and behaviors can eventually render them automatic, and effortful processing can become effortless (Gollwitzer & Bargh, 2005; Hassin, 2005), so too might persistent adherence to values such as egalitarianism lead to automatization of the attitude (e.g., Moskowitz et al., 1999). The process of self-determination may offer an explanation for this trend; as motivations become internalized, they become chronic, consistent, and less effortful, and thus may also become automatized. This may be why those with self-determined prejudice regulation display such little prejudice at the implicit level. Interestingly, evidence suggests that automaticity is stronger for those with chronically autonomous orientations compared to those without (Levesque & Pelletier, 2003).

Given the many benefits of self-determined motivation (e.g., Deci & Ryan, 2002), there is also a desire to understand the conditions that give rise to it. Self-determination theorists suggest that self-determined motivation may develop from less self-determined motivation given the right environmental circumstances. Because the effective regulation of prejudice appears to be a complex process of self-determination, there is a need to understand the individual and social antecedents that give rise to motivation to be nonprejudiced. The function of groups has been addressed as playing an important role in this development (Crandall et al., 2002). Groups establish behavioral norms and standards, are influential in forming individuals' beliefs, and manipulate the kind of information that individuals acquire (e.g., Ryan, Robinson, & Hausmann, 2004). The elimination of prejudice rests partly on the instillation of personal and social norms that discourage prejudice and negative stereotyping (Bodenhausen & Macrae, 1998). On understanding that motivation is important in the development, experience, and expression of both prejudice and nonprejudice, it becomes just as clear that various personal and social antecedents may give rise to such motivation. If we are to understand the ways in which prejudice is reduced, then we must understand its precursors in sequence. Because it appears that self-determined motivation to be nonprejudiced is related to less biased attitudes and because past research suggests that self-determined motivation can be learned, it is our hope that the identification of factors that give rise to self-determined egalitarianism will bring us closer to the application of motivational and regulatory strategies to reduce and eliminate prejudice.

## NOTE

1. The global self-determined regulation of prejudice index was computed 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). Weighted scores are then summed and divided by the number of variables in the equation. 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, whereas weights for the non-self-determined forms were specified as -1, -2, -3.

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