

Stereotype Threat Created by Dissociative Groups

by

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A Thesis submitted to the Faculty of Graduate Studies of
The University of Manitoba
in partial fulfilment of the requirements of the degree of

Doctor of Philosophy

I.H. Asper School of Business

University of Manitoba

Winnipeg

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Abstract

Research on consumer behavior shows that consumers tend to avoid products associated with dissociative groups (e.g. White and Dahl 2006). In this research, I show that stereotypes that associate products with dissociative groups can pose a threat to consumers, thus adversely affecting their performance when using these products. Results of this research suggest that consumers facing the threat of dissociative groups show low ability in using the products related to these groups. Specifically, they report low competence when using these products and shun opportunities to blame their poor performance on external or unstable barriers to success thus signaling that they have low ability regarding the use of these products. Assuring consumers that they do not belong to dissociative groups by acknowledging that they lack ability in the domains stereotypically related to these groups attenuates the effect of the threat thus enhancing performance. Results also show that stereotype threat created by dissociative groups is accompanied by a fear of rejection from one's ingroup. A method that helps reduce fear of rejection (i.e. money priming) helps in attenuating the effect of the threat on performance.

Acknowledgement

This dissertation is the product of five years of hard work and dedication. I was very lucky to have had the full support of my committee members, faculty and colleagues at the Asper School of Business, and my friends in Winnipeg.

I would like to thank all of my committee members for putting the time and effort to guide my work on this dissertation. I would like express my deepest gratitude to my “academic parents” Dr. Sergio Carvalho and Dr. Kelley Main for believing in me and for providing me with the academic and moral support throughout all stages of the PhD program. After graduation, it will be weird not being able to seek their advice on a daily basis – however I am sure that I will continue to bother them for years to come!

I would like to acknowledge the tremendous support of the faculty and staff of Asper School of Business. I am grateful to Dr. Malcolm Smith whose door is always open for PhD students seeking research and teaching advice.

I am very thankful for having great colleagues in the graduate program at the Asper School of Business. I would like to thank all the graduate students who volunteered to help me conduct the experiments. I would like to thank: Hamed Aghakhani, Jennifer Bozeman, Hesham Fazel, Wenxia Guo, and Catherine Maksymuik.

I would also like to thank my Winnipeg family: Eric Karaoylas, Camilo Hurtado, James Frank, and Jeff Delorme. Thanks for putting up with my grumpy attitude during the busy times of the year, and thanks for tolerating the presence of gift boxes all over the house. You are the best!

This research was supported in part by grants to Dr. Kelley J. Main and Dr. Sergio Carvalho from the Social Sciences and Humanities Research Council of Canada.

Dedication

This dissertation is dedicated to my family: to my parents Fatima and Abdulla for their endless love and sacrifice and to my siblings Khaled, Shereen, Hiba, and Hani for always being there for me.

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Chapter I: Introduction

Research on consumer behaviour that signals social identity goals has gained momentum in the last few years (Berger and Heath 2007; Ward and Broniarczyk 2011; White, Argo, and Sengupta 2012; White and Dahl 2007). This growth is timely as in the marketplace an increasing number of marketing strategies are beginning to blur the boundaries of group membership. Blurring social boundaries can be threatening especially to people who belong to social groups that are negatively stereotyped. For example, Lee, Kim, and Vohs (2011) found that women feel anxious in consumption contexts in which their gender group is negatively stereotyped (e.g. financial services and automobile repairs). Research suggests that stereotypes of incompetence about one's ingroup add pressure on group members who strive to prove that the stereotype is inaccurate resulting in poor performance in the stereotyped domain (Steele 1997). Research also shows that when threatened, members of stereotyped groups either try to show that they have ability in the stereotype related domain (Stone 2002) or simply avoid situations where they may be stereotyped as incompetent (Lee et al. 2011).

Existing research has looked at the effects of stereotype threat on members of groups stereotyped to lack ability in domains in which these members aspire to excel (e.g., women who want to be good at mathematics). To my knowledge, no research has considered the effect of stereotype threat on group members in domains associated with dissociative groups (e.g., men who avoid domains that might associate them with feminine traits). A dissociative group is an out-group that consumers actively want to avoid being associated with (Englis and Solomon, 1995). Understanding the reactions of

such group members provides an opportunity to uncover a different kind of stereotype threat that occurs in the context of dissociative groups.

Consider the case of Jim, a university student living on campus. Jim suffers from moderate acne, and his dermatologist suggested an anti acne regimen to be followed several times a day. Jim has always assumed that only women have the ability to be careful enough to follow skin care regimens. He could not remember any skin care advertisement that featured a man. Thus, feeling afraid that he could be seen as effeminate by his peers, Jim purposefully ends up being careless about his skin care regimen.

Jim's experience is an example of how consumers face situations that may threaten their own self-image. Such situations might not only shape consumers preference for stereotype-related products, but might also affect their performance in using these products. Jim's experience is only one example among many others in which consumers attempt to protect their self-image by behaving in ways to distance themselves from stereotypes related to dissociative groups. In this research, I propose that stereotypes linking products to dissociative groups trigger stereotype threat, leading to a negative consumption experience. Given that consumers may not be able to avoid products linked to dissociative groups, understanding how consumers perform using these products is important to practitioners and researchers alike.

This research combines literature on stereotype threat and dissociative group influence to examine how consumers react to marketing strategies that trigger a threat to self. Five studies investigate whether consumers feel threatened when using products

stereotypically linked to dissociative groups and whether they avoid showing high ability in using such products. These studies also aim to identify methods that can potentially attenuate the effect of the threat. In particular, study one establishes that stereotype threat takes place in dissociative domains. Studies two and three establish that when people face the threat of being associated with dissociative groups, they underperform to show that they lack ability in the related domain. Study four shows that signaling to consumers in advance that they are expected to be incompetent in the domain linked to a dissociative group reduces the effect of the threat. Study five shows that the threat of dissociative groups is accompanied with a fear of rejection from one's ingroup. This study also shows that money priming (a method that reduces fear of rejection) diminishes the effect of the threat.

This research extends the knowledge on stereotype threat by investigating how consumers react to stereotypes of incompetence when adhering to such stereotypes can protect their social identity. In other words, this research looks at situations where being viewed as incompetent is desirable; such situations have yet to be explored by the stereotype threat literature that has extensively investigated situations where being competent is imperative to a person's self-worth (Aronson et al 1999).

More specifically, this research identifies a self-presentation strategy that is different from the self-handicapping strategy used by consumers in the traditional stereotype threat domains. The self-handicapping literature postulates that individuals who strive to show that they have high ability report or build unstable (e.g., exerting low effort) or external (e.g., reporting that the exam is biased) barriers to successful performance when they expect to fail in the task at hand (Jones and Berglas 1978). In the

stereotype threat situation investigated in the current research, consumers purposefully underperform to avoid being viewed as having high ability in domains linked to dissociative groups. That is, this research shows that in domains in which dissociative groups are stereotyped as having high ability, consumers not only underperform, they also strive to show low ability by giving the impression that they have no unstable or external barriers to successful performance, suggesting their low performance is solely due to a lack of ability in the focal domain. Previous research in marketing has shown that consumers negatively evaluate products linked to dissociative groups (White and Dahl 2007). However, consumers might not always be able to walk away from products/situations that might associate them with such undesired groups (e.g., a child who has to wear braces). This research adds to the marketing literature on dissociative groups by furthering our understanding of how consumers use such products and how they try to affirm their identity in such consumption situations.

Previous research has shown that stereotype threats experienced by members of negatively stereotyped groups are generally accompanied with a fear of rejection from outgroup members (Aronson and Inzlicht 2004). This dissertation illustrates that stereotype threat created by dissociative groups can be related to fear of rejection from one's ingroup. The current research is likely the first to identify that dissociative groups may be threatening because consumers fear being rejected by their ingroup if they are found to share traits with dissociative groups. This finding furthers our understanding on the nature of stereotype threat created by dissociative groups and on how it differs from stereotype threat in aspirational group domains.

In the next chapter, I review the literature on stereotype threat and dissociative group influence that leads to the prediction that stereotype threat can be created by dissociative groups. I identify the potential process for the threat expected to take place and propose potential moderators of this threat.

Chapter II: Literature Review

In this section I review the relevant literature on stereotype threat in aspirational group domains. I also review the literature on dissociative group influence and suggest that stereotype threat can take place in dissociative group domains. I propose five hypotheses related to threat taking place in such domains.

Stereotype Threat

Stereotypes are highly prevalent in our everyday interactions. Schneider refers to stereotypes as “the common colds of social interaction –ubiquitous, infectious, irritating, and hard to get rid of” (2004, p1). A vast amount of research has shown that negative stereotypes about social groups can threaten group members. Stereotype threat is the extra pressure associated with belonging to a group stereotyped to be incompetent in a certain domain. This threat is pronounced when such a person becomes aware that he/she might behave in a manner that confirms that stereotype (Steele 1997; Steele and Aronson 1995; Steele, Spencer, and Aronson 2002).

Members of groups stereotyped to lack ability in certain domains face stereotype threat when: (1) they engage in a task that they perceive as diagnostic of their ability in these domains (Steel and Aronson 1995), (2) they are primed with their group identity (Shih, Pittnsky, and Ambady 1999), and/or (3) they are a minority among other outgroup members when engaging in tasks related to these domains (Inzlicht and Ben-Zeev 2000). Individuals who do not belong to a group that is perceived as incompetent face stereotype threat when they are told upfront that other group members have superior abilities

(Aronson et al. 1999). Stereotype threat has been shown to impair people's performance in several domains.

Stereotype threat impairs students' academic performance. For example, since women are stereotypically viewed to be less competent in math than men, reminding female students of that stereotype or informing them that the test is diagnostic of their ability in math leads them to perform poorly (Ben-Zeev, Fein, and Inzlicht 2005; Davies, Spencer, Quinn, and Gerharstein 2002; Johns, Schmader, and Martens 2005; Keller 2002; Johns, Greensberg, and Schimel 2006; Schmader and Johns 2003; Sekaquaptewa and Thompson 2003; Spencer, Steel, and Quinn 1999). Stereotype threat is also shown to impair the performance of African Americans on verbal tests (Steele and Aronson 1995) and remote association tests (Blascovich et al. 2001) when reminded that the test is diagnostic of their innate ability in these domains. Stereotype threat affects the performance of psychology students on mathematics and logical reasoning tests (Croizet et al. 2004) and male psychology students on affective processing tasks (Leyens, Desert, Croizet, and Darcis 2000). In brief, stereotype threat has been shown to negatively affect people's performance in the domains in which their group is stereotyped to be incompetent.

Stereotype threat has also been shown to negatively affect people in non-academic settings. Women show less interest in stereotypically masculine occupations (Davies et al. 2002) and are more likely to avoid leadership roles after viewing commercials featuring stereotypical gender roles (Davies, Spencer, and Steele 2005). Caucasians perform worse in sports when told that the task is diagnostic of their natural athletic ability (Stone et al. 1999). In a consumer context, stereotype threat makes

consumers who belong to a negatively stereotyped group more sensitive about the service provider's group membership, thus causing them to be more reluctant to purchase a service if the provider belongs to an outgroup as opposed to their ingroup (Lee et al. 2011).

Previous research has only shown the occurrence of stereotype threats in domains in which individuals aspire to be successful. For example, Aronson et al. (1999) showed that only students who believe that math is important to their self-concept were affected by stereotype threat. This is explained by the fact that people fear being devalued in domains that are self-definitional (Steele 1997). To show the effect of stereotype threat, researchers recruited only participants who believed that the stereotype-related domain was important to their self-concept including those who had a history of high achievement in the stereotype-related domain (Davies et al. 2002; Martens et al. 2006; Schmader and Johns 2003; Spencer et al. 1999) or those who indicated that they highly identify with that domain (Ben-Zeev et al. 2005; Davies et al. 2002; Leyens et al. 2000; Stone et al. 1999). However, no research has looked at how people are affected by stereotype threat in domains that they want to be dissociated from. For example, when taking a mathematics exam, a student who does not identify with the mathematics domain and believes that mathematics is for nerds (a group that s/he is trying to avoid) is not likely to have the same experience as a student who highly identifies with mathematics. To better understand such situations it might be helpful to refer to the literature on dissociative group influence.

Dissociative Group Influence

Social groups constitute a reference base that influences people's behavior (Turner 1991). People are motivated to join groups that are socially valued and avoid groups that are not socially valued (Cialdini et al. 1976; Tajfel and Turner 1979). Consumers particularly try to avoid being seen as members of dissociative groups; they show weaker self-brand connection and more negative evaluation of products associated with those groups than products associated with other neutral outgroups (White and Dahl 2006, 2007). Consequently, consumers are less likely to choose products linked to dissociative groups (Berger and Heath 2008, White and Dahl 2006). For example, to avoid being associated with women, men were less likely to choose a steak when it was called "ladies cut" than when it was called "chef's cut" (White and Dahl 2006). Further, consumers were more likely to report engaging in healthier behaviors when risky behaviors were linked to dissociative groups (Berger and Heath 2008; Berger and Rand 2008). For example, freshman students reported lower alcohol consumption when an advertisement associated drinking alcohol with graduate students (Berger and Rand 2008). Consumers with low collective self-esteem were even willing to distance themselves from their own social group when they became aware of negative information about their ingroup (White and Argo 2009).

Research on dissociative group influence has yet to investigate whether dissociative groups create a stereotype threat to consumers and how this threat affects their performance when using products stereotypically linked to such groups. Investigating the effect of threat on performance using products is important given that performance is an under investigated objective measure of consumers' experiences. Existing literature has extensively looked at more subjective measures including, but not

limited to, product evaluation (e.g. White and Dahl 2007). Besides, understanding the effect of the threat on performance is imperative to situations where avoiding such products is not an option (e.g. in the example outlined previously, Jim's only option was to follow the skin care regimen if he wanted to get rid of his acne). Such research provides an opportunity to understand how: (1) stereotype threats that take place in dissociative domains are different than those that take place in aspirational domains, and (2) consumers can affirm their identity when they use products associated with dissociative groups.

The current research proposes that products stereotypically associated with dissociative groups can create stereotype threat for consumers in situations where their performance using certain products is perceived as diagnostic of their ability in domains linked to those groups. Stereotype threat in aspirational domains takes place when members of negatively stereotyped groups expect to be excluded or socially devalued because of their current negative social identity (Inzlicht et al. 2009). However, the proposed threat created by dissociative groups may be associated with a fear of being viewed as members of negatively stereotyped groups as a result of engaging in behaviors stereotypical of such groups. Thus, individuals try to avoid stereotypical behaviors linked to dissociative groups in order to avoid having a negative social identity. Theories on stereotype threat state that only people who identify with a certain domain but belong to a group that is stereotyped as lacking the ability in that domain experience threat. This threat, in turn, negatively affects their performance in that aspirational domain (Steele et al. 2002). For example, the stereotype threat literature would predict that Jim will have a negative experience in following the skin care regimen only if he feels that the skin care

domain is important to him (high identification). This research goes beyond this point by showing that consumers also feel threatened in domains with which they do not want to be associated. That is, a stereotype threat also occurs in situations where showing high ability in certain domains links consumers to dissociative groups. Consequently, consumers under this kind of stereotype threat tend to report less competence and perform poorly when using products linked to dissociative groups. For example, if Jim feels that showing high ability in following a skin regimen will make him look effeminate, he will try to show lower ability in that domain by telling his friends that he has less competence in that domain and by performing poorly when using the skin care products. In this case, Jim does not need to be highly identified with the skin care domain to experience the stereotype threat. As stereotype threat is felt when people perceive that the task is diagnostic of their ability (e.g. Steele and Aronson 1995), consumers who associate certain products with dissociative groups are more likely to be negatively affected by stereotype threat when performance using these products is perceived to be diagnostic of their ability (threat present) than when it is not perceived to be diagnostic of their ability (threat absent). Stated formally:

H1a: Consumers who link a product to a dissociative group will report less competence and perform more poorly when performance using the product is perceived to be diagnostic of their ability in the dissociative domain than when it is not perceived to be diagnostic. Consumers who do not link the product to a dissociative group are not likely to be influenced by diagnosticity.

Stereotype threat created by a dissociative group is expected to motivate consumers facing threat to show low ability which can be reflected in their tendency to

report less competence in the domain related to the dissociative group. This motivation will eventually lead to impaired performance. Thus, it is expected that reported competence mediates the relationship between threat and performance.

H1b: Reported competence mediates the relationship between stereotype threat created by dissociative groups and performance.

In this dissertation, it is proposed that stereotype threat created by dissociative groups makes consumers fear being associated with these groups. Thus, consumers report less competence and underperform using products related to dissociative groups. This threat is motivated by people's intention to show low ability in stereotype-related domains, contrary to observations related to stereotype threat in aspirational domains. In aspirational domains, stereotype threat is motivated by people's intention to avoid showing low ability (Stone 2002). Then, the strategies that people use to deal with the stereotype threat differ depending on the type of threat. The current literature suggests that stereotype threat in aspirational domains leads people to engage in self-handicapping strategies to cope with threat (e.g. Keller 2002). Alternatively, in dissociative domains, it is expected that people will cope with stereotype threat by engaging in strategies that are the reverse of self-handicapping. I further elaborate on this difference next.

Self-handicapping

Self-handicapping is a self-presentational strategy whereby people build barriers to successful performance in order to be able to attribute any expected failure to these self-imposed barriers (Berglas and Jones 1978; Jones and Berglas 1978). There are several strategies that allow the self-handicapper to attribute failure externally (i.e.

outside the control of the person) or to unstable factors (i.e. not fixed and changeable) thereby avoiding low ability attributions including reporting alcohol use and sleep deprivation (Jones and Berglas 1978). One strategy used by self-handicappers is withdrawal of effort (Jones 1989), which has been widely used as a measure of self-handicapping (Pyszczynski and Greenberg 1983; Rhodewalt, Saltzman, Wittmer, 1984; Stone 2002; Tice 1991; Tice and Baumeister 1990). Whereas failure that results from a lack of effort may not be viewed as low ability (Jones, 1989), failure following high effort can lead to attributions of low ability (Covington and Omelich 1979a, 1979b). For example, a student who fails an exam even after studying hard can be viewed as having lower innate ability than a student who fails because s/he did not study for the exam.

People facing stereotype threats in aspirational domains usually engage in self-handicapping strategies. For example, Steele and Aronson (1995) asked African American participants to take a standardized verbal exam (a domain that African Americans are stereotyped to be incompetent in), and found that participants who were made aware that the exam was diagnostic of their ability (threat present) were more likely to self-handicap than participants who were not made aware that the test was diagnostic of their ability (threat absent). That is, participants in the threat present condition were more likely than participants in the threat absent condition to report problems focusing due to causes unrelated to the exam, including less sleep the night before and life stress. Participants were also more likely to report that standardized exams are generally biased when stereotype threat was present than when stereotype threat was absent. Stone (2002) found that participants facing threat purposefully built handicaps to justify expected poor performance. In his study, participants were given a chance to practice before a sports

task and were told that the experimenter would keep track of the time they took to practice. Results showed that participants facing stereotype threat practiced for less time than participants facing no threat. Keller (2002) used a similar self-handicapping measure to that used by Steele and Aronson (1995) and found that self-handicapping mediated the relationship between stereotype threat and performance.

Taken together, it is evident that participants facing stereotype threat in aspirational domains are concerned about demonstrating high ability in those domains even when they expect to perform poorly. Consequently, they self-handicap by either reporting they experienced barriers (e.g. lack of sleep) or by building barriers (e.g. practicing for less time) to successful performance. Conversely, as hypothesized earlier, in domains linked to dissociative groups, people facing stereotype threat are concerned with demonstrating low ability in those domains. Thus, individuals want to show that they performed poorly despite the fact that they did not face any barriers to a successful performance. In other words, it can be expected that people facing a stereotype threat created by dissociative groups will cope with the threat by engaging in a self-presentational strategy that will lead others to view them as lacking ability in the stereotyped domain. To my knowledge, the existing literature has not yet investigated this type of self-presentational strategy. For the purpose of this dissertation, I will refer to this strategy as “reverse self-handicapping”. Reverse self-handicapping is defined as a self-presentational strategy in which individuals present themselves as having low ability in a dissociative domain by implying to others that they do not have any external or unstable barriers to successful performance and that their poor performance is solely due to a lack of ability in that specific domain. For example, if given a chance to train, participants

facing stereotype threat created by a dissociative group are likely to train for longer time so when they perform poorly they can attribute the poor performance to low ability. Thus, reverse self-handicapping is expected to mediate the effect of stereotype threat created by dissociative groups on performance.

H2a: Consumers who link a product to a dissociative group are more likely to reverse self-handicap when performance using the product is perceived to be diagnostic of their ability in the dissociate domain than when it is not.

H2b: The relationship between diagnosticity and performance is mediated by reverse self-handicapping.

In this research, it is suggested that people engage in reverse self-handicapping to signal low ability in domains associated with dissociative groups. Showing low ability in dissociative domains should indicate that the person is not a member of that group. In order to reduce the threat of being associated with a dissociative group, consumers need assurance that they are not viewed as part of that group. This assurance can take place by signaling to consumers that they are viewed as lacking ability in the domain in which dissociative group members are stereotypically viewed as having high ability. For example, if Jim associates high ability following skin care regimens with women and effeminate men, he should experience the effect of the stereotype threat when he has to follow the regimen himself. However, if his friends disclosed to him that they doubt that he has the ability to use skin care products (thus implying that he is seen as stereotypically masculine), he should feel less threatened.

H3: Consumers who link a product with a dissociative group and perceive that performance in using such a product is diagnostic of their ability in the dissociative domain are likely to report higher competence and perform better when assured that they do not have high ability in the dissociative domain than when not assured so.

In the next section, I will identify one reason consumers may be motivated to distance themselves from dissociative groups. I propose that the threat of dissociative groups is associated with a fear of rejection from one's ingroup.

Fear of Rejection

Social categorization theory (e.g. Turner 1985) suggests that each group has shared attributes, and group members who display these attributes (i.e. core group members) are better examples of their group than those who do not display these attributes (i.e. peripheral group members). For example, fashion models are expected to be very thin, thus very thin models are seen as better examples of the group (core group members) than over-sized models (peripheral group members). Being a peripheral group member is threatening to those committed to their ingroups (Ellemers, Spears, and Doosje, 2002), especially since atypical ingroup members are usually belittled (Marques, Abrahams, Paez, and Martinez-Taboada 1998; Marques and Yzerbytt 1988). Those who have peripheral status within their ingroup are concerned about being accepted by their group members (e.g. Moreland 1985) and their expectation of future rejection results in negative emotions (Jetten, Branscombe, Spears, and McKimmie 2003). In order to cope with their threatened status, peripherals try to display the core attributes of their ingroups

(Prewit-Freilino and Bosson 2008). For example, Asian Americans who feel that others view them as less American, try to cope with this threat by reporting that they participate in typical American activities, such as playing American sports (Cheryan and Monin 2005). Being viewed as a peripheral member in one's ingroup seems to create a similar type of threat to being viewed as a member of a dissociative group. If this is the case, then threat created by association with a dissociative groups should also result in fear of rejection from one's ingroup.

As elaborated previously, the literature on dissociative groups suggests that dissociative groups are outgroups that consumers are motivated to distance themselves from in order to avoid a negative social identity (White and Dahl 2007). There is little research investigating whether there are factors related to people's ingroup membership that might motivate them to avoid dissociative outgroups. In the current research, it is proposed that associations with dissociative outgroups might be threatening because a consumer who gets involved with these outgroups might face the risk of being viewed as a peripheral member of her/his ingroup. That is, by displaying outgroup attributes the individual appears to lack their ingroup's core attributes. Since people who fear being viewed as peripheral members of their ingroup show a fear of rejection from the group (e.g. Moreland 1985), associating with dissociative groups can create a similar fear of rejection. For example, men might avoid choosing a steak labeled "lady's cut" (White and Dahl 2006) not only to distance themselves from the women's outgroup, but also to avoid being viewed as peripheral to their "male" ingroup (e.g., less masculine), thus avoiding rejection by their ingroup. One reason that Berger and Heath (2007) may have found that first year undergraduate students reported lower consumption of alcohol when

it was associated with geeky graduate students is because a major characteristic of first year university students is that they are outgoing, and less worried about academic success. Thus, association with graduate students (a dissociative outgroup) might have led first year undergraduates to fear rejection from their ingroup members. Therefore, stereotype threat created by dissociative groups is accompanied by a fear of rejection by the ingroup. In other words:

H4: Consumers who link a product to a dissociative group are likely to experience a higher fear of rejection by their ingroup when their performance using the product is perceived to be diagnostic of their ability in the dissociative domain than when it is not.

If the stereotype threat created by dissociative groups is associated with a fear of rejection by the ingroup, then employing a method that can help reduce rejection sensitivity should reduce the effect of the threat. Prior research has demonstrated that money motivates people to be self-sufficient and free of dependency (Vohs, Mead, and Goode 2006) and reduces the need for social acceptance (Zhou, Vohs, and Baumeister 2009). For example, people who were primed with money (by counting bank notes) as opposed to those who were not primed with money (by counting pieces of paper) were less likely to feel socially excluded even after being ignored by other players in a ball tossing game. Thus, if consumers avoid dissociative groups because they are afraid of being rejected by their ingroup, money priming should make them feel more self-sufficient, reducing their fear of rejection which in turn, should reduce the effect of the threat on performance.

H5: Consumers who link a product to a dissociative group and perceive that performance in using such product is diagnostic of their ability in the dissociative domain are likely to report higher competence and perform better when primed with money than when not primed with money.

In the next chapter, I present the five experiments conducted to test the hypotheses. I present and discuss in details the results of these experiments and their contribution to the existing literature.

Chapter III: Tests of Hypotheses

In this section, the five studies conducted to test the hypotheses are presented. The five studies follow an experimental design. Studies one, two, three, and five were conducted in a controlled lab environment. Study four was a field experiment.

Study 1: The Effects of Stereotype Threat Related to Dissociative Groups

The aim of study one is to test H1a; that is, to test whether consumers who link a product to a dissociative group report less competence and perform more poorly when they perceive that their performance using such a product is diagnostic of their ability (threat present) than when they do not perceive it to be diagnostic of their ability (threat absent) in the dissociative domain. A second aim of this study is to test H1b; that is, whether reported competence mediates the relationship between stereotype threat and performance. The hypothesis was tested in an arts domain context that is stereotypically associated with feminine traits (Rosenkrantz et al. 1968). Male participants are expected to dissociate from the arts domain while female participants are not expected to dissociate from this domain. As part of the study manipulation, all of the participants were asked to engage in a gift wrapping task.

The design of the study was a 2 (stereotype threat: absent vs. present) x 2 (gender: female vs. male). It was expected that if a stereotype threat can be created by dissociative groups, male participants in the stereotype threat present condition would report less competence and perform worse in the gift-wrapping task than male participants in the stereotype threat absent condition and female participants in both stereotype threat

conditions. It was also expected that the motivation to report less competence drives the poor performance of male participants in the stereotype threat present condition.

Method and Procedure

Eighty undergraduate business students (50% male, $M_{\text{age}}=21.3$ years) from a large North American university participated in this study in exchange for course credit. The experiment was run in a behavioral lab in groups of ten to fifteen participants. Each participant was seated in a separate booth so that they could not see each other's work (refer to Appendix A for experimental materials). At the beginning of each experimental session, participants were given a short questionnaire that had three embedded questions that are commonly used to measure identification with the domain (Ben-Zeev et al. 2005; Davies et al. 2002; Stone et al. 1999). On a seven-point Likert scale (1=strongly disagree; 7=strongly agree), participants indicated if art is important to them, constitutes a part of who they are, and if they believe they are more artistic than most people they know. The three items were averaged to be used as a measure of participants' identification with the arts domain ($\alpha=.91$). Overall, participants' identification with the arts domain was moderate (Mean= 4.03, Median= 4). The identification of both male and female participants with the arts domain was also found to be moderate and not significantly different ($M_{\text{male}} = 3.83$ vs. $M_{\text{female}} = 4.22$, $t(78)=1.12$, $p>.2$).

Half an hour after answering the first questionnaire, participants were asked to read and evaluate an article allegedly taken from a students' newspaper. The fictitious article portrayed a local gift-wrapping company that provides services to the major malls in the city. The article was used to activate the stereotype that women are more artistic

than men by mentioning that “75% of the company’s employees are women because women are generally more artistic than men.” After evaluating the article, participants were presented with the stereotype threat manipulation. This was done by notifying them that they were about to engage in a gift-wrapping task that was designed to either test their artistic ability (stereotype threat present) or test the gift-wrapping materials (stereotype threat absent).

Participants were then given a 4”x4”x4” white gift box and a plastic kit (refer to Figure 1) containing gift-wrapping supplies. The kit contained a 30”x24” gender-neutral gift wrapping paper, a 53” white ribbon, tape in a transparent tape dispenser, and black and white scissors. On the computer screen in front of each participant, a research assistant pointed out to each participant a picture of a sample wrapped gift box.

Figure 1: Gift Box and Gift Wrapping Kit Given to Participants



Participants were told that they had up to six minutes to complete the gift-wrapping task. The research assistant set an electronic countdown for each participant and kept track of whether the participant ran out of time. After the gift-wrapping task was completed, participants were given a questionnaire in which they were asked to report their level of competence in performing the gift-wrapping task and respond to

manipulation checks and demographic questions (i.e., age and gender). Finally, participants were dismissed and asked to leave at the station all of the materials they used in the task, including the wrapped box. After each session, the research assistants tagged the wrapped boxes with the session and station numbers in order to match participants' responses to their respective wrapped boxes. The tags did not show the experimental condition.

Measures

Manipulation check. The stereotype threat manipulation was assessed by having participants report on a seven-point Likert scale (1=strongly disagree; 7=strongly agree) to what extent they believed the purpose of the gift-wrapping task was to test their artistic ability (task purpose). This measure was adapted from Steele and Aronson (1995).

Reported competence. Five items were used to measure competence on a 7-point Likert scale (1=strongly disagree; 7=strongly agree). Participants reported the extent to which they felt smart, talented, competent, intelligent, and creative while engaging in the gift wrapping task. The first four items were adapted from Dahl and Moreau (2007). The fifth item (i.e. creative) was added due to its relevance to the study's specific context (arts domain). The items were averaged to represent a measure of reported competence ($\alpha = .94$). It was expected that in addition to poor performance, participants would report lower competence on the task linked to dissociative groups, distancing themselves from these groups.

Performance. Five independent judges (two women, three men) who were blind to the hypotheses assessed participants' gift-wrapping performance. That is, after detailed

instructions and training, the judges assessed each wrapped box based on three seven-point items (i.e., properly wrapped, presentable, and elegant) (1=Not at all; 7=Extremely). Inter-coder agreement was calculated using the approach used by Holbrook and Batra (1987) and MacInnis, Rao, and Weiss (2002). First, coefficient alphas for the three items for each judge were calculated (coefficient alphas were between .92 and .95), and then these items were averaged to create a measure of performance for each judge. After that, each judge's measure of performance was treated as one item in an overall measure of performance, which made it possible to calculate a coefficient alpha for this overall measure of performance ($\alpha = .90$). The scores for the five judges were then averaged to represent an overall measure of performance.

Results

Preliminary Analyses. The manipulation of stereotype threat was tested with 2 (stereotype threat: absent vs. present) x 2 (gender: female vs. male) between-subjects ANOVA with task purpose as the dependent variable. Results showed only a main effect of stereotype threat on task purpose ($F(1,76) = 4.33, p < .05$) such that participants in the stereotype threat present condition were more likely to report that the purpose of the gift-wrapping task was to test their artistic ability than participants in the stereotype threat absent condition ($M_{\text{absent}} = 3.55, M_{\text{present}} = 4.42$).

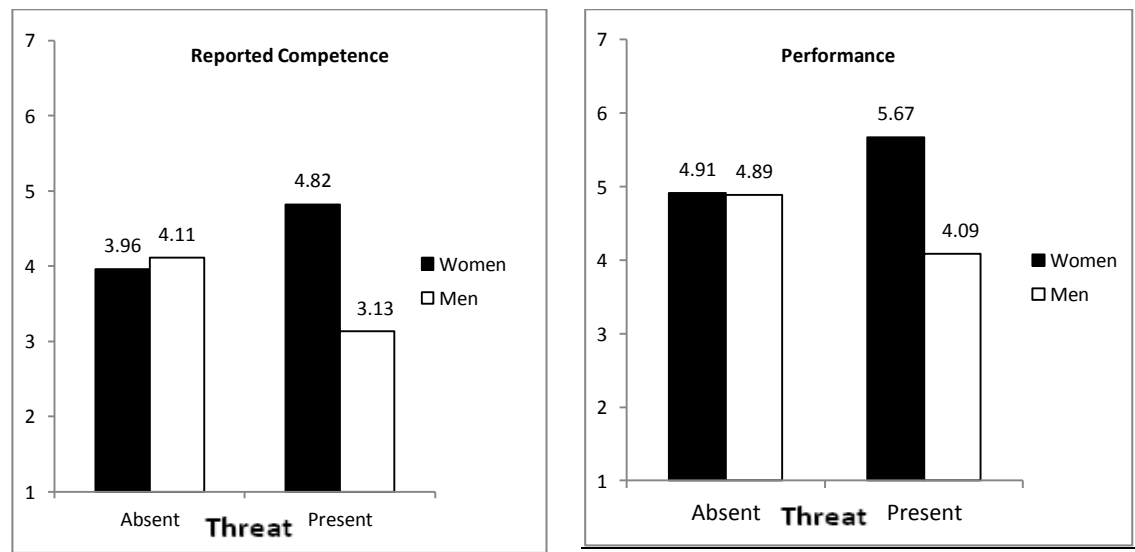
Tests of hypothesis 1. Analysis of two 2 (stereotype threat: absent vs. present) x 2 (Gender: female vs. male) between-subjects ANOVAs with reported competence and performance as dependent variables provide support for hypothesis 1. Results showed a significant main effect of gender on both reported competence ($M_{\text{male}} = 3.62$ vs. $M_{\text{female}} =$

4.39; $F(1,76) = 5.52, p < .05$) and performance ($M_{\text{male}} = 4.49$ vs. $M_{\text{female}} = 5.29$; $F(1,76) = 14.01, p < .001$). These main effects were qualified by a significant interaction of stereotype threat and gender on both reported competence ($F(1,76) = 7.99, p < .01$) and performance ($F(1,76) = 13.43, p < .001$).

As can be seen in Figure 2, there was a significant effect of stereotype threat on reported competence ($M_{\text{absent}} = 4.11$ vs. $M_{\text{present}} = 3.13$; $t(38) = 2.26, p < .05$) and performance ($M_{\text{absent}} = 4.89$ vs. $M_{\text{present}} = 4.09$; $t(38) = 2.72, p = .01$) for male participants. That is, participants who associate gift wrapping with a dissociative group reported less competence and performed more poorly when told that the task was to test their artistic ability than when told that the task was to test the gift-wrapping materials. Results also revealed a marginally significant effect on reported competence ($M_{\text{absent}} = 3.96$ vs. $M_{\text{present}} = 4.82$; $t(38) = -1.77, p = .09$) and a significant effect of stereotype threat on the performance of female participants ($M_{\text{absent}} = 4.91$ vs. $M_{\text{present}} = 5.67$; $t(38) = -2.47, p < .05$). In general, females performed better and reported higher competence when told that the task was designed to test their ability than when told that the task was designed to test the gift-wrapping materials. Though it was not hypothesized that female participants would perform better when the task is presented as diagnostic of their artistic ability than when it was not presented as such, these results are consistent with the findings of the stereotype lift literature (Shih et al. 2002). Stereotype lift is an improvement in one's performance that takes place when becoming aware of a stereotype that suggests that an outgroup has lower ability. This lift is an outcome of a downward comparison with the negatively stereotyped outgroup (Walton and Cohen 2003).

In addition, within the stereotype threat present condition, compared to females, male participants reported less competence ($M_{\text{males}} = 3.13$ vs. $M_{\text{females}} = 4.82$; $t(38) = 3.80$, $p = .001$) and performed significantly worse ($M_{\text{males}} = 4.09$ vs. $M_{\text{females}} = 5.67$; $t(38) = 4.92$, $p < .001$), further suggesting that stereotype threat is the mechanism that affects reported competence and performance of male participants. This is because male participants perceive that performance in the gift-wrapping task is diagnostic of their ability in the domain stereotypically linked to the dissociative group. In the absence of the stereotype threat, male and female participants reported equal levels of competence and performed equally well ($p > .10$), providing further support to hypothesis 1a.

Figure 2: The Effect of Stereotype Threat and Gender on Reported Competence and Performance



To test whether reported competence mediated the relationship between threat and performance, the moderated mediation procedure outlined by Hayes (2012) and Preacher, Rucker, and Hayes (2007) was followed. Results showed that the coefficient for the interaction between stereotype threat and gender on reported competence ($\beta = -1.85$) was

statistically different from zero ($t=-2.83$, $p<.01$). Results also showed that the effect of reported competence on performance ($\beta=.29$) was statistically different than zero ($t=3.92$, $p<.01$). This suggested that as participants reported lower competence, they performed worse, supporting H1b. The results also showed that the 95% bootstrap confidence intervals of the conditional indirect effect of stereotype threat on performance did not include zero (-0.6226 to -0.0570) for male participants ($\beta=-.28$), while it included zero (-0.0275 to 0.6395) for female participants ($\beta=-.24$). This indicated that reported competence mediated the relationship between stereotype threat and performance for male participants only.

Discussion

Results of study 1 demonstrate that stereotype threat can take place in domains stereotypically linked to dissociative groups. Further, results also show that threat impairs consumers' performance using products stereotypically related to dissociative groups. The psychology literature suggests that performance is negatively affected by stereotype threat when people who aspire to excel in a certain domain but belong to a group stereotyped to be incompetent in that domain try so hard to prove the stereotype wrong that they end up impairing their performance (Steele et al. 2002). It is here suggested that this argument might not explain why the performance of male participants in the gift-wrapping task was impaired when they were told the task was designed to test their artistic ability. Given that the artistic domain is not a domain male participants highly identify with, it is not likely that men facing threat performed poorly because they were apprehensive about not doing well in the task. It is here suggested that since people want to distance themselves from dissociative groups, they try to avoid showing high ability in

domains linked to these groups by reporting lower competence and showing poor performance. In brief, the results helped establish that (1) stereotype threat can take place in domains linked to dissociative groups; thus extending the existing stereotype threat literature that emphasizes that the threat only takes place in aspirational domains; and (2) dissociative groups negatively affect how consumers perform using products stereotypically related to these groups, thus extending the marketing literature that showed that dissociative groups affect consumers product preferences but has not yet investigated this effect on performance using the product. What remains to be explored is how stereotype threat created by dissociative groups differs from the stereotype threat established in the literature.

Study two builds on the findings of study 1 by investigating whether or not the stereotype threat created by a dissociative group leads people to engage in a reverse self-handicapping strategy (to show that they lack high ability in the domain stereotypically associated with that group). The existing literature suggests that since people under stereotype threat try to avoid attributions of low ability in the stereotyped domain, they tend to signal that they had barriers to a successful performance (Stone 2002). Study 2 demonstrates that in order to avoid being seen as part of a dissociative group, people under stereotype threat, created by a dissociative group, are likely to signal that they have low ability in the stereotyped domain. They do so by showing that they have no external or unstable barriers to successful performance and that their poor performance is solely due to their lack of ability in the stereotyped domain.

Study 2: The Role of Reverse Self-Handicapping

The goal of this study is to test H2a; that is, to test whether people facing the stereotype threat created by dissociative groups reverse self-handicap. It is expected that people facing threat would be less likely to build or report external or unstable barriers to successful performance as compared to people facing no threat. Within the gift wrapping context used in study one, if given the chance, male participants are less likely to self-handicap when aware that the task is diagnostic of their ability than when not aware that the task is diagnostic of their ability. Female participants are not expected to show differences in reverse self-handicapping in any condition. Specifically, if given a chance to train before the gift wrapping task, male participants under stereotype threat should train for longer (reverse self handicapping) than male participants under no stereotype threat and female participants in either condition. The design of this study is a 2 (stereotype threat: absent vs. present) x 2 (gender: female vs. male) between subjects design.

Method and Procedure

Participants. Seventy-nine undergraduate business students (52% male, $M_{\text{age}}=20.7$ years) from a large North American university participated in exchange for course credit. This study mirrored the procedure used in study 1 with the exception that the gift-wrapping task was presented as a training task. For that, the procedure outlined by Stone (2002) was followed. Stone showed that under stereotype threat, people train for less time before engaging in a sports task to show that their expected poor performance was due to a lack of effort instead of a lack of ability.

A training phase was included in the design used in study 1 to give participants an opportunity to engage in a self-handicapping strategy. It is expected that compared to other participants, male participants facing stereotype threat would practice for a longer period of time (i.e., engage in a reverse self-handicapping strategy) to show that they performed poorly despite their high effort. This is a strategy that should signal to others that the participant has low ability in the task stereotypically linked with the dissociated group.

Procedure. Participants were told that they were about to engage in a complicated gift-wrapping task and for that reason, they would be given an opportunity to train. They were then given up to eight minutes to train on the gift-wrapping task. It was emphasized to them that they could stop the training at any time prior to the eight minutes and start the main task. It was also emphasized that the gift box they wrap during the training task will not be evaluated. They were also told that a research assistant would keep track of the time they took to train because it would be used later to understand how they performed in the main task. After the training task was over, participants were given a short questionnaire asking them questions about their training experience. After they finished responding to the questionnaire, they were made aware that there would be no main gift-wrapping task and that the study was intended to evaluate how they would train for that task (refer to Appendix B for experimental materials).

Measures

To assess participants' identification with the arts domain, similar items to those used in study one were used in this study. Participants' identification with the arts domain

was moderate (Mean= 3.81, Median= 3.67). For male and female participants, identification with the arts domain was moderate, however female participants showed a marginally higher level of identification with the arts domain than male participants ($M_{\text{male}} = 3.55$ vs. $M_{\text{female}} = 4.08$, $t(77)=1.84$, $p=.07$). The manipulation check for stereotype threat was measured with the same task purpose scale used in study 1. Time taken to train was used as the dependent variable and research assistants used an electronic stopwatch on a computer screen in front of each participant to keep track of the time they took to train.

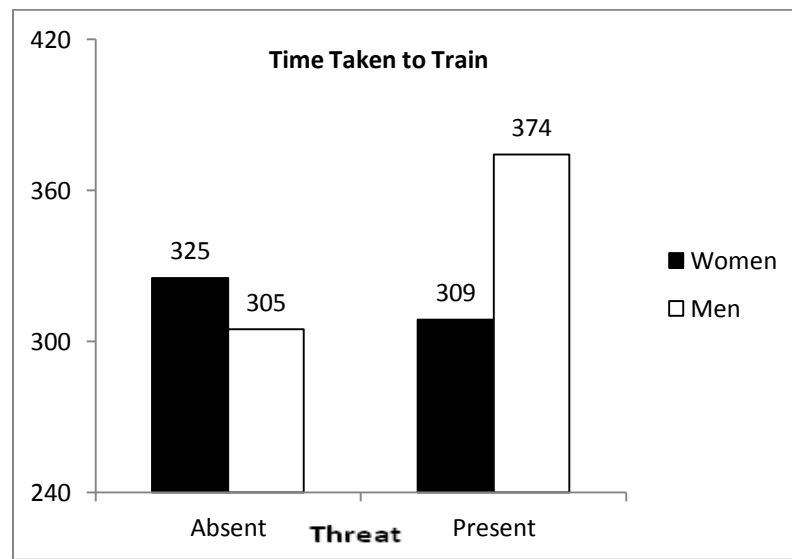
Results

Preliminary Analyses. The manipulation of stereotype threat was tested with a 2 (stereotype threat: absent vs. present) x 2 (gender: female vs. male) between-subjects ANOVA with task purpose as the dependent variable. Results showed only a main effect of stereotype threat on task purpose ($F(1,75) = 4.59$, $p < .05$) such that participants in the stereotype threat present condition were more likely to report that the purpose of the gift-wrapping task was to test their artistic ability than participants in the stereotype threat absent condition ($M_{\text{absent}}=4.37$, $M_{\text{present}} = 5.17$).

Test of hypothesis 2a. Results of a 2 (stereotype threat: absent vs. present) x 2 (gender: female vs. male) between-subjects ANOVA with time taken to train as the dependent variable revealed a significant interaction of stereotype threat and gender on time taken to train ($F(1,75) = 4.43$, $p < .05$). As can be seen in Figure 3, male participants under stereotype threat trained for a longer period of time than male participants who were not under stereotype threat ($M_{\text{absent}} = 5 \text{ min } 5 \text{ sec}$ vs. $M_{\text{present}} = 6 \text{ min } 14 \text{ sec}$; $t(39) =$

-2.35, $p < .05$). That is, male participants were less likely to self-handicap when told that the task is to test their artistic ability than when told that the task is to test the gift-wrapping materials. There were no significant differences in time taken to train between females in both stereotype threat conditions ($p > .2$). In addition, within the stereotype threat present condition, male participants trained for a longer time than female participants ($M_{\text{males}} = 6 \text{ min } 14 \text{ sec}$ vs. $M_{\text{females}} = 5 \text{ min } 9 \text{ sec}$; $t(39) = -2.45$, $p < .05$), thus the results supported H2a.

Figure 3: The Effect of Stereotype Threat and Gender on Training Time (in seconds)



Discussion

The results of study 2 further our understanding about the effect of stereotype threat created by dissociative groups and how it differs from the more general stereotype threat phenomenon discussed in the literature. Stone (2002), for instance, suggested that people under stereotype threat engage in self-handicapping strategies (e.g., train less for a task) to have an unstable cause to justify their low performance and avoid being seen as having low ability. Interestingly, the results of the current study point to a reverse effect.

That is, male participants under stereotype threat spent more time training on the gift-wrapping task than their counterparts who were not under such threat, thus giving an indication that they want to demonstrate that they did not have any barriers to a successful performance and that their poor performance was solely due to their lack of ability in the domain stereotypically related to feminine traits.

In brief, this study makes two contributions, the results help to establish that: (1) stereotype threat created by dissociative groups is different than that already discussed in the literature, (2) people are not always interested in appearing as having high ability; people under a stereotype threat created by dissociative groups use reverse self-handicapping as a self-presentational strategy in order to appear as lacking ability in the dissociative domain. To my knowledge, the reverse self-handicapping strategy has not been discussed in the existing literature, thus this study introduces a new self-presentational strategy to the literature on stereotype threat.

One limitation of this study is that it does not allow a test of whether reverse self-handicapping mediates the relationship between stereotype threat and performance. In the experiment, the instructions emphasized that the study was not interested in performance during the training task. Such instructions should have inferred to participants under threat that the only way to show their low ability is to alter their training time rather than their performance on the training task. Thus, the design of this experiment is not adequate to test whether reverse self-handicapping mediates the effect of stereotype threat on performance. Study three is designed to test such mediation.

Study 3: The Mediating Role of Reverse Self- Handicapping

The primary goal of study three is to test H2b, whether reverse self-handicapping mediates the relationship between stereotype threat created by dissociative groups and performance. It is expected that consumers under stereotype threat will try to show inability in the relevant domain through a reverse self-handicapping strategy. A second goal of the study is to generalize the effect observed in studies one and two to a different context. Participants were asked to engage in a task that might associate them with Aboriginals, a minority ethnic group that is negatively stereotyped in the country where the experiment was conducted (Bell, Esses, Maio and 1996; Kirby and Gardner 1973).

Design and Participants

Participants. One hundred twenty three undergraduate business students (60.7% male, $M_{age}=20.76$ years) from a large North American university participated in this study. Participants were randomly assigned to one of the two experimental conditions and received research credit for their participation. Three participants identified themselves as Aboriginals and were excluded from the analysis.

Procedure. Participants first answered a short survey in which questions about their perceived social distance to Aboriginals were embedded. This measure was included to assess whether participants dissociate themselves from Aboriginals. Participants then answered several unrelated surveys and then were asked to participate in a survey which contained the stereotype threat manipulation and the main dependent variables.

In the study's stimuli, all of the participants read an article talking about a community centre that is interested in producing and marketing aboriginal artifacts. The article also mentioned that Aboriginals are talented in making artifacts. To manipulate

stereotype threat, participants were made aware that they were about to engage in a task designed either to test their ability in making Aboriginal artifacts (stereotype threat present) or to test the supplies used by the community centre to make Aboriginal artifacts (stereotype threat absent). Just before engaging in the task, participants were asked to answer another short questionnaire in which the self-handicapping items were embedded. After completing the questions, participants were shown a sample Aboriginal medicine pouch (see Figure 4) and were given craft supplies and eight minutes to make the pouch. Afterwards, participants were asked to complete a short questionnaire that included measures of manipulation checks and demographics (refer to Appendix C for experimental materials).

Figure 4: Aboriginal Medicine Pouch



Measures

Social Distance. Using four items adopted from Borgardus (1967), participants reported how they feel towards Aboriginals (1=strongly disagree, 7=strongly agree). These items were: “I would be bothered by having Aboriginal classmates”, “I would be bothered by having Aboriginal teachers”, “I would be bothered by having Aboriginal neighbors”, and “I would be bothered by having Aboriginal houseguests”. The four items

loaded on a single distinct factor so they were averaged to create an overall social distance index ($\alpha=.95$). It was expected that only participants with a higher social distance from Aboriginals (higher dissociation) would be affected by the threat. Since the hypothesis to be tested is concerned with dissociative groups, only participants who had a social distance score higher than the median (Median=2.25) were included in the analysis, resulting in a final sample of fifty nine participants ($M_{\text{social distance}}=4.28$). All the reported results (including results of the reliability analysis) were obtained from this smaller sample.

Manipulation check. Participants were asked if they believe that the task was only designed to test the artifact supplies (1=not at all, 7=very much).

Performance. Four independent judges (three men, one woman) who were blind to the experimental conditions evaluated participant's performance. The same procedure outlined in study 1 was used here. Coefficient alphas were used for the three evaluative items (proper, elegant, presentable) for each judge (coefficient alphas were between .85 and .97). These items were then averaged to create a measure of performance for each judge. After that, each judge's measure of performance was treated as one item in an overall measure of performance and coefficient alpha for this overall measure of performance was calculated ($\alpha=.85$). The scores of the four judges were then averaged to represent an overall measure of performance.

Self-handicapping. After reading the stereotype threat manipulation, participants read a short paragraph that stated that their performance on the task might be affected by external or unstable factors like life stress for example. The paragraph mentioned that

they will be asked to answer several questions concerning such factors and that their answers on these questions will be compared to their performance. Participants then responded to four seven-point items (1=strongly disagree; 7=strongly agree) similar to the ones used in the self-handicapping literature (e.g. Steele and Aronson 1995). These items were: “lately I have been feeling stressed out”, “the research session was long so I’m feeling tired”, “I had a long day today”, “the station where I am seated is uncomfortable for craft making”. The four items loaded on a single distinct factor so they were averaged to create an overall self-handicapping index ($\alpha=.61$).

Results

Preliminary analysis. The threat manipulation was effective as participants in the stereotype threat present condition were less likely to report that the task is only designed to test the craft supplies than participants in the stereotype threat absent condition ($M_{\text{absent}} = 3.33$ vs. $M_{\text{present}} = 2.56$; $t(56) = 2.10$, $p < .05$).

Test of hypothesis 2b. Analysis showed a significant effect of stereotype threat on self-handicapping. Participants in the stereotype threat present condition self-handicapped less than participants in the stereotype threat absent condition ($M_{\text{absent}} = 4.57$ vs. $M_{\text{present}} = 3.79$; $t(57) = 3.18$, $p < .01$), giving an indication that the reverse self-handicapping effect was taking place. In other words, participants were less likely to self-handicap when they were told the task was to test their ability in making Aboriginal artifacts (stereotype threat present) than when told that the task was to test the supplies used to make Aboriginal artifacts (stereotype threat absent). Contrary to expectations, results showed no effect of stereotype threat on performance ($p > .1$). Considering that an

independent variable does not need to directly affect the dependent variable in order for a mediation effect to be established (see Zhao, Lynch, and Chen (2010) for a more detailed explanation for this argument), a test of whether self-handicapping mediated the relationship between stereotype threat and performance was conducted using the bootstrapping technique suggested by Preacher and Hayes (2004).

As can be seen in table 1, results revealed a significant indirect-only mediation of stereotype threat on performance through self-handicapping ($axb = -.27, p < .05$), with a 95% confidence interval excluding zero (-0.615 to -0.068). More specifically, as shown in the previous analysis, the sign of (path a) is negative, showing that stereotype threat negatively impacted self-handicapping. However the sign of (path b) is positive, showing that as reverse self-handicapping decreased, performance also decreased. These results confirmed that self-handicapping mediated the relationship between stereotype threat and performance.

Table 1: Self-Handicapping as a Mediator of the Effect of Stereotype Threat on Performance

	Coeff	t	P
The direct effect of stereotype threat on self-handicapping (a path)	-0.77	-3.18	0.01
The direct effect of self-handicapping on performance (b path)	0.35	2.49	0.02
The total effect of stereotype threat on performance (c path)	0.17	0.63	0.53
The direct effect of stereotype threat on performance (c' path)	0.44	1.58	0.12
	Effect	Z	P
The indirect effect of stereotype threat on performance through self-handicapping	-0.27	-1.99	0.05
Bias Corrected Confidence Intervals			
	Lower	Upper	
Total	-0.615	-0.068	
Handicapping	-.0615	-0.068	

Discussion

Consistent with results obtained in studies 1 and 2, the current study shows that consumers facing stereotype threat created by dissociative groups ignore the opportunity to show high ability in the stereotype-related domain. Further, the results of this study demonstrate that they cope with the threat by engaging in a reverse self-handicapping strategy. Participants had the opportunity to protect their image of having high ability by blaming external and unstable factors for any expected poor performance. Interestingly, contrary to what would have been predicted by the existing literature on stereotype threat, participants under stereotype threat created by a dissociative group did not take advantage of this opportunity. Instead, they were less likely to report these barriers to a successful performance than participants who were not under the stereotype threat. This reverse self-handicapping strategy helped them to signal that their poor performance was solely due to a lack of ability in the dissociative domain. In general, results of this study show that consumers facing stereotype threats created by dissociative groups strategically try to show they lack ability in the domains where these groups are stereotypically perceived to have high ability.

Though the results of the current study provide general support to the hypothesis outlined in this dissertation, it is surprising that the expected direct effect of stereotype threat on performance was not found. A possible explanation for this unexpected result is that participants were given a chance to self-handicap and decided to reverse self-handicap before engaging in the main task. This might have relieved them from the pressure caused by the stereotype threat.

In brief, the findings of this study help to establish that: (1) reverse self-handicapping mediates the relationship between stereotype threat created by dissociative groups and performance, and (2) the effect of stereotype threat created by dissociative groups can be generalized to other contexts beyond the one already tested in studies 1 and 2 (i.e., an arts domain). A related, yet unexplored issue is how the effects of stereotype threat created by dissociative groups on performance can be reduced.

It is evident from the results of studies two and three that consumers engage in a reverse self-handicapping strategy to signal a lack of ability in the domains linked to dissociative groups. Engaging in such a strategy allows individuals to avoid associating with dissociative groups. Assuming that this logic is correct, it can be expected that in order to reduce the threat of association with dissociative groups, consumers might need assurance that performing well does not suggest that they share traits with members of dissociative groups. Therefore, giving people a chance to signal upfront that they do not belong to the dissociative group or reinforcing that they do not belong to the dissociative group, might attenuate the effect of stereotype threat. Reinforcing that individuals do not belong to the dissociative group can reduce threat resulting in better performance in domains stereotypically linked to that group. One way to signal to consumers that they are not seen as part of the dissociative group is to tell them upfront that it is well known that they lack ability in the domain linked to the dissociative group. Study four was designed to test if signaling inability in the dissociative domain reduces the negative effect of the stereotype threat created by a dissociative group on performance.

Study 4: Signaling Inability to Attenuate the Negative Effect of Stereotype Threat Created by Dissociative Groups

The major goal of study four is to test hypothesis 3 which states that signaling to individuals upfront that they lack ability in the domain stereotypically associated with the dissociative group attenuates the negative effect of stereotype threat on performance.

Method and Procedure

Participants. A total of eighty one male university students ($M_{age} = 21$ years) participated in this field experiment in exchange for \$10. The data from sixty-six of those students were used in the main analysis and the data for the remaining 15 students were used as a control group to test whether the gender of the confederate had any impact on the final results.

Procedure. This field experiment employed a 2 (stereotype threat: absent vs. present) x 2 (inability signaling: no vs. yes) between-subjects design and used the same gift-wrapping context used in studies 1 and 2. The experiment was run by a female confederate with the exception of a control group composed of 15 students in the stereotype threat present and no inability signaling condition (the condition expected to be most threatening) who interacted with a male confederate. The experiment took place just before the Christmas holiday season at the university centre of a large North American university. The main floor of the building, where the experiment took place, had several stands that were rented by different companies to promote their products/services to students.

A confederate who was blind to the experimental hypothesis occupied one of these stands. The confederate pretended to be a representative of a fictitious gift wrapping company. The confederate dressed formally and had a laptop computer. The stand was decorated with gift boxes to make the situation appear real (refer to Figure 5).

Figure 5: Female Confederate at the Stand



The experiment adopted the following procedures: The experimenter individually intercepted students at the university centre and asked them if they would like to participate in a market research study evaluating the various company representatives currently displaying their businesses in the building. They were told that they would receive \$10 for their participation. After agreeing to participate, each student was asked to pick a paper from an envelope that would indicate the name of the company that they should evaluate. Unbeknownst to the participants, all papers in the envelope would lead them to the representative of the fictitious gift-wrapping company. Participants were also instructed to interact with the representative but avoid mentioning that they were sent by the experimenter. Finally, they were asked to go back to the experimenter after interacting with the representative and fill out a questionnaire to evaluate their experience.

Once the participant approached the gift-wrapping company's stand, the confederate introduced her/himself as a consultant hired by a local gift-wrapping company to recruit people to evaluate new gift-wrapping materials that the company was planning to use in the upcoming holiday season. The confederate then asked the participants if they would like to help by testing the gift-wrapping materials. All of the participants agreed to help. After obtaining the participants formal consent, the confederate asked them to take a seat in front of a laptop and watch a short PowerPoint presentation about the company. The PowerPoint presentation included pictures of gift boxes, a gift-wrapping workshop, and some fictitious employees. The presentation was auto-run to ensure that all of the participants were exposed to the stimuli for the same amount of time. There were two versions of the presentation which differed only in the last slide. The order in which the presentations were shown was randomly assigned by the experimenter every morning before the start of the experiment. The confederate had no control over the sequence of the presentations.

The presentation was designed to remind participants of the stereotype that women are better than men at arts and ostensibly at gift-wrapping. The presentation also implicitly emphasized that the work done by the gift-wrapping company was purely artistic. This was done by including titles in the PowerPoint slides such as "our artistic team" or "providing our artistic service" and portraying mostly female employees in the company's pictures. The last slide of the presentation contained the stereotype threat manipulation. In both conditions the slide mentioned that the company would like the participants to test the gift-wrapping materials. However, in the threat present condition, the slide explicitly mentioned that the company was also interested in knowing how

artistic the participant was because it has been proven that being artistic correlates with how people rate the gift-wrapping materials. In the threat absent condition, the slide explicitly mentioned that the company was not interested in knowing the participants' level of artistic ability(refer to Appendix D for experimental materials).

After participants finished watching the presentation, the confederate showed the participants a sample wrapped gift box, and asked them to wrap a similar box. The confederate then gave the participants a kit with the gift-wrapping materials and told them that they had up to eight minutes to wrap the gift box. To manipulate inability signaling, a ribbon was included in each gift-wrapping kit. Once the participant was given the kit, the confederate pretended to notice that the kit included a ribbon. The confederate then took away the ribbon and gave the participants a readymade bow and said either "You know what! We are using bows now" (No inability signaling) or "You know what! Most men are not artistic enough to work with a ribbon; I'll give you a bow instead" (inability signaling). After finishing the gift-wrapping task, participants were given a short questionnaire containing similar questions to those used in studies 1 and 3 to measure the dependent variables.

After completing the questionnaire, participants reported back to the experimenter where they were asked to fill out a questionnaire evaluating the service provided by the company's representative and the purpose of the study. None of the participants guessed that the evaluation of the company's representative and the gift-wrapping task were related. Participants were then debriefed on the purpose of the study, thanked, and paid for their participation.

Measures

Manipulation Checks. As a manipulation check for stereotype threat, participants indicated on a seven-point scale (1=not at all, 7=very much) the extent to which they believed that gift-wrapping is not related to their artistic ability (reverse coded). As an indirect manipulation check for inability signaling, participants indicated on a seven-point scale (1=strongly disagree, 7= strongly agree), the extent to which they believed that the company hires more women than men. It was expected that participants who were told that men are not good at using ribbons (inability signaling) would be more likely to endorse gender-related stereotypes than participants who were not told so (no inability signaling) thus leading them to be more likely to expect that the company hires more women than men.

Reported competence. The same five item 7-point Likert scale (1=strongly disagree; 7=strongly agree) used in study 1 to measure reported competence was used in this study. The items were averaged to represent a measure of reported competence ($\alpha = .87$).

Performance. Five independent judges (three women and two men) who were blind to the hypotheses assessed participants' gift-wrapping performance. This evaluation followed the same procedure outlined in studies 1 and 3. Coefficient alphas were calculated for the three items for each judge (coefficient alphas were between .92 and .97). The items were then averaged to create a measure of performance for each judge. After that, each judge's measure of performance was treated as an item in an overall measure of performance and a coefficient alpha for this overall measure of performance

was calculated ($\alpha = .94$). The scores for the five judges were then averaged to represent an overall measure of performance.

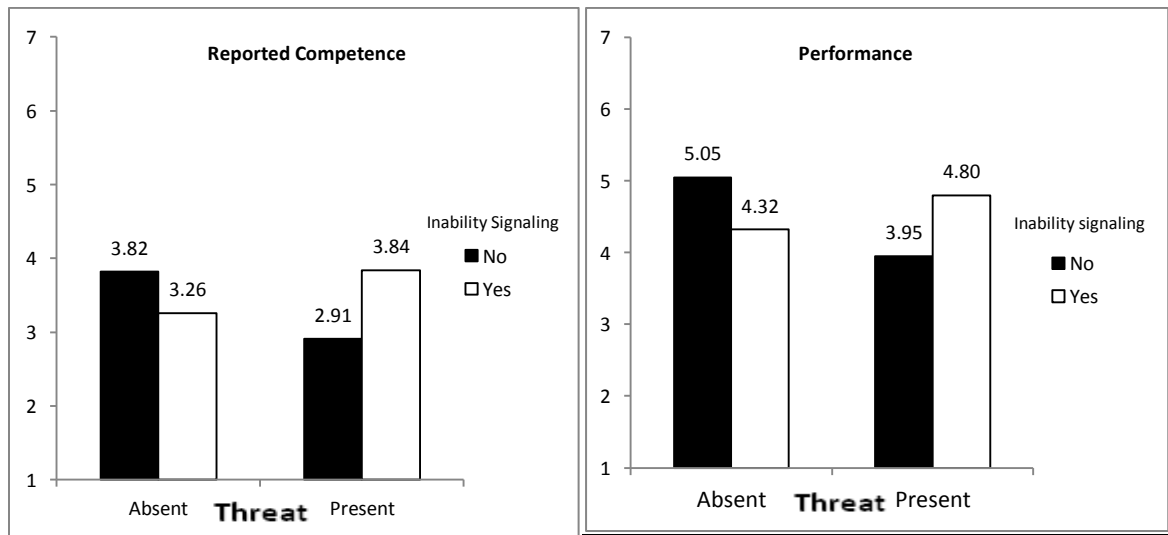
Results

Preliminary Analysis. Two two-way ANOVA tests on the extent that participants associated gift-wrapping with their artistic ability and on the extent that they believe that gift wrapping company hires more women than men revealed only: (a) a main effect of stereotype threat on the extent that participants associated gift-wrapping with their artistic ability ($F(1,62) = 3.86, p = .05$) such that participants in the stereotype threat absent condition were more likely to report that gift-wrapping is not related to their artistic ability than participants in the stereotype threat present condition ($M_{\text{absent}} = 4.87, M_{\text{present}} = 4.06$); and (b) a significant main effect of inability signaling on the extent that participants believe that the company hires more women than men ($F(1,62) = 3.64, p < .05$) such that participants in the 'yes' inability signaling condition as compared to participants in the 'no' inability signaling condition were more likely to report that the company hires more women than men ($M_{\text{no}} = 4.45$ vs. $M_{\text{yes}} = 5.28$).

Test of Hypothesis 3. Only participants who interacted with the female confederate were included in this analysis. Results of two separate ANOVA tests using a 2 (stereotype threat: absent vs. present) x 2 (inability signaling: no vs. yes) between-subjects design with reported competence and performance as dependent variables provided support to H3. A significant two-way interaction of stereotype threat and inability signaling on both reported competence ($F(1,62) = 7.33, p < .01$) and performance ($F(1,62) = 6.81, p = .01$) was found.

As can be seen in figure 6, there was a significant effect of stereotype threat on reported competence ($M_{\text{absent}} = 3.82$ vs. $M_{\text{present}} = 2.91$; $t(31) = 2.15$, $p < .05$) and performance ($M_{\text{absent}} = 5.05$ vs. $M_{\text{present}} = 3.95$; $t(31) = 2.45$, $p < .05$) when inability was not signaled, replicating the findings obtained in study 1. There was no significant effect of stereotype threat on reported competence and performance when inability was signaled ($p_s > .1$). Interestingly, results also revealed that under stereotype threat, reported competence and performance were enhanced when inability was signaled (reported competence: $M_{\text{no}} = 2.91$ vs. $M_{\text{yes}} = 3.84$; $t(33) = -2.41$, $p < .05$; performance: $M_{\text{no}} = 3.95$ vs. $M_{\text{yes}} = 4.80$; $t(33) = -2.36$, $p < .05$). No other effects were found to be significant ($p_s > .10$).

Figure 6: The Effect of Stereotype Threat and Inability Signaling on Reported Competence and Performance



To test whether reported competence mediated the relationship between threat and performance, the moderated mediation procedure outlined by Hayes (2012) and Preacher et al. (2007) was followed. Results showed that the coefficient for the interaction between

stereotype threat and inability signaling on reported competence ($\beta=-1.48$) was statistically different from zero ($t=-2.71, p<.01$). Results also showed that the effect of reported competence on performance ($\beta=.30$) was statistically different than zero ($t=2.26, p<.05$). This suggested that as participants reported lower competence, they performed worse. The results also showed that the 95% bootstrap confidence intervals of the conditional indirect effect of stereotype threat on performance did not include zero (0.0038 to 0.7677) when inability was not signaled ($\beta=-.47$), while it included zero (-0.6241 to 0.0271) when inability was signaled ($\beta=.53$). This indicated that reported competence mediated the relationship between stereotype threat and performance only when inability was not signaled.

Gender of the Confederate. To test whether the gender of the confederate influenced the results, reported competence and performance of the 15 participants who interacted with the male confederate were compared to the reported competence and performance of the participants who interacted with the female confederate under the same experimental condition (stereotype threat present and no signaling). There was no significant difference on reported competence whether the participants interacted with the female or male confederate ($M_{\text{female}}= 2.91$ vs. $M_{\text{male}}= 3.71, t(31)=-1.57, p>.1$). However, results showed that participants who interacted with the female confederate performed worse ($M_{\text{female}}= 3.95$ vs. $M_{\text{male}}= 4.80, t(31)=-2.11, p<.05$) than participants who interacted with the male confederate. The presence of a male confederate positively affected participants' performance. The male confederate might have served as a role model for participants, especially given that the presence of role models helps reduce the negative effects of stereotype threat (Marx and Roman 2002). This might have taken place because

the presence of the male confederate assured participants that gift wrapping is not necessarily related solely to the “female” dissociative group. To evaluate whether this explanation is valid, participants were asked if they believed that women are better at gift wrapping than men. Results showed that as compared to participants who interacted with the male confederate, participants who interacted with the female confederate were significantly more likely to report that women are better at gift wrapping than men ($M_{\text{female}} = 5.06$ vs. $M_{\text{male}} = 3.53$, $t(31) = -2.84$, $p < .01$).

Discussion

The results of study 4 replicate the findings of study 1 using a different research approach, a field experiment. The results also demonstrate that when inability in the dissociative domain is signaled upfront, the effect of the stereotype threat is attenuated, enabling the participants to perform better in the dissociate domain. Signaling inability upfront might have suggested to participants under stereotype threat that they would not be perceived as sharing traits with the dissociative group, reducing stereotype threat. The results of study 4 also demonstrated that the gender of the confederate might have influenced the findings.

In brief, study 4 makes two important contributions to our understanding of the effect of stereotype threat created by dissociative groups: (1) signaling upfront to consumers under stereotype threat that it is well known that they lack ability in the dissociative domain can attenuate the effect of the threat which in turn, leads to an improvement in performance, and (2) the results obtained from the previous studies can be replicated outside the lab in a more realistic context.

Study five aims to explore another factor that might be accompanied with stereotype threat created by dissociative groups. This study investigates whether concerns about the reactions of ingroup members is a factor contributing to the perceived threat. Specifically, study five tests the role of fear of rejection by ingroup members in stereotype threats created by dissociative groups.

Study 5: The Role of Fear of Rejection from One's Ingroup

The major goal of study five is to test hypotheses 4 and 5. That is, whether the stereotype threat created by dissociative groups is accompanied with a fear of rejection from ingroup members, and if so, whether methods that can potentially reduce feelings of rejection (e.g., money priming) help to attenuate the effect of the stereotype threat on performance.

Method and Procedure

Pre-test. A pre-test was conducted to select a dissociative group that would fit the characteristics of our sample. Thirty eight university students (22 women) reported their attitude towards different social groups. Three seven-point Likert scale items (1=strongly disagree; 7=strongly agree) were used to measure attitudes towards the groups, in which participants reported the extent to which they admired, liked, and felt sympathetic towards members of these groups. The fan group of Justin Bieber was identified as a dissociative group ($M=2.97$; 1=very negative, 7= very positive). A one sample t-test showed that the sample mean was significantly lower than the mean of the scale ($t(37)=6.77, p<.001$). The attitude of both men and women towards fans of Justin Bieber was low and not significantly different ($M_{Men} = 2.94$ vs. $M_{Women} = 3.00, t(36)=-.20, p>.2$).

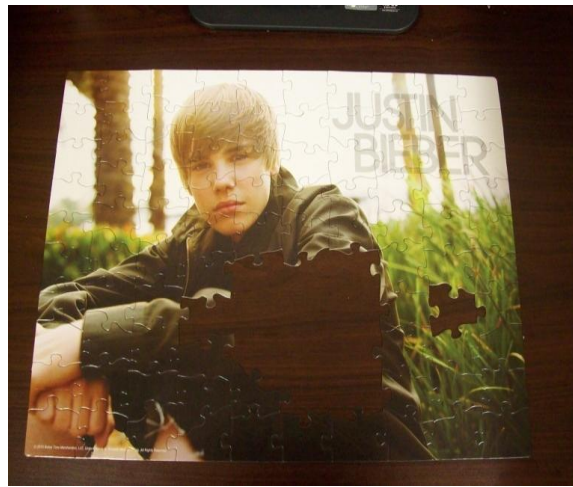
Participants. Sixty seven undergraduate business students from a large North American university (51% women, $M_{age}=19.6$ years) participated in the main study in exchange for course credit.

Procedure. Participants first answered several unrelated online questionnaires. While answering these questionnaires, the web browser window was kept maximized so that the participants did not have a chance to see the desktop window of their computer. When the participants finished working on these unrelated studies, they were instructed to wait for one minute until they could start working on the next study. Then, a money priming procedure similar to that used by Vohs et al. (2006) was followed. The lab attendant minimized the web browser window so participants could see the desktop window of their computer. Money priming was activated by having a picture of money on the desktop. A picture of flowers was displayed in the control condition. Participants were not instructed to pay attention to the picture. After one minute, the lab attendant maximized the web browser window again and signed the participants in to an online questionnaire that had the priming manipulation check. At no time other than the one minute wait did participants see the desktop of their computer.

Later, participants were given a questionnaire containing the threat manipulation. The questionnaire mentioned that previous research has shown that people tend to be more competent at doing cognitive tasks (including puzzles) if these tasks are associated with a favored person. All participants were given a Justin Bieber puzzle to assemble. In the stereotype threat present condition, participants were made to believe that the task is designed to test their ability at assembling the puzzle. In the stereotype threat absent condition, participants were made to believe that the task is designed to pre-test the

experimental materials to be used in a future study. Participants were then given a 100 piece Justin Bieber puzzle and eight minutes to assemble the puzzle (see Figure 7). Participants were asked to refrain from disassembling the puzzle after completing the task. Afterwards, participants were asked to answer several questions measuring fear of rejection by ingroup members, manipulation checks, and demographics (refer to Appendix E for experimental materials).

Figure 7: Justin Bieber Puzzle



Measures

Manipulation checks. To test the stereotype threat manipulation, participants were asked whether or not they believed that the task was diagnostic of their ability in working with puzzles. To test for the money priming manipulation, participants were asked to work on a word-stem completion task, a standard method to implicitly measure cognitive activation (Anderson, Carnagey, and Eubanks 2003, Roediger et al. 1992). Participants had to complete 19 words of which seven words can be either neutral or money-related

words. Similar to Vohs et al. (2006) the money-related words were rich, cash, coin, money, fortune, dollar and wealth.

Performance. After the participants left, the research assistant counted the total number of puzzle pieces that were assembled by each participant.

Fear of Rejection. On a seven point scale (1= strongly disagree, 7= strongly agree) participants reported whether they believed that they might be excluded from their social surroundings if they did well in the task, whether they believed that their friends would reject them if they showed ability in assembling the puzzle, and whether they believed that their friends would reject someone who is competent in assembling the puzzle. The three items loaded on a single distinct factor and were averaged to create a measure of fear of rejection by the ingroup ($\alpha=.92$).

Results

Preliminary Analysis. Two-way ANOVA tests on the extent to which participants believed that the task was diagnostic of their ability at assembling the puzzle and on the number of money related words completed by them revealed only: (a) a main effect of stereotype threat on the extent that participants believed that the task was diagnostic of their ability at assembling the puzzle ($F(1,63) = 3.97, p<.05$) such that participants in the stereotype threat present condition were more likely to report that the task was diagnostic of their ability than participants in the stereotype threat absent condition ($M_{\text{absent}} = 2.27, M_{\text{present}} = 3.03$); and (b) only a main effect of money priming on the completed number of money related words ($F(1,63) = 5.92, p<.05$) such that participants in the money priming

condition completed more money related words than participants in the no priming condition ($M_{Yes}=.86$, $M_{no}=.38$).

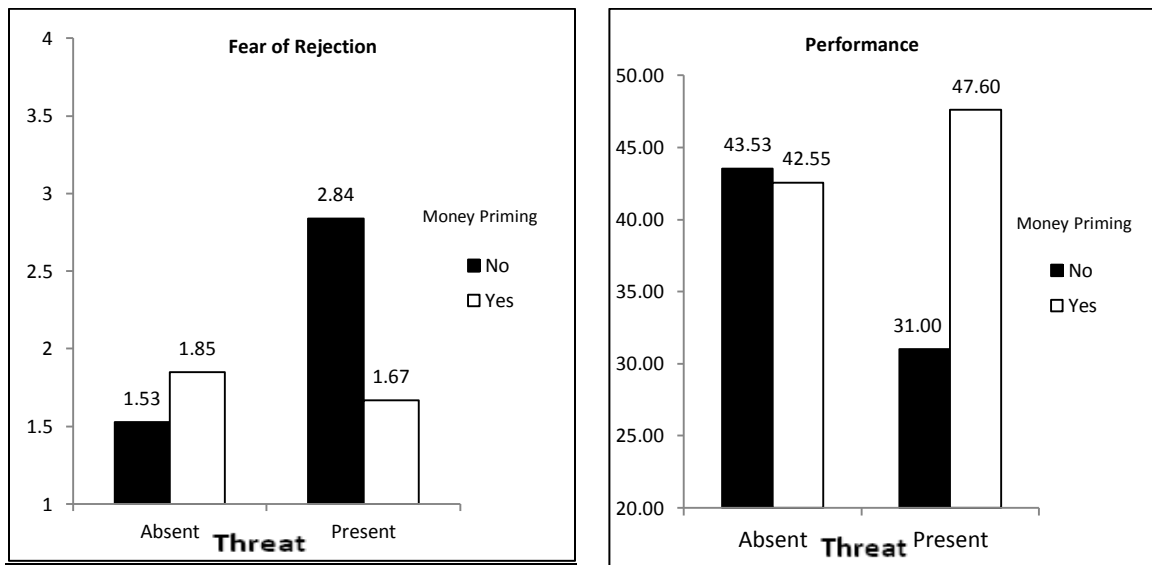
Tests of hypothesis 4. Analysis of a 2 (stereotype threat: absent vs. present) x 2 (money priming: no vs. yes) between subjects ANOVA with fear of rejection as a dependent variable showed a marginally significant main effect of stereotype threat ($M_{absent}=1.70$, $M_{present}=2.26$; $F(1, 63)=3.05$, $p<.1$). This main effect was qualified by a significant interaction of stereotype threat and money priming on fear of rejection ($F(1, 63)=5.35$, $p<.05$). As can be seen in figure 8, when participants were not primed with money, they showed significantly higher levels of fear of rejection by their ingroup when the stereotype threat was present than when it was absent ($M_{absent}=1.53$ vs. $M_{present}=2.84$; $t(30)=-2.54$, $p<.05$), providing support for H4. When participants were primed with money, there was no significant difference in their fear of rejection whether stereotype threat was present or absent ($p_s>.2$). Moreover, when the stereotype threat was present, participants who were primed with money reported significantly lower levels of fear of rejection ($M_{no}= 2.84$ vs. $M_{yes}=1.67$, $t(28)=2.53$, $p<.05$) than participants who were not primed with money.

Test of hypothesis 5. Analysis of a 2 (stereotype threat: absent vs. present) x 2 (money priming: no vs. yes) between subjects ANOVA with performance (number of assembled puzzles) as a dependent variable showed a significant main effect of money priming on performance ($M_{no}=37.66$, $M_{yes}=44.71$; $F(1, 63)=4.01$, $p=.05$). This main effect was qualified by a significant interaction of stereotype threat and money priming on performance ($F(1, 63)=5.07$, $p<.05$). As can be seen in figure 8, when participants were not primed with money, they performed significantly worse ($M_{absent}=43.53$ vs.

$M_{\text{present}}=31.00$; $t(30)=2.12$, $p<.05$) when the stereotype threat was present than when it was absent, replicating the findings of the previous studies. When participants were primed with money, there was no significant difference in their performance depending on whether the stereotype threat was present or absent ($p>.2$). Moreover, when the stereotype threat was present, participants who were primed with money performed significantly better ($M_{\text{no}}=31$ vs. $M_{\text{yes}}=47.60$, $t(28)=-2.35$, $p<.05$) than participants who were not primed with money. These results combined give full support to H5.

Tests of mediation and moderated mediation following the procedures outlined by Preacher and Hayes (2004), Preacher et al. (2007) and Zhao et al. (2010) showed that fear of rejection by the ingroup did not predict performance ($t=.77$, $p>0.2$) and consequently, did not mediate the relationship between stereotype threat and performance.

Figure 8: The Effect of Stereotype Threat and Money Priming on Fear of Rejection and Performance



Discussion

Results of this study show that stereotype threat created by dissociative groups is accompanied with a fear of rejection by the ingroup. More specifically, participants under stereotype threat experienced a higher fear of rejection by the ingroup than participants under no threat. Theories of stereotype threat have shown that members of negatively stereotyped groups face the threat in the presence of outgroup members (Inzlicht and Ben-Zeev 2000) and thus they are more to avoid outgroup members in situations that create stereotype threat (Lee et al. 2011). Moreover, people who are sensitive to rejection from outgroups are more likely to experience stereotype threat than people who are less sensitive to such rejection (Aronson and Inzlicht 2004). Based on these results, a potential difference between threat created by dissociative groups and stereotype threat in aspirational domains is related to the source of expected rejection: whether expected rejection originates from ingroup or outgroup members. The results of this study also show a method for reducing the threat of dissociative groups. Money priming not only reduces fear of rejection from one's ingroup when faced with threat of dissociative groups but also reduces the disruptive effect of the threat on performance.

In brief, this study has several contributions. Results helped establish that (1) stereotype threat created by dissociative groups is associated with a fear of rejection from one's ingroup, (2) methods used to alleviate self-sufficiency (i.e. money priming) can reduce the negative effect of the threat and (3) pop star fan groups can serve as dissociative groups. This is an addition to the dissociative group influence literature that employs more established social groups based on nationality, gender, or lifestyle (Berger and Heath 2008; White and Dahl 2007).

Chapter IV: Conclusions and Directions for Future Research

This research advances knowledge on how products linked to dissociative groups can threaten consumers who want to avoid being associated with these groups. Study one established that stereotype threat can take place in dissociative domains; men's performance was impaired when told that a gift wrapping task is diagnostic of their artistic ability, a trait that is stereotypically associated with women. Study one also showed that under threat people report lower levels of competence in the domain associated with dissociative groups, attempting to distance themselves from these groups. This reported competence mediates the relationship between threat and performance. Studies two and three showed that consumers facing the threat of dissociative groups try to signal that they have a low ability in the dissociative domain. They do so by engaging in a reverse self-handicapping strategy: they avoid attributing their expected poor performance to external/unstable factors thus blaming their expected failure on a lack of ability in the dissociative domain. Study three established that reverse self-handicapping mediates the relationship between threat and performance. Study four showed that signaling to consumers that they are not viewed as members of the dissociative group, attenuates the effect of the threat. Study five showed that the threat created by dissociative groups is accompanied by a fear of rejection from one's ingroup. Study five also showed that money priming, a method that decreases fear of rejection, reduces the effect of the threat.

Theoretical Contributions

This research extends the existing stereotype threat literature by showing that stereotype threat can be created by dissociative groups and that high identification with the stereotype-relevant domain is not a necessary factor for the threat to take place. Existing literature on stereotype threat postulated that individuals belonging to groups that are stereotyped to be lacking ability in a certain domain face a threat that impairs their performance in that domain (Steele 1997). This research emphasized that threat takes place in domains that individuals aspire to be good at, thus their effort to disconfirm the stereotype can backlash and lead to impaired performance (Steele et al. 2002; Steele 1997). This dissertation suggests that stereotype threat can also take place in domains that individuals dissociate from. Consumers belonging to groups that are stereotyped to be incompetent in certain domains face stereotype threat if these domains are stereotypically linked to dissociative groups. This threat originates from the consumers' effort to distance themselves from the dissociative group. In their effort to distance themselves from these groups, consumers try to confirm that they lack ability in the stereotype related domain thus impairing their performance.

This research challenges the belief that people always strive to appear competent (Covington 1984) by showing that when displaying high ability can associate the consumer with a dissociative group, consumers show interest in displaying low ability in the domain related to the dissociative group. Consequently, consumers facing the threat of dissociative groups engage in a strategy that is the opposite of self-handicapping. Consumers facing this threat try to ignore opportunities to blame expected poor performance on external or unstable factors, attributing blame to low innate ability. An

extensive examination of the psychology literature revealed that such a strategy has not been explored before.

Following the premise that consumers try to show low innate ability in domains linked to dissociative groups in order to avoid being seen as part of the dissociative group, this research introduced a method to attenuate the effect of the threat. Signaling to consumers that they lack the ability associated with the dissociative group, thus acknowledging that they are not seen as members of that group, attenuates the effect of the threat. This finding adds to theory by introducing a context in which informing people that they have low ability leads to enhancing performance.

This research also establishes that the threat taking place in dissociative domains is accompanied by a fear of rejection from one's ingroup. This research showed preliminary evidence that one's ingroup can be threatening when the consumer fears that departing from the stereotypical norms of their ingroup can result in rejecting them from the group. This finding adds to the understanding on how this type of threat differs from the threats created in aspirational domains. Unlike stereotype threat in dissociative domains, the literature on threat in aspirational domains postulated that such a threat is accompanied by a fear of rejection from outgroup members (Inzlicht and Ben-Zeev 2000). This research suggests that one difference between the two types of threat is related to whether consumers expect to be rejected by ingroup or outgroup members.

Managerial and Public Policy Contributions

The research has several managerial and public policy contributions. We live in an era where crossing traditional group boundaries has become a necessity of everyday

life thus understanding how people use products stereotypically linked to dissociative groups would be beneficial both for marketers and consumers. For example, the percentage of Canadian fathers who take paternal leave has increased in the last few years and reached 48% in Quebec and 10% in English Canada in 2006 (Marshall 2008). This new role for men is likely to be accompanied by consumption practices that were traditionally associated with dissociative groups (i.e. women). Therefore, it is important to understand how stereotypes shape the consumption experiences of individuals and what factors can make these experiences more pleasant. The findings can also form the basis for public policy strategies aimed at reducing the effects of dissociated group related stereotype threat in several fields. For instance, several scholars (Dyck et al. 2009; Meadus 2000) argue that with the current shortage of nurses in North America, it is imperative to attract and retain men to the nursing field. Addition, this research can be useful to public policy makers in other fields including those related to stigmatized health conditions. For example, it has been documented that some adults may refuse to wear hearing aids to avoid the stigma associated with hearing loss such as being old or mentally challenged (Kochkin 2000, 2007). Results of this dissertation suggest that reminders of self-sufficiency can reduce the fear of being negatively stereotyped and thus may motivate adult patients to be more proactive regarding stigmatized health issues including hearing loss.

The current research extends knowledge about the self-presentational strategy consumers are likely to use when faced with the threat of dissociative groups; people under threat reverse self-handicap in order to be viewed as incompetent in the stereotype relevant domain. The strategy of purposefully showing low ability to avoid being linked

to dissociative groups might be used in domains other than product usage. For example, immigrants of Asian origin are likely to face “Fresh off Boat” stigma; they are stereotyped to be nerdy. Children of immigrants try to avoid these negative stereotypes by distancing themselves from non-assimilated immigrants (Pyke and Dang 2003). Findings of this dissertation suggest that assimilated Asians may try to avoid the stigma associated with their ethnic group by purposefully showing that they lack scholastic competence.

One interesting finding of the current research is that signaling incompetence can actually attenuate the threat of dissociative groups. Marketers of products traditionally associated with dissociative groups can suggest that their brands are designed for incompetent users, thus encouraging consumers to buy and use these products. For example, marketers of gender-typed products can introduce washing machines, vacuum cleaners, and even diapers for dummies, this would encourage men to buy and use these products without experiencing the threat that results from signaling an undesired identity. Huggies, for example, ran an advertising campaign depicting fathers as incompetent and clueless when it comes to baby care including diaper changing. The advertisements suggested that the diapers hold up to the fathers’ incompetence. The success of the advertising campaign is arguable; however findings of this dissertation suggest that the advertisements can encourage men who are reluctant to engage in childcare chores due to self-image concerns to feel more comfortable to do so.

Limitations and Directions for Future Research

One interesting but puzzling finding of this research is that when reverse self-handicapping was measured prior to performance in study three, the direct effect of threat on performance disappeared. One explanation could be that whether reverse self-handicapping is measured prior to or after performance plays a role in the observed effect. Allowing participants under threat to reverse self-handicap prior to performing might have lowered their motivation to perform poorly. Thus, future research should look into whether the time of measuring reverse self-handicapping can change the direct effect of threat on performance.

The results of study four showed that inability signaling reduces the effect of stereotype threat created by dissociative groups. It is highly plausible that signaling inability to participants affirmed their gender group identity thus assuring them that performing well at the gift wrapping task will not risk them being viewed as part of the dissociative group. Unfortunately, in this study participants were not asked about how they felt about their gender group membership after the inability signaling manipulation.

In the same experiment, the gender of the confederate affected observed threat. Under the threat condition, participants performed worse when the confederate was female than when the confederate was male. It appears that the male confederate may have been viewed a role model for male participants. However, the male confederate only interacted with participants who were aware that the task was diagnostic of their ability and whose inability was not signaled. The fact that the male confederate did not interact with participants in all conditions hindered a more comprehensive understanding on whether the gender of the confederate has a main or interactive effect on the dependent variables. In other words, it is unclear whether in the presence of the male confederate

(role model) the threat would exist or disappear all together. Future research should consider the effect of having a role model on stereotype threat related to dissociative groups.

In study five, participants facing threat showed a high fear of rejection from their ingroup. Given that existing literature suggests that stereotype threat is associated with fear of rejection from the outgroup (Aronson and Inzlicht 2004), the finding that threat of dissociative groups is associated with fear of being rejected by one's ingroup adds to our understanding on the difference between both types of threat. However, in study five fear of rejection from the outgroup (the dissociative group) was not measured. Thus, there is no compelling evidence to conclude that the major difference between both types of the threat lies within the source of fear of rejection (ingroup or outgroup). Future research should explore in detail whether the source of fear of rejection distinguishes between both types of threat.

An issue of managerial relevance that remains to be explored is to test whether methods that increase self-sufficiency, other than money priming, can successfully reduce the effect of the threat of dissociative groups. Such research would be of importance to marketers given that they may not always be able to prime consumers with money in order to reduce the potential threat experiences by consumers. Self-sufficiency is defined as "an insulated state wherein people put forth effort to attain personal goals and prefer to be separate from others" (Vohs et al., 2006, p. 1154). Methods that motivate consumers to think of personal goals (e.g. reminders of personal success) may make them less prone of a fear of rejection and thus threat of dissociative groups.

Student participants were recruited in all studies. The findings of these experiments may or may not generalize to older populations. Future research should consider looking at how the effects observed in this dissertation apply to consumers other than university students.

One limitation of the five studies is that participants engaged in low risk consumption experiences (e.g. wrapping a gift box). In these situations there was no risk to participants if they did not perform well. However, the observed effects might not generalize to higher risk consumption situations. For example, a male nurse might not become careless in performing his job in the emergency room when faced with situations where he wants to distance himself from female nurses. The effect of stereotype threat created by dissociative groups when perceptions of the risk of poor performance are high is an area that remains to be investigated.

Another issue that remains to be explored is related to whether positive stereotypes can create a threat. For example, African Americans are stereotyped to have high athletic ability. While this stereotype is positive, it might have a negative effect when the hard work of African American athletes is taken lightly thus attributing their athletic success to high innate ability only. Future research should explore the situations where people belonging to positively stereotyped groups show low innate ability in the stereotyped domain in order to avoid having their hard work and dedication discredited.

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Appendix A: Study One Experimental Materials

Cover Story

Seasonal Employment Opportunities:

[...] Gift giving is one of the most valued traditions in our society. Every year, in festive seasons like Christmas, gift sales increase extensively and so does demand for gift wrapping, thus creating high demand for occasional gift wrapping employees.

A few years ago, a Manitoban entrepreneur started a company that offers a variety of outsourcing services; one of these services is providing large stores with trained gift wrapping employees.

The company mostly hires female university students, trains them, and sells their services to the stores. Currently, the company has over 250 employees. Most of these employees work on a part-time basis. According to the company owner, being highly artistic is the most important qualification required to get a job in the company, maybe that's why 75% of the employees are females.

Since the employees are well trained, they are paid relatively high salaries ranging from \$15 to \$22 per hour, based on their experience and skills. This year, demand for such employees is expected to rise.

Please give us your opinion about the news article you have just read. Circle the appropriate number on the following scales to reflect your opinion about the article.

Unbelievable	1	2	3	4	5	6	7	Believable
Untrustworthy	1	2	3	4	5	6	7	Trustworthy
Not convincing	1	2	3	4	5	6	7	Convincing
Not credible	1	2	3	4	5	6	7	Credible

Unreasonable	1	2	3	4	5	6	7	Reasonable
Dishonest	1	2	3	4	5	6	7	Honest
Unlikely	1	2	3	4	5	6	7	Likely
Not authentic	1	2	3	4	5	6	7	Authentic
Inconclusive	1	2	3	4	5	6	7	Conclusive
Not relevant to me	1	2	3	4	5	6	7	Relevant to me
Not Interesting	1	2	3	4	5	6	7	Interesting
Not personally Important	1	2	3	4	5	6	7	Personally Important

Manipulation: Threat Absent

In the following task, we are asking you to wrap a gift box. This task is designed to test the wrapping tools and materials.

You will have six minutes to try to wrap a gift box. Please let the session attendant know when you are ready to start the task. He/she will provide you with the wrapping materials and set an electronic time countdown on your PC. Please don't start wrapping the box until the attendant set the countdown for you, and stop wrapping when the time is up (even if you were not done yet). If you were done in less than the six minutes, please let the session attendant know as soon as possible, so he/she can record the time it took you to finish the task.

You will be provided with a gift box, wrapping paper, ribbon, scissors, and tape. You can use the scissors to cut the wrapping paper or ribbon into the size you prefer.

Manipulation: Threat Present

In the following task, we are asking you to wrap a gift box. This task is designed to test your artistic abilities.

You will have six minutes to try to wrap a gift box. Please let the session attendant know when you are ready to start the task. He/she will provide you with the wrapping materials and set an electronic time countdown on your PC. Please don't start wrapping the box until the attendant set the countdown for you, and stop wrapping when the time is up (even if you were not done yet). If you were done in less than the six minutes, please let the session attendant know as soon as possible, so he/she can record the time it took you to finish the task.

You will be provided with a gift box, wrapping paper, ribbon, scissors, and tape. You can use the scissors to cut the wrapping paper or ribbon into the size you prefer.

Measures

Identification with the Arts Domain

- Being artistic is important to me
- Being artistic is part of who I am
- I am more artistic than most people I know

Stereotype Threat Manipulation Check

- The purpose of the task is to test your artistic ability

Reported Competence

- I felt smart
- I felt talented
- I felt Competent

- I felt Intelligent
- I felt Creative

Performance

- The gift box is wrapped properly
- The gift box is elegant
- The gift box is presentable

Appendix B: Study Two Experimental Materials

Cover Story

Seasonal Employment Opportunities:

[...] Gift giving is one of the most valued traditions in our society. Every year, in festive seasons like Christmas, gift sales increase extensively and so does demand for gift wrapping, thus creating high demand for occasional gift wrapping employees.

A few years ago, a Manitoban entrepreneur started a company that offers a variety of outsourcing services; one of these services is providing large stores with trained gift wrapping employees. What is interesting about this company is that it offers varied styles of gift wrapping that can be described as original, complex, and highly artistic.

The company mostly hires female university students, trains them, and sells their services to the stores. Currently, the company has over 250 employees. Most of these employees work on a part-time basis. According to the company owner, being highly artistic is the most important qualification required to get a job in the company, maybe that's why 75% of the employees are female.

The company pays its employees relatively high salaries ranging from \$15 to \$22 per hour, based on qualifications. This year, demand for such employees is expected to rise.

Please give us your opinion about the news article you have just read. Circle the appropriate number on the following scales to reflect your opinion about the article.

Unbelievable	1	2	3	4	5	6	7	Believable
Untrustworthy	1	2	3	4	5	6	7	Trustworthy
Not convincing	1	2	3	4	5	6	7	Convincing

Not credible	1	2	3	4	5	6	7	Credible
Not personally Important	1	2	3	4	5	6	7	Personally Important

Manipulation: Threat Absent

In this study we would like to ask you to wrap a gift box using one of the company’s methods. The task is relatively complicated. The purpose of this task is to test the gift wrapping materials. How artistic you are will not be our concern.

Since the primary task is complicated, we will give you eight minutes to train by performing an ordinary gift wrapping task. We will provide you with gift wrapping materials and set an electronic time countdown on your PC. We will not evaluate how good you are in wrapping the box in the training task, but we will keep track of the time you spent training because we might need it later to interpret how you performed in the primary task and how you feel about it.

Please let the session attendant know when you are ready to start the training. Please don’t start wrapping the box until the attendant sets the countdown for you. Stop wrapping when the time is up (even if you were not done yet). If you were done in less than the eight minutes, please let the session attendant know as soon as possible, so she/he can record the time it took you to finish the training task. Once you are done with the training task, the lab attendant will give you a short questionnaire and then give you directions on how to go about the primary task.

At any time, if you feel that you had enough training, you can move on to the primary task even without completing the training task. Just let the lab attendant know that you need to move on.

Manipulation: Threat Present

In this study we would like to ask you to wrap a gift box using one of the company's methods. The task is relatively complicated. The purpose of this task is to test your artistic ability. How artistic you are will be our major concern.

Since the primary task is complicated, we will give you eight minutes to train by performing an ordinary gift wrapping task. We will provide you with gift wrapping materials and set an electronic time countdown on your PC. We will not evaluate how good you are in wrapping the box in the training task, but we will keep track of the time you spent training because we might need it later to interpret how you performed in the primary task and how you feel about it.

Please let the session attendant know when you are ready to start the training. Please don't start wrapping the box until the attendant sets the countdown for you. Stop wrapping when the time is up (even if you were not done yet). If you were done in less than the eight minutes, please let the session attendant know as soon as possible, so she/he can record the time it took you to finish the training task. Once you are done with the training task, the lab attendant will give you a short questionnaire and then give you directions on how to go about the primary task.

At any time, if you feel that you had enough training, you can move on to the primary task even without completing the training task. Just let the lab attendant know that you need to move on.

Measures

Identification

- How important is it to you to be good at arts

- How much is arts important to the sense of who you are
- Compared to other students, how good are you at arts

Stereotype Threat Manipulation Check

- The purpose of the task is to test your artistic ability

Appendix C: Study Three Experimental Materials

Cover Story

Native Talents

Several Aboriginal community centres are collaborating in an interesting venture. In their project, members of the community centres are capitalizing on their Native heritage by producing several Aboriginal artifacts and selling them to souvenir shops all over Manitoba. It has been two years since the successful venture was first launched. Today, two hundred talented Aboriginals are cooperating to produce high quality hand-made artifacts. The venture produces a large array of products including Native Jewelry, dream catchers, and medicine pouches. In an effort to increase awareness about Aboriginal artifacts in general, and about the venture in specific, the community centres involved in the venture will set up a booth at U of M University Centre to show their products. Students will also have a chance to learn how to make Aboriginal artifacts.

In the following, please indicate how you feel towards this business "Native Talents":

Bad	1	2	3	4	5	6	7	Good
Dislike	1	2	3	4	5	6	7	Like
Useless	1	2	3	4	5	6	7	Useful
Unpleasant	1	2	3	4	5	6	7	Pleasant
Unfavourable	1	2	3	4	5	6	7	Favourable
Negative	1	2	3	4	5	6	7	Positive
Worthless	1	2	3	4	5	6	7	Worthy

Threat Manipulation: Threat Absent

In the following task, we are asking you to create a native medicine pouch. This task is designed to test the materials used in producing Native crafts. You will have eight minutes (480 seconds) to try to make the pouch. Please let the session attendant know when you are ready to start the task. He/she will provide you with the materials used to make a pouch. You will be shown how a pouch looks like before you start the task. We will keep track of the time you spent on the task because we might need it later to understand your experience. The screen will show a countdown timer that will automatically record how long you took to finish the task. Please don't start working on the pouch until the countdown appears on the screen. Please stop working when the time is up (even if you were not done yet). If you were done in less than the eight minutes, please press next and you will view several question designed to evaluate your experience. Before you start the task, we would like you to answer some questions.

Threat Manipulation: Threat Absent

In the following task, we are asking you to create a native medicine pouch. This task is designed to test your ability in producing Native crafts. You will have eight minutes (480 seconds) to try to make the pouch. Please let the session attendant know when you are ready to start the task. He/she will provide you with the materials used to make a pouch. You will be shown how a pouch looks like before you start the task. We will keep track of the time you spent on the task because we might need it later to understand your experience. The screen will show a countdown timer that will automatically record how long you took to finish the task. Please don't start working on the pouch until the countdown appears on the screen. Please stop working when the time is up (even if you were not done yet). If you were done in less than the eight minutes,

please press next and you will view several question designed to evaluate your experience. Before you start the task, we would like you to answer some questions.

Measures

Manipulation Check

- The task was only designed to test the supplies

Social Distance from Aboriginals

- I would be bothered by having Aboriginal classmates
- I would be bothered by having Aboriginal teachers
- I would be bothered by having Aboriginal neighbours
- I would be bothered by having Aboriginal houseguests

Self-Handicapping

As you know, student life is sometimes stressful, and we might not always get enough sleep or feel at our best. Lack of sleep, general stress, along with other factors do affect eye-hand coordination and are likely to affect your medicine pouch making experience. Then, it will be necessary to ask you how you feel before engaging in the task. Please choose the number that best describes your level of agreement with the following statements:

- Lately, I have been feeling stressed out
- The research session was long so I'm feeling tired
- I had a long day today

- The station where I am seated is uncomfortable for craft making

Performance

- The gift box is wrapped properly
- The gift box is elegant
- The gift box is presentable

Appendix D: Study Four Experimental Materials

Manipulation: Threat Absent

<p style="text-align: center;"><i>Company</i></p> <ul style="list-style-type: none">• Launched in 2006 and based in Winnipeg• We provide large stores with trained gift wrapping employees• More than 50 employees• We offer several styles of gift wrapping that can be described as original, complex, and highly artistic.• Being highly artistic is what differentiates us from competition	<p style="text-align: center;">Today's Task</p> <ul style="list-style-type: none">• We are doing market research about the new gift wrapping materials to use this Christmas• We would like to ask you to wrap a gift box and then give your opinion about the materials• We are NOT interested in how artistic you are in wrapping the gift box
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Manipulation: Threat Present

<p style="text-align: center;"><i>Company</i></p> <ul style="list-style-type: none">• Launched in 2006 and based in Winnipeg• We provide large stores with trained gift wrapping employees• More than 50 employees• We offer several styles of gift wrapping that can be described as original, complex, and highly artistic.• Being highly artistic is what differentiates us from competition	<p style="text-align: center;">Today's Task</p> <ul style="list-style-type: none">• We are doing market research about the new gift wrapping materials to use this Christmas• We would like to ask you to wrap a gift box and then give your opinion about the materials• We are interested in how artistic you are in wrapping the gift box since the way people rate the materials is correlated with their artistic ability
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Measures

Threat Manipulation Check

- The gift wrapping task is not related to my artistic ability

Inability signaling manipulation check

- The company hires more women than men

Reported Competence

- I felt smart
- I felt talented
- I felt Competent
- I felt Intelligent
- I felt Creative

Performance

- The gift box is wrapped properly
- The gift box is elegant
- The gift box is presentable

Appendix E: Study Five Experimental Materials

Cover Story

This study is being conducted in collaboration with the department of cognitive psychology. This research is looking at individual differences that predict people's capacity to perform cognitive tasks. Our previous research found that people who are fans of pop stars are better at performing a cognitive task when the task is associated with the star they are fans of. For example, our research found that fans of Jennifer Lopez perform better in memory tasks than non fans when the words to be memorized can be used to describe her. On the other hand, fans of Kid Rock had a higher ability than non fans in assembling a jigsaw puzzle that has his picture. We are extending this research by looking at cognitive tasks that are associated with Justin Bieber. You will be given a Justin Bieber puzzle and will be given 10 minutes to try to put the puzzle together. You will also be asked several questions about your experience.

Manipulation: Threat Absent

The purpose of this study is to test the experimental materials we are using in the future. We are NOT testing your ability in assembling the Justin Bieber puzzle. We will keep track of the time you take to assemble the puzzle. Please let the lab attendant know that you are ready, so he/she can provide you with the puzzle.

Manipulation: Threat Present

The purpose of this study is to test your ability at assembling the Justin Bieber puzzle. We will keep track of the time you take to assemble the puzzle. Please let the lab attendant know that you are ready, so he/she can provide you with the puzzle.

Measures

Attitude towards Justin Bieber Fans (Pre-test)

- I admire fans of Justin Bieber
- I like fans of Justin Bieber
- I feel sympathetic towards fans of Justin Bieber

Threat Manipulation Check

- The purpose of the task is to test your ability at assembling the puzzle

Money Priming Manipulation Checks

- In the following, please complete the word by adding the missing letters. For example, Fa __ __ (two letters missing) can be the word "farm".

Wo __ __ Co __ __ For __ __ __ __ __ __ __ __ th

Tr __ __ Ca __ __ Be __ __ Sp __ __ __

Pa __ __ __ L __ __ __ D __ __ __ Ba __ __

Ch __ __ __ __ Do __ __ __ __

Fear of Rejection from Ingroup

- My friends might reject me if I showed an ability in assembling the puzzle
- My friends would reject someone who is competent in assembling a Justin Bieber puzzle
- If I did well in the task, I might be excluded from my social surrounding

Appendix F: Sample Consent Form

(This Consent Form was Printed on Institutional Letterhead)

We would like to invite you to participate in a research study conducted by Dr. Sergio Carvalho of the I. H. Asper School of Business at the University of Manitoba, who may be reached at either 474-8878 or at carvalho@cc.umanitoba.ca.

In this study, you will be asked to read and evaluate a news article about a company. You will also be asked to use and evaluate materials used by the company. Please note that you might be asked to use scissors. Let the lab attendant know if you are not comfortable taking this study.

Your signature on this form indicates that you have understood to your satisfaction the information regarding participation in the research project and agree to participate as a subject. In no way does this waive your legal rights nor release the researchers, sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw from the study at any time, and /or refrain from answering any questions you prefer to omit, without prejudice or consequence. Your continued participation should be as informed as your initial consent, so you should feel free to ask for clarification or new information throughout your participation.

Please also be assured that your responses to all questions will remain completely confidential. There is absolutely no way to trace your responses back to you.

The Joint-Faculty Research Ethics Board at the University of Manitoba has approved this research. Should you have any complaints you may contact the Human Ethics Secretariat at 474-7122 or e-mail margaret_bowman@umanitoba.ca.

Thank you for taking the time to consider being a part of this research activity.

Please check one:

I **do agree** to participate in the study described above.

I **do not agree** to participate in the study described above.

Name: _____

Signature: _____

I confirm that I am over 18 years of age

Date: _____