

The Effects of Stigma Awareness on the Self-Esteem of Singles

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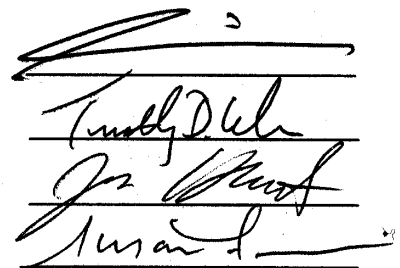
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## Abstract

Most of the research concerning the effects of stigma on self-esteem involves groups that are publicly acknowledged as stigmatized (e.g., African-Americans, women, obese people, etc.). Very little is known about how people cope when they first learn they are members of a stigmatized group. This series of experiments explores how stigma awareness affects self-esteem among singles. Although recent research indicates that single people are the victims of negative stereotyping and discrimination, there is little public recognition of the fact that singles are a stigmatized group. This current lack of stigma awareness among singles provides a unique opportunity to learn how awakening to a previously unacknowledged stigma affects self-esteem.

Experiment 1 confirmed the hypothesis that most singles do not recognize the stigma of being single. Experiments 2, 3, and 4 each explored the impact stigma awareness has on the self-esteem and mood of singles. When the results across the 3 experiments were combined in a meta-analysis, I found no evidence that stigma awareness harms self-esteem; there were also small positive effects of stigma awareness, primarily for women. Possible reasons for the inconsistencies across the three experiments and the gender differences are discussed.

Experiment 3 also tested the hypothesis that stigma awareness would improve self-esteem if singles could reject the validity of the negative stereotypes about their group. This hypothesis was supported among participants, particularly women, who believed the stereotypes were true of most singles and true of them personally.

Experiment 4 tested the hypothesis that stigma awareness would improve self-esteem if singles were encouraged to revise their earlier attributions for past negative experiences from internal to external causes (a process referred to as rearview revision). Although people who were instructed to think about their past negative experiences felt marginally better about themselves if they reported changing their past attributions, in general, participants who thought about their past did not have higher self-esteem than those who were not instructed to think about their past.

## Dedication

I would like to dedicate this dissertation to the many people who made the completion of my doctoral work possible and even enjoyable as well as those who supported me while thinking such an undertaking was sheer madness.

? Janus for his loving support, humor, endless hours of childcare, and for typing one of the appendices. If there are any typos in Appendix D, please blame him.

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## Introduction

Most of the research on stigma examines groups that are publicly acknowledged as stigmatized (e.g., African-Americans, homosexuals, obese people, etc.) and we have learned a great deal about how people react to the realization that they may have been personally discriminated against on the basis of a known stigmatized group membership (e.g., Crocker & Major, 1989; Major, Kaiser, & McCoy, 2003; Major & Shmader, 1998; Major, Quinton, & Shmader, 2003). However, it is essentially too late to learn how members of stigmatized groups, such as African-Americans or obese people, react to first learning that their groups are stigmatized because it would most likely be difficult to find an African-American or obese person who is not aware of the stigma and differential treatment associated with his or her membership in these groups. For this reason, we currently know very little about how people react when they first learn they are members of a group that is stigmatized.

The following set of studies examines how people react and adjust to the *new* awareness that one's group is vulnerable to prejudice and discrimination. Specifically, I hypothesize that becoming aware of a stigma one has possessed for some time will increase self-esteem. I hypothesize that this boost in self-esteem will be more likely to occur if people can reject the negative stereotypes about their group or if they can make retrospective external attributions for past negative experiences. The following set of studies explores the experience of awakening to a stigma among singles, a group of people who do not currently realize their group is stigmatized in our society.

## Singles: An Unacknowledged Stigmatized Group

Schneider, Major, Luhtanen, and Crocker's definition of social stigma (1996) quite aptly describes the experience of many singles. According to these authors, "people who are stigmatized are the target of negative stereotypes, are generally devalued in the larger society, and receive disproportionately negative interpersonal and economic outcomes. Members of stigmatized groups are often suspected of being inferior to members of nonstigmatized groups." Failure or latency in achieving what is considered to be a very important life task in our society, the act of marrying, leads to a great deal of social disapproval from others (Marini, 1984; Rook, Catalano & Dooley, 1989). Singles are assumed to have "blemishes of individual character," a type of stigma described by Goffman (1963), as evidenced by the fact that people often assume singles must possess some underlying personality flaws preventing them from marrying (Schwartzberg, Berliner, & Jacob, 1995; Van Dusen, 1994). The longer one remains single, the stronger the stigma (Morris, DePaulo, Hertel, & Ritter, 2005). The glorification of marriage in our society and the commonly held perception that married people are more valuable than singles leads to stereotyping and discrimination against singles, a phenomenon called singlism (DePaulo & Morris, 2005a).

*Negative stereotypes of singles.* Singles are the target of negative stereotypes, both explicit and implicit. In an adult community sample (ages 18-81), we found that people perceived singles in more negative ways than married people and that the negative stereotypes of singles increased with the age of the target (Morris, DePaulo, et al. 2005). Participants considered singles less well-adjusted, less socially mature, less exciting, and more self-centered and envious. Single men and single women were perceived in equally

negative ways. As evidence that singles have internalized the negative stereotypes about their group, single participants, particularly single women, also rated single targets more negatively than married targets. Moreover we have found that singles hold negative implicit attitudes towards their own group as well (Ritter, Morris, & Sinclair, 2002).

*Discrimination against singles.* The negative stereotypes of singles have implications in many contexts. Singles receive negative economic as well as interpersonal outcomes. Based on the stereotype that singles are more career-oriented and do not have as many outside obligations or interests (Morris, DePaulo, et al; 2005), employers often expect singles to work overtime and during the holidays while receiving fewer financial benefits than their married peers (Burkett, 2000). In general, single men earn less than married men and receive fewer promotions across a range of professions (Budig & England, 2001; Keith, 1986; Toutkoushian, 1998). Interestingly, most states do not have laws prohibiting employers from discriminating on the basis of marital status ([www.singlesrights.com/ms-statutes.htm](http://www.singlesrights.com/ms-statutes.htm)). Singles are also discriminated against in their housing options as evidenced by the fact that it is more difficult for single people to gain approval for a mortgage than married people (“Couple,” 2000). Furthermore, we have found evidence that landlords prefer to lease their properties to married couples over various types of singles (Morris, Sinclair, & DePaulo, 2005). In this series of experiments, participants imagined they were landlords and chose one of three potential tenants to whom they would most prefer to lease a property. Participants overwhelmingly chose to lease their properties to married couples rather than to single men or single women (Experiment 1) and rather than to unmarried, cohabiting, romantic partners or pairs of friends (Experiment 2). In fact, a Michigan judge upheld the rights of

landlords to deny renting to single people or cohabitating couples if they so choose (“Michigan,” 2000). Single people also have more difficulty when trying to gain approval for adopting children or in vitro fertilization (Millbank, 1997).

Singles are also discriminated against socially. Once people marry, they tend to socialize with other married friends rather than single friends (Verbrugge, 1983). Singles often feel abandoned by their married friends or feel like second class citizens on the infrequent occasions when they are invited to socialize with couples (Amador & Kiersky, 1998). When singles socialize with married friends and family, they often feel that their needs are not given as much respect, couples tend to make most of the decisions for them, and they are treated as if they are less than fully adult (Amador & Kiersky, 1998; Schwartzberg, et al., 1995). Furthermore, being single makes one vulnerable to “friendly fire” which Amador and Kiersky define as critical, undermining comments from loved ones who are seemingly trying to be helpful in rescuing their friends and family from singlehood but whose help is interpreted by singles as negative judgment.

Although discrimination against singles is pervasive, recent research has shown that people generally accept the legitimacy of marital status discrimination but become outraged by more publicly recognized types of discrimination (Morris, Sinclair, & DePaulo, 2005). In one experiment, participants read about an example of blatant discrimination based on marital status, race, gender, sexual orientation, age, or weight. Compared to participants who read about the other types of discrimination, those who read about marital status discrimination were more likely to rate the outcome as legitimate and were less likely to surmise that the discriminatory decision was based on

stereotypes and prejudice. It seems that people are not accustomed to thinking in terms of the fact that being single is associated with stereotypes and prejudice.

### Singles: On the Verge of Stigma Awareness

Although discrimination against singles is largely unacknowledged, there have been signs over the past few years that our culture is on the verge of awakening to the fact that singles are a stigmatized group. While the majority of books about singles focus on how to find a mate, books about the stigma and the negative interpersonal and economic consequences of being single are becoming more common (e.g., DePaulo, 2005). Books by Amador & Kiersky (1998) and Schwartzberg, et al. (1995) provide instructions for singles and therapists about how to cope with being devalued interpersonally on the basis of one's marital status. Burkett's controversial book (2000) exposes the many ways in which singles and people without children receive unfair treatment and fewer financial benefits in the workplace. Also, new courses dedicated to studying singles are sprouting up at Universities (Sonoma State University, 2002; University of Virginia, 1999) and a recent book on stigma now includes a chapter about the stigma of being single (Falk, 2001). Some scholars believe that the study of singles will become even more common in the years to come (e.g., Crandall & Warner, 2005; DePaulo & Morris, 2005b).

These signs of dawning stigma awareness can also be heard in politics and the news. When Vermont and Hawaii first enacted laws granting same-sex couples rights previously only granted to married people (e.g., inheritance rights, insurance discounts,

medical decision-making for loved ones), some people began to question why these rights should only be reserved for people in legally sanctioned relationships (Nader, 2000). Two recently founded organizations, the American Association of Single People and the Alternatives to Marriage Project aim to educate politicians and the general public about the prevalence of marital status discrimination. One of these groups began a “National Singles Week” in response to the Census Bureau report (2000) indicating that nearly half of the nation’s households are led by single people. Since that statistic was published, the *New York Times* has printed numerous articles and editorials about singles, National Public Radio ran its first month-long series about being single in America (June, 2002), and *Businessweek* ran a cover story about discrimination against singles and the changing place of singles in society (2003). Thus it seems that our society is on the verge of realizing that an ever-increasing population, singles, is the target of negative stereotypes and pervasive discrimination.

This moment in history gives us a unique opportunity to study how people cope with the new awareness that their group is stigmatized. I hypothesize that, despite the signs that people are just beginning to think about and recognize the stigma of being single, most singles still lack stigma awareness. If this true (and Experiment 1 will explore this assumption), then singles would be a group in which one could explore the effects of newfound stigma awareness on self-esteem.

## The Relationship between Stigma Awareness and Self-Esteem

I am interested in examining how stigma awareness impacts the self-esteem of people who did not previously know their group was stigmatized. This dissertation research on stigma awareness builds on and is guided by the extant literature on feminist consciousness-raising and recent stigma research examining the psychological impact of perceiving group-based discrimination. These literatures seem to make divergent predictions regarding the impact of stigma awareness. Some of the literature on feminist consciousness-raising suggests that awakening to the negative consequences of a stigmatized group membership may increase self-esteem (deMan & Benoit, 1982; Smith, 1999; Weitz, 1982). However, the results from this field of research have been somewhat mixed with other studies finding no self-esteem related benefits of consciousness-raising (Highly, 1998; Rodin, 1995). Contrary to the notion that consciousness-raising increases self-esteem, Branscombe, Schmitt, & Harvey (1999) found that perceiving pervasive discrimination against one's group negatively affects well-being unless one is strongly identified with the in-group. These two literatures can be reconciled by noting an important distinction between the research of Branscombe et al. and the research on feminist consciousness-raising: Branscombe et al.'s participants have been members of stigmatized groups which are publicly acknowledged as stigmatized whereas consciousness-raising, by definition, can only occur among people who have not previously acknowledged their group's stigma. Thus it seems that awakening to a stigma for the first time is distinctly different from the general perception of pervasive discrimination as studied by Branscombe et al. and different coping strategies may be used in these two different situations. The current line of research will examine whether

becoming aware of a stigmatized group membership increases self-esteem and if so, what moderators increase or decrease this effect.

Much of what we know about how people cope with stigma indicates that people who know they are stigmatized can protect their self-esteem using various coping strategies. Contrary to the assumptions of earlier researchers that being in a stigmatized group harms self-esteem (Clark & Clark, 1958; Lewin, 1948), Crocker & Major (1989) found that when people experience an instance of personal discrimination they manage to protect their self-esteem using three primary coping mechanisms: attributing negative feedback to prejudice, comparing outcomes with in-group rather than out-group members, and devaluing domains in which their group fares poorly. It has been argued that although perceiving one's *group* as the target of pervasive discrimination can harm self-esteem (e.g., Branscombe et al., 1999) by making one's environment seem threatening, people can protect their self-esteem from their own *personal* experiences of discrimination by using the coping mechanisms previously mentioned (See Major, Quinton, & McCoy, 2002). These coping mechanisms can be used to explain the surprisingly high self-esteem of African-Americans and other stigmatized groups (Gray-Little & Hafdahl, 2000; Twenge & Crocker, 2002).

While perceiving pervasive discrimination against one's group may harm self-esteem, it is possible that initially learning one's group is stigmatized could benefit self-esteem if one sees the personal relevance of the new information by recalling one's own past personal experiences of being treated negatively based on the stigmatized group membership. Stigma awareness could also benefit self-esteem if it is accompanied by an



acknowledgment that discrimination against one's group is unjustified and thereby illegitimate.

## Hypotheses

I hypothesize that the powerful experience of stigma awareness leads people to reinterpret their life experiences and perceptions of the world around them through the lens of the newly recognized stigma they have long possessed. I argue that newfound stigma awareness is experienced as a revelation or an "a-ha" moment in which one's life begins to make sense in a new way. I predict that awakening to a stigma will enhance self-esteem if one can revise earlier attributions for a past negative experience or if one can reject the negative stereotypes about one's group.

*Rearview revision.* I refer to the process of revising one's attributions for past negative events from internal to external causes as rearview revision and I hypothesize that rearview revision can improve the self-esteem of people who have just become aware of their group's stigma. By definition, stigmatized groups members are subject to a disproportionate number of negative outcomes due to stereotyping, prejudice, and discrimination. According to Crocker & Major (1989), attributing these negative outcomes to prejudice rather than personal failure protects self-esteem. Prior to realizing that one's group is stigmatized, one does not have the opportunity of attributing negative outcomes to prejudice (Crocker & Major, 1994). Without the option of external attribution, stigmatized individuals may suffer a decrease in self-esteem as a function of the negative evaluations and treatment they experience (Crocker, Voelkl, Testa, & Major,

1991). Therefore, when single people finally realize that their group is the target of prejudice, their self-esteem will improve if they reinterpret and revise their perceptions of their past by making retrospective external attributions of blame for many negative experiences. Although Branscombe et al. (1999) found that perceiving pervasive discrimination against one's group can harm self-esteem, rearview revision will protect self-esteem because people will focus their attention on their own personal experiences of discrimination rather than just focusing on the pervasive discrimination against their group.

*Rejection of negative stereotypes.* If people can reject the negative stereotypes of their group upon learning of their group's stigma, this should improve their self-esteem as well. Early stigma theorists predicted that culturally held negative evaluations of one's group cause one to internalize those negative stereotypes thereby decreasing self-esteem (Clark & Clark, 1958; Lewin, 1948). However, recent research has shown that members of publicly acknowledged stigmatized groups do not suffer from low self-esteem today (Gray-Little & Hafdahl, 2000) and this may be because they have rejected the validity of the negative stereotypes of their group. Twenge & Crocker (2002) noted that the self-esteem of African-Americans began to surpass that of Caucasian-Americans after the civil rights movement. This finding could be explained by the fact that low-status group members are more likely to evaluate their in-group in a positive manner if they do not think the differences between the groups are justified (e.g., if they think the negative stereotypes of their group have no validity) (Jost, 2001). The civil rights movement is an example of the collective recognition that group differences were unjustified and the collective rejection of negative stereotypes (e.g., "black is beautiful"). Consistent with

my hypothesis, stigmatized people who do not believe the negative stereotypes about their group have higher self-esteem (Chassin & Stager, 1984). The unrecognized nature of prejudice against singles denies singles the coping strategy of rejecting negative cultural stereotypes by acknowledging them as the product of societal bias. For example, many singles believe the negative stereotypes of singles are true (Morris, DePaulo, et al., 2005; Ritter, Morris, & Sinclair, 2002). I predict that the process of stigma awareness allows one to question the validity of and then reject culturally accepted negative stereotypes thereby increasing self-esteem. Although perceiving pervasive discrimination against one's group can harm self-esteem (Branscombe et al, 1999), when stigma awareness is accompanied by an acknowledgment that the stereotypes about one's group are invalid thereby de-legitimizing the discrimination, this should improve self-esteem.

## Summary

Although singles are stigmatized, I expect that there is currently little awareness among most singles that their group is vulnerable to stereotyping, prejudice, and discrimination. If confirmed, this lack of awareness would provide a unique opportunity to explore how people are affected when they first realize their group is stigmatized. I hypothesize that newfound stigma awareness will enhance self-esteem, particularly for those who do rearview revision (i.e., make external attributions for negative past experiences) and those who reject the validity of the negative stereotypes about their group.

Experiment 1 examines the assumption that singles are relatively unaware of their stigmatized status. Experiment 2 explores the impact of stigma awareness on self-esteem. I predict that self-esteem will increase when singles learn of the stereotypes and discrimination their group faces. Experiments 3 and 4 test the hypotheses that rearview revision and the rejection of negative stereotypes will improve the self-esteem of those who become aware of their group's stigma. Because the stigma of being single increases as people get older (Morris, DePaulo, Hertel, & Ritter, 2005) and because there is a popular conception that being a single woman is more stigmatizing than being a single man (e.g., there is no parallel term for "old maid" describing a single man), both the age and gender of participants will be taken into account in the analyses.

## Experiment 1: Are Singles Aware of the Stigma of Being Single?

In order to explore the effects stigma awareness, I must first show that members of the stigmatized group of interest are indeed unaware of their group's stigma. Experiment 1 tests the assumption that the stigma of being single and the negative consequences associated with this stigma are generally unacknowledged by singles today. In other words, I hypothesized that, in contrast to members of publicly acknowledged stigmatized groups (e.g., African-Americans and women), the majority of singles would not think of their group as stigmatized.

### Method

*Participants.* One hundred and forty participants (71 men and 69 women) participated in this experiment in return for \$5. The median age of participants was 38 and the age range was 18 to 88. Forty-four of the participants were single and not currently in romantic relationships, 20 were legally single but in romantic relationships, 10 were legally single but cohabiting with their romantic partners, 10 were divorced, 2 were separated, 9 were widows, 6 were engaged, 38 were married, and 1 did not provide this information. One hundred and three of the participants were Caucasian, 16 were African-American, 9 were Asian, 2 were Latino, 1 was Native American, 1 was Indian, 6 were of mixed ethnicity, 1 did not provide this information, and 1 listed "Kentucky Derby" as his race. The range of income was zero (unemployed) to over \$100,000 with the median income falling in the range of \$20,000-\$30,000. Participants' highest

educational degrees were as follows: 3 had not completed high school, 24 completed high school, 28 were currently enrolled in college, 35 had completed college, 47 had achieved advanced degrees beyond college, and 2 did not provide this information.

*Procedure and materials.* Participants learned about the opportunity to participate in this experiment when they passed an experiment table with a sign advertising the study outside of a grocery store or at an outdoor shopping area. The sign said that people 18 and over would be paid \$5 to be part of research sponsored by the University of Virginia. In the first part of the experiment, all participants listed any groups or categories to which they belonged that they thought were the targets of negative stereotypes and/or discrimination. Because I did not expect that many singles would list their marital status as a stigma in this spontaneous listing task, participants were subsequently given a checklist of groups to which they might belong. The list of groups included singles, more obviously stigmatized groups (e.g., African-Americans), as well as non-stigmatized groups (e.g., cooking enthusiasts). Participants circled a yes or no to answer the following two questions about each group: “Are you a member of this group?” and “Is this group the target of negative stereotypes and/or discrimination?” See Appendix A for experimental materials.

## Results

In the first part of the experiment where people spontaneously mentioned any stigmatized groups they were members of, only 4% of single participants listed singles as a stigmatized group. When explicitly asked if singles were stigmatized in the checklist

task, both singles and non-singles largely failed to acknowledge singles as a stigmatized group. Only 30% of singles reported that singles are a stigmatized group; in contrast, 100% of gay people, 90% of obese people, and 86% of African-Americans acknowledged their group's stigma. Similarly, among non-group members, only 23% of people thought singles were stigmatized while 78% thought gay people were stigmatized, 78% thought obese people were stigmatized, and 83% thought African-Americans were stigmatized. See Table 1.

Given the popular conception that it is worse to be a single woman than a single man, I wanted to explore whether single men or single women were more likely to recognize the stigma of being single. A 1-way ANOVA was conducted with sex as the independent variable and the checklist task question, "Is this group [singles] the target of negative stereotypes and/or discrimination," as the dependent variable. This analysis found that men and women were equally likely to think that singles were a stigmatized group ( $F < 0.5$ ). To explore whether age was related to the recognition of singlehood as a stigma, participants were split by the median age (38) into two age groups. A 1-way ANOVA with age group as the independent variable found no significant effects of age on the likelihood that singles thought their group was stigmatized ( $F < 1.0$ ). Similarly, Caucasians and people of color were just as likely to think singles were a stigmatized group ( $F < 0.1$ ).

In order to explore whether different types of singles (e.g., never-married, divorced, cohabiting, etc.) recognized the stigma of being single more readily, the percentage of singles that recognized the stigma was recalculated including different types of singles in the analyses. When analyses included only those participants who

were neither currently in a romantic relationship nor had ever been married, the percentage of singles that recognized the stigma was 43%. When people who were currently in relationships but had never married were included in the analyses, the percentage of singles that recognized the stigma fell to 36%. Adding divorced and widowed people into the analyses did not affect the number of people who recognized the stigma of being single which remained at 36%. When participants who were cohabiting with their romantic partners were included in the analyses, the percentage of singles that recognized the stigma decreased to 33%. When all participants were included in the analyses, including engaged people, as stated earlier, only 30% of singles recognized the stigma of being single.

## Summary and Discussion

Only a minority of singles think of their singlehood as a stigma. When participants were asked to list any stigmatized groups of which they were members, only 4% of singles acknowledged the stigma of being single. When singles were explicitly asked whether they thought singles were the targets of negative stereotypes and/or discrimination, only 30% answered yes. The percentage of singles that recognized the stigma increased to 43% when participants only included never-married singles who were not currently in romantic relationships. Even in this instance though, most singles did not realize that their group was the target of negative stereotypes and discrimination.



## Experiment 2: Does Stigma Awareness Improve Self-esteem?

Experiment 2 tested the hypothesis that stigma awareness enhances self-esteem. Furthermore, many potentially relevant beliefs were assessed to explore whether they would mediate or moderate the effect of stigma awareness on self-esteem.

### Method

*Participants.* Sixty-eight adults (34 women and 34 men) from the local community participated in this experiment in exchange for \$5. The median age was 27 and the range was 18 to 69. All of the participants were legally single and 14 of them had been married in the past. Forty-three of the participants reported that they were not currently in a romantic relationship while 25 were in romantic relationships. Fifty-five of the participants were Caucasian, 6 were African-American, 3 were Latino, 2 were Asian, and 2 reported being of mixed ethnicity. The range of income was zero (unemployed) to over \$100,000 with the median income falling in the range of \$20,000-\$30,000. Participants' highest educational degrees were follows: One had not completed high school, 16 completed high school, 18 were currently enrolled in college, 21 had completed college, and 12 had achieved advanced degrees beyond college.

*Design.* In this between-participants experiment, half of the participants learned of the pervasive stereotyping and discrimination singles face. The other participants were a control group who were presumably relatively unaware of the stigma of being single (as demonstrated in Experiment 1). After the stigma awareness manipulation, all participants

completed a questionnaire measuring their self-esteem, mood, relevant beliefs, and demographic characteristics.

*Procedure.* Participants learned about the opportunity to participate in this experiment when they passed an experiment table with a sign advertising the study outside of a grocery store or at an outdoor shopping area. The sign said that singles 18 and over would be paid \$5 to be part of research sponsored by the University of Virginia. Participants who were interested in being part of the research were randomly assigned to be in the stigma aware group or the unaware control group. After signing the consent form, participants in the aware group read about the negative stereotypes and discrimination faced by singles. After this stigma awareness manipulation, they completed a questionnaire containing all of the dependent measures. The control group simply completed the questionnaire of dependent measures after signing the consent form. After completing the experiment, all participants were debriefed.

*Materials.* All participants received experimental packets that looked identical on the surface. The front page of the packet was the consent form. Immediately following the consent form was the stigma awareness manipulation. Those in the aware group read a paper written like a news article that cited research showing that singles are perceived more negatively than married people and provided examples of the many ways in which singles are discriminated against economically and socially (see Appendix B). This article was missing from the packets of participants in the unaware control group. After the stigma awareness manipulation, the packets were identical. Each packet contained multiple self-esteem measures, a mood measure, measures of various beliefs held by participants, and a demographic survey.

*Self-esteem and mood measures.* The packets contained a global self-esteem measure (Rosenberg, 1965), and a state self-esteem scale (Heatherton & Polivy, 1991) that consisted of three subscales: social state self-esteem, appearance state self-esteem, and performance state self-esteem. Confirmatory factor analyses found that these self-esteem measures all loaded onto a single factor. Therefore, a composite explicit self-esteem score was created and used in all of the analyses. The packet also included an adapted version of Luhtanen & Crocker's (1992) collective self-esteem scale that consisted of three subscales. The private collective self-esteem subscale (a measure of how happy participants were to be single) was used as a dependent variable. The other two subscales were included as potential moderators (see below). The PANAS scale of positive and negative affect (Watson, Clark, & Tellegen, 1988) measured mood.

*Measurement of relevant beliefs that could be potential mediators or moderators.*

Many relevant beliefs were also measured to test whether they might have moderated or mediated the effect of stigma awareness on self-esteem. Using 7-point scales, participants answered nine questions regarding how legitimate they perceived the differential treatment of singles to be, seven questions assessing their belief in the validity of the stereotypes of singles, and seven questions assessing the extent to which they felt the stereotypes of singles were true of them personally. Single 7-point scaled questions assessed how important participants felt it was to marry at some point in their lives, how important they felt it was to marry within the next few years, how likely they thought they would be to marry, and how much control they believed people generally have over whether they marry or remain single. Participants also completed scales measuring social dominance orientation (Pratto, Sidanius, Stallworth, & Malle, 1994), protestant work

ethic (Mirels & Garrett, 1971), and the other two subscales of Luhtanen & Crocker's collective self-esteem scale: in-group identification and public collective self-esteem (a measure of how positively participants thought singles were viewed by others).

These specific beliefs were chosen as potential moderators or mediators because they, or similar constructs, have been found to be influential in past stigma research with participants who were already aware of their stigma. For instance, because Crocker & Major (1989) found that the self-esteem of the stigmatized can be protected if they devalue the relevant domain in which they are expected to be inferior, I included measures of how important participants felt it was to get married. Because Major & Crocker (1993) found that attributions to prejudice do not protect self-esteem if the target believes the discrimination is justified or the target accepts responsibility for having the stigma, I included measures of how legitimate participants believed discrimination against singles to be and how much control they felt people have over whether they get married or remain single. Furthermore, because Branscombe, Schmitt, & Harvey (1999) concluded that stigmatized people who perceive prejudice against their group can only protect their self-esteem if they identify with their group, I included a measure of in-group identification.

See Appendix C for the full questionnaire. For reliabilities of all of the scales used in this experiment and the following two experiments, please see Table 2.

## Results

*Stigma awareness manipulation check.* The stigma awareness manipulation did not affect participants' ratings of how positively they thought singles were viewed by others ( $F < 1.0$ ).

*The effect of stigma awareness on self-esteem and mood.* Each of the self-esteem and mood variables was entered as dependent variables into a 2 X 2 X 2 ANOVA. The independent variables were awareness of stigma (aware vs. unaware), sex (male vs. female), and age (30 vs. 30 and older). The age of 30 was chosen because it was close to the median age of the sample but a few years past the age at which most people marry for the first time. I predicted that stigma awareness would have a stronger effect on people who were in an age range where being single is no longer normative and therefore more stigmatizing.

Becoming aware of the stigma of being single increased explicit self-esteem. Although this was the only significant main effect, the other dependent variables had a similar pattern. See Table 3. Significant interactions between stigma awareness and sex revealed that stigma awareness only improved self-esteem and mood among women. See Table 4. Although the overall  $F$ 's were not statistically significant for interactions involving the age of the participants, planned contrasts revealed that the increase in explicit self-esteem, mood, and private collective self-esteem occurred only among participants who were 30 and older ( $p$  levels for the simple effects were .06 for explicit self-esteem, .04 for mood, and .05 for private collective self-esteem). There was no 3-way interaction between stigma awareness, sex, and age.

Because participants in Experiment 1 were less likely to think of themselves as being members of a stigmatized group if they had been married in the past than if they had always been single, I wanted to explore whether the effect of stigma awareness would be stronger among participants who had always been singles or those who had been married. However, past marital status could not be included in the overall ANOVA described above due to missing data in various cells. Therefore, the self-esteem and mood measures were entered into a 2 (stigma awareness: aware vs. unaware) X 2 (past marital status: always single vs. used to be married) ANOVA. Results showed that the benefits of becoming aware of the stigma of being single were more likely to occur among singles who had been married in the past. See Table 5. The impact of stigma awareness did not vary as a function of current relationship status (in a relationship vs. not in a relationship).

Additional analyses were conducted to explore the possibility that the stigma awareness manipulation may have had different effects among highly educated participants compared to participants without as much education if the reading level of the stigma awareness article had been too high. However, when the participants' education level was taken into account, there were no significant differences in the effects of stigma awareness between those with and without college diplomas.

*Did any relevant beliefs mediate or moderate the effect of stigma awareness on self-esteem?* Analyses were conducted to test whether the potentially relevant beliefs held by participants might mediate or moderate the effect of stigma awareness on self-esteem. No mediators were found and the stigma awareness manipulation had no significant effects on the relevant beliefs. To test for moderation, each of the self-esteem and mood

measures was entered into a 2 X 2 X 2 ANOVA with the independent variables being stigma awareness, sex, and a high/low measure of the potential moderator. For each potential moderator, the high/low measure of the moderator was a median split computed with separate medians for the aware and unaware groups when the medians differed by experimental condition (although the difference was not statistically significant in any case). Age was not included as a factor in these analyses due to an inadequate number of participants in various cells.

These analyses found only one moderator and it had opposite effects on women than men. Stigma awareness improved the self-esteem of women if they had a low social dominance orientation (increase = 1.61,  $p < .005$ ) but not if they had high social dominance orientation (increase = .07),  $F(1,60) = 4.43$ ,  $p = .04$ . The opposite pattern was found in men but it was not significant.

## Summary and Discussion

Participants had higher explicit self-esteem if they were in the group that became aware of the stigma of being single. When the sex and age of the participants were taken into account, the hypothesis that stigma awareness improves self-esteem was supported among women but not men, and among people who were at least 30 years old. These findings are consistent with the popular conception that the stigma of being single is worse for women than men and the research showing that the stigma increases as people get older (Morris, DePaulo, et al., 2005).

Stigma awareness also had a more positive effect on the self-esteem of singles who had been married in the past than those who had never been married. In Experiment 1, it was found that singles who had been married in the past were less likely to think of singles as stigmatized (25%) than were never-married singles (43%). Therefore, the stigma awareness manipulation might have had stronger effects on singles who used to be married because they were less likely to have already considered being single a stigma before participating in the experiment.

The results of this experiment raise an interesting question: why was stigma awareness more beneficial to the self-esteem of women than men? When additional analyses were conducted to test whether men and women differed along any of the potential moderators or whether stigma awareness affected the potential mediators differently for men than women, no significant results were found. It is not clear from the data in this experiment why women benefited more from becoming aware of the stigma of being single than men did.



## Experiment 3: Testing the Effect of Stereotype Rejection on Self-Esteem among the Newly Stigma Aware

Having found in Experiment 2 that stigma awareness increased the explicit self-esteem of singles, Experiment 3 was designed to test the hypothesis that stigma awareness is most beneficial to people who can reject the validity of the negative stereotypes about their groups. Specifically, I hypothesized that singles who were made aware of their group's stigma would feel better about themselves if they could reject the validity of the negative stereotypes of their group than if they were told the stereotypes were generally true or if they were given no information about the validity of the stereotypes.

### Method

*Participants.* 115 adults (61 men, 49 women, 5 unknown) from the local community participated in this experiment in exchange for \$5. The median age was 40 and the range was 30 to 71. Ninety-three of the participants were Caucasian, 7 were African-American, 2 were Asian, 1 was Latino, 1 was Native American, 5 were of mixed races, and 6 did not provide this information. All of the participants were legally single. Fifty-four were not in romantic relationships, 21 were divorced, 2 were separated, 1 was widowed, 10 were living with their romantic partners, 19 were in romantic relationships but not living with their partners, 2 were engaged, and 6 did not provide this information. The two engaged people were dropped from all analyses because the stigma of being

single is most likely less self-relevant to people on the verge of marriage. Seventy-seven of the participants did not have children, 37 did, and 1 did not provide this information. Participants' income ranged from 0 (unemployed) to over \$100,000 with the median income falling in the range of \$20-\$30,000. Participants' highest educational degrees were as follows: Four had not completed high school, 33 completed high school, 6 were currently enrolled in college, 34 had completed college, 35 had achieved advanced degrees beyond college, and 3 did not provide this information.

*Design.* There were four experimental conditions in this Experiment. The first condition was the “unaware” group which was identical to the control group in Experiment 2. The second condition was the “no information” group who learned of the stigma but was given no information about the validity of the stereotypes about singles; this group was identical to the aware group in Experiment 2. These first two conditions were included with the intention of replicating the findings of Experiment 2. The third group was the “stereotype rejection” group who learned of the stigma of being single but was assured that the stereotypes were not based on any real difference between single and married people. The fourth group was the “stereotype acceptance” group who learned of the stigma of being single and was told that research has found these stereotypes to be fairly accurate. The three aware groups test the hypothesis that participants who have been made aware of their group's stigma will feel better about themselves if they are informed that the stereotypes are not true.

*Procedure.* The procedure of Experiment 3 was very similar to that of Experiment 2 with just a few variations. First of all, because the positive effects of stigma awareness occurred primarily among participants who were 30 or older in

Experiment 2, participants were only recruited for Experiments 3 and 4 if they were 30 or older. The sign advertising the study requested people who were 30 or older to participate in two studies for two separate class projects. The first experimenter randomly assigned participants to be in one of the four experimental groups and gave them the appropriate experimental packets. After participants read the experimental manipulation (three versions of the news article in the case of the three aware groups; the unaware group did not read anything), they completed the same explicit measures of self-esteem and mood used in Experiment 2. They also completed the same measures of potentially relevant beliefs (e.g., how likely they thought they would be to marry) and a demographic questionnaire. After this first part of the experiment, a second experimenter administered implicit self-esteem measures and participants were not told that the two parts of the experiment were related. The implicit self-esteem measures were included to rule out the possibility that the increased self-esteem discovered in Experiment 2 was a form of self-presentation or reactance against the news of being in a stigmatized group. All participants were thoroughly debriefed after the experiment.

*Materials.* The materials were very similar to those of Experiment 2 with some additions. The experimental manipulation was again the stigma awareness article describing the negative stereotypes and discrimination against singles in the three aware groups and no such news article in the unaware group. Belief in the validity of the negative stereotypes was manipulated in the stereotype rejection and stereotype acceptance groups by adding a few sentences to the stigma awareness news article. In the stereotype rejection article, participants read the following additional information:

“Although research has found that people hold negative stereotypes about single people and positive stereotypes about married people, there is absolutely no scientific evidence that these stereotypes are accurate. For example, although people think that married people are more happy, secure, responsible and mature than single people, there are plenty of married people who are unhappy, insecure, irresponsible and immature. According to life-task models of development (Rook, Catalano, & Dooley, 1989), people who do not achieve socially expected life-tasks such as marriage are devalued by others. Thus it appears that the negative stereotypes of singles are due to this devaluation rather than being based in any real differences between singles and married people.”

In the stereotype acceptance article, participants read the following additional information:

“In order to test whether these negative stereotypes of singles are accurate, researchers have been measuring single and married people along the stereotypical traits listed above. Recent research has found that these traits do, in fact, more accurately describe single people than married people (Galbraith & Mitchell, 2002). For example, married people tend to be more mature, responsible, happy, and secure than single people. Thus it seems that there is more than a grain of truth in the negative stereotypes of singles.”

Because the stigma awareness article described both the negative stereotypes people hold of singles and the differential treatment singles receive, in addition to the manipulation check used in Experiment 2 that assessed how positively participants

thought singles were viewed by others, I added an additional manipulation check which tested whether the three aware groups differed from the unaware group in the extent to which they agreed with the 7-point scale statement, “In general, singles are treated differently than married people.” Also the demographic question pertaining to the participants’ relationship status was changed to gather more detailed information. Instead of simply asking whether they were currently in a relationship or not and whether they had ever been married (as the questions were posed in Experiment 2), participants were asked to check any of the following choices that described their relationship status: single and not in a romantic relationship, legally single and in a romantic relationship (not living with partner), legally single and living with romantic partner, engaged, separated, divorced, widowed, or other.

In addition to the explicit measures of self-esteem, this experiment also included two implicit measures of self-esteem. Participants completed a letter preference task (Bosson, Swann, & Pennebaker, 2000) where preference for the letters that begin one’s first and last name over other letters is an implicit indication of positive self-esteem. They also completed a paper based version of an Implicit Association Test (IAT) designed to measure self-esteem (Greenwald & Farnham, 2000). In this version of the IAT, participants had to categorize words (e.g., success, rotten, me, their) as quickly as possible under headings that would be consistent with positive self regard (e.g., “me/pleasant” and “not me/unpleasant”) and headings that would be inconsistent with positive self-regard (e.g., “me/unpleasant” and “not-me/pleasant”). To the extent that people are able to categorize more words in a limited amount of time using the positive

self-regard headings than the low self-regard headings, this is indicative of positive implicit self-esteem. (See Appendix D).

## Results

*Stigma awareness manipulation checks.* When public collective self-esteem was used as a manipulation check, there were no significant differences between any of the conditions. Thus the manipulation did not affect participants' beliefs about how others viewed their group. The question, "In general, singles are treated differently than married people," served as an added manipulation check indicating whether participants believed the article that was intended to raise their awareness of their group's stigma. As expected, the unaware group agreed with this question ( $M = 4.81$ ) less than did both the aware group that was given no information about the validity of the stereotypes ( $M = 5.62, p = .023$ ) and the stereotype acceptance group ( $M = 5.46, p = .06$ ). However, surprisingly, the stereotype rejection group ( $M = 4.64$ ) did not differ significantly from the unaware group. Thus it is possible that being told the stereotypes were not true may have led participants to cast doubt on the validity of the entire stigma awareness article.

*The effect of stigma awareness on self-esteem and mood.* The first set of analyses was intended to replicate the findings of Experiment 2. The group that was unaware of the stigma was compared to the group that was made aware of the stigma but given no information about the validity of the negative stereotypes of singles. Each of the self-esteem and mood variables was entered into a  $2 \times 2 \times 2$  ANOVA. The independent variables were awareness of stigma (aware vs. unaware), sex (male vs. female), and age

(under 40 vs. 40 and older). Because there were no participants under 30 and the median age was 40, the two age groups were separated at 40 rather than 30 in Experiment 3 and 4.

In general, the comparison between the group that was unaware and the group that was aware but given no additional information about the validity of the stereotypes did not replicate the findings of Experiment 2. See Table 6. There were no significant main effects of stigma awareness and there were no interactions between stigma awareness and the sex or age of the participants. Planned contrasts did not find any differences between people under 40 and those 40 and older with regard to the effects of stigma awareness.

In order to explore whether the results would change if certain types of singles were excluded from the analyses (e.g., people cohabiting with their romantic partners, divorcees, people in romantic relationships, etc.), all analyses were conducted multiple times excluding participants of varying relationship statuses. However, excluding different types of participants did not affect the results. Furthermore, there were no significant differences in the effects of stigma awareness between those with and without college diplomas.

*Did any relevant beliefs mediate or moderate the effect of stigma awareness on self-esteem?* Analyses were conducted to test whether certain relevant beliefs held by participants might mediate or moderate the effect of stigma awareness on self-esteem. No mediators were found and the stigma awareness manipulation had no significant effects on the relevant beliefs. Although a few beliefs were found to moderate the effect of stigma awareness on self-esteem, these moderators were not consistent across

Experiments 2, 3, and 4. For that reason, they will not be discussed here. See Tables 7 and 8.

*Stereotype validity manipulation check.* The stereotype validity manipulation did not affect participants' beliefs about the validity of the stereotypes in general ( $F < 1.0$ ) or the extent to which they thought the stereotypes were true of themselves ( $F < 1.0$ ). There were no differences between any of the three aware groups on either of these measures.

*Testing the hypothesis that stereotype rejection improves self-esteem.*

To test the hypothesis that rejecting group stereotypes will improve self-esteem upon learning one's group is stigmatized, the following analyses only included the three groups who were made aware of the stigma of being single. Each of the self-esteem and mood variables was entered into a 3 X 2 X 2 ANOVA. The independent variables were manipulated beliefs about the validity of the stereotypes (stereotype rejection, stereotype acceptance, and no information), sex (male vs. female), and age (under 40 vs. 40 and older).

I hypothesized that self-esteem would be higher when people could reject the stereotypes than when they were told the stereotypes were true or when they were given no information about the validity of the stereotypes. This hypothesis was not supported. There were no main effects of condition or interactions between condition and the sex or age of the participants. See Table 9. Planned contrasts did not find any differences between people under 40 and those 40 and older with regard to the effects of stereotype rejection. Excluding participants of different relationship statuses from the analyses did not affect results. Furthermore, there were no significant differences in the effects of stereotype rejection between those with and without college diplomas.



*Did any relevant beliefs mediate or moderate the effect of stereotype rejection on self-esteem?* Analyses were conducted to test whether certain relevant beliefs held by participants might mediate or moderate the effect of stereotype rejection on self-esteem. The stereotype rejection manipulation had no significant effects on the relevant beliefs and no mediators were found. The extent to which participants believed the stereotypes of singles were descriptive of themselves was found to be a moderator. People were more likely to feel better about themselves in the stereotype rejection group than in the stereotype acceptance group or no information group if they were high self-stereotypers. See Table 10. Moderating beliefs had a stronger effect on women than men. Women were in a more positive mood and had higher explicit self-esteem in the stereotype rejection group than in the stereotype acceptance group or the no information group if they believed people have low control over their marital status, the stereotypes of singles are true, or the stereotypes of singles are true of them personally. See Table 11.

## Summary and Discussion

When comparing the unaware group with the aware group that received no information about the validity of the stereotypes, the results of this experiment failed to replicate those of Experiment 2. There was no evidence that stigma awareness increased self-esteem or that this effect was larger among women than men. Furthermore, the moderators of the hypothesized effect were inconsistent across the two experiments.

The main hypothesis of this experiment, that stereotype rejection would improve self-esteem among people who had been informed of their group's stigma received

support among people who believed the stereotypes of singles were true of themselves. The hypothesis was also supported among women who believed that people have low control over their marital status, that the stereotypes of singles are true, or that the stereotypes of singles are true of them personally.

Thus stereotype rejection had the most positive effect on self-esteem among people who thought the stereotypes were true in general and true of them personally. Contrary to what one might expect, however, being told the stereotypes were false did not lead to lowered beliefs in the stereotypes or cause less self-stereotyping. Neither belief in the validity of the stereotypes nor self-stereotyping varied by experimental condition for men or women. Being told the stereotypes were false just caused an increase in self-esteem among those who continued to believe the stereotypes. Why might this be the case?

Although the stereotype validity manipulation was not strong enough to make participants change their beliefs about the stereotypes, it may have made them less certain of their beliefs and this uncertainty could have improved their self-esteem and mood. Furthermore, it is possible that high self-stereotypers, in particular, had more to gain by entertaining the possibility that the stereotypes might not be valid. When participants were made aware of their group's stigma but given no information about the validity of the stereotypes, high self-stereotypers had significantly lower self-esteem and less positive mood than low self-stereotypers ( $p$  values for simple effects were .003 for self-esteem and .03 for mood). Therefore, high self-stereotypers had more to gain by reading that the stereotypes might not be valid. Compared to high self-stereotypers in the no information group, high self-stereotypers had significantly higher explicit self-esteem ( $p$

= .02) and marginally more positive mood ( $p = .10$ ) when they were told the stereotypes were not valid but they were unaffected or felt slightly worse in terms of mood ( $p = .04$ ) when their beliefs were confirmed that the stereotypes were valid. Even though the manipulation may not have been strong enough to change their explicit beliefs about the stereotypes, it may have had a positive effect on the self-esteem and mood of high self-stereotypers by making them at least less certain of their beliefs. Low self-stereotypers were not significantly affected by information about stereotype validity perhaps because they had little motivation to doubt their own self-serving beliefs.

## Experiment 4: Testing the Effect of Rearview Revision on Self-esteem among the Newly Stigma Aware

In order to test the hypothesis that people who are newly made aware of their stigmatized status protect their self-esteem through rearview revision (i.e., making retrospective external attributions), Experiment 4 manipulated the likelihood that participants would think back upon their past experiences and revise their earlier attributions.

### Method

*Participants.* 98 adults (49 men, 44 women, 5 unknown) from the local community participated in this experiment in exchange for \$5. The median age was 40 and the range was 30 to 73. Seventy-three of the participants were Caucasian, 16 were African-American, 2 were of mixed races, and 7 did not provide this information. All of the participants were legally single. Forty-eight were not in romantic relationships, 22 were divorced, 2 were separated, 4 were widowed, 9 were living with their romantic partners, 8 were in romantic relationships but not living with their partners, and 5 did not provide this information. Fifty-three of the participants did not have children, 39 did, and 6 did not provide this information. Participants' income ranged from 0 (unemployed) to over \$100,000 with the median income falling in the range of \$20-\$30,000. Participants' highest educational degrees were follows: 2 had not completed high school, 30 completed

high school, 4 were currently enrolled in college, 32 had completed college, 24 had achieved advanced degrees beyond college, and 6 did not provide this information.

*Design.* There were five experimental groups in this experiment. The first group was the “unaware” group which was identical to the unaware groups in Experiments 2 and 3. The second group was the “no instructions” group who learned of the stigma of being single but was given no particular instructions beyond filling out the rest of the questionnaires given to all participants; this group was identical to the aware group and the no information group in Experiments 2 and 3 respectively. The third and fourth groups were both “rearview revision” groups who learned of the stigma of being single and then were instructed to think back upon a time in their past when they were treated negatively (or in a particular way) because they were single. These two rearview revision groups had slightly different instructions but were later combined into one group for reasons discussed below. The final group was the “cognitive load” group who learned of the stigma of being single but was given a cognitive load to prevent them from thinking about their own past experiences.

*Procedure.* The procedure of this experiment was very similar to that of Experiment 3. After the experimental manipulation (described below), all participants completed the same explicit measures of self-esteem, mood, beliefs, and demographics that were used in Experiment 3. Then they proceeded to complete the same implicit measures of self-esteem with a second experimenter.

The unaware group simply completed the explicit and implicit measures. The four aware groups became aware of the stigma by reading about the stereotypes and discrimination faced by singles. The no instructions group then completed the explicit

and implicit measures. The cognitive load group was instructed to count backwards from 100 to 1 aloud before proceeding to complete the explicit and implicit measures. The two rearview revision groups were instructed to describe a time in their life when they were treated negatively (or “differently,” depending on the group) because they were single. After describing the experience, they completed a series of 7-point scales measuring how they remembered feeling on the day of the experience and how they currently felt when they thought back on the experience. After thinking about their past, they then proceeded to complete the explicit and implicit measures.

*Materials.* The explicit measures of self-esteem, mood, beliefs and demographics, as well as the implicit measures of self-esteem were all the same as those used in Experiment 3. The stigma awareness article was the same article given to participants in Experiments 2 and 3 (without any information regarding the validity of the stereotypes).

After reading the stigma awareness article, one of the rearview revision groups read the following instructions,

“Please think back on your life and try to recall any instances where you think you may have been treated or perceived negatively through no fault of your own but rather because you were single. These instances could include a significant form of discrimination or a passing negative comment related to being single. Please describe one such event below and explain why you think this instance might be an example of prejudice against singles.”

The other rearview revision read the following instructions,

“Think of a time when someone treated you in a particular way (either positively or negatively) because you were single. Please describe this instance below.” After thinking about their past, the rearview revision groups completed a series of scales measuring how they remembered feeling on the day of the experience and how they currently felt when they thought back on the experience. (See Appendix E).

The instructions given to the first group were intended to force participants to make retrospective external attributions for a negative, discriminatory event. The second set of instructions were intended to allow participants to recall any type of positive or negative experience related to being single, possibly a more realistic approximation of what people might go through upon learning of their group’s stigma. Interesting, participants in both groups typically recalled negative experiences from their past. ANOVA’s were conducted to examine whether the different instructions given to the two rearview revision groups caused them to have different responses. Because the data did not differ between these two rearview revision groups, they were combined and will be referred to as simply the rearview revision group for the rest of this paper.

## Results

*Stigma awareness manipulation checks.* When public collective self-esteem, a measure of how positively they thought others perceived their group to be, was used as a manipulation check, it was found that stigma awareness did not affect participants’ responses. Furthermore, there were no differences between any of the groups with respect to how much they believed singles are treated differently than married people.

*The effect of stigma awareness on self-esteem and mood.* The first set of analyses compared the group who was unaware of the stigma with the group that was made aware of the stigma but given no instructions to think about their past experiences. These two groups were essentially the same as those in Experiment 2. Each of the self-esteem and mood variables was entered into a 2 X 2 X 2 ANOVA. The independent variables were awareness of stigma (aware vs. unaware), sex (male vs. female), and age (under 40 vs. 40 and older).

In general, the comparison between these two groups did not replicate the findings of Experiment 2. See Table 12. There were no significant main effects of stigma awareness and there were no interactions between stigma awareness and the sex or age of the participants. Planned contrasts did not find any differences between people under 40 and those 40 and older with regard to the effects of stigma awareness. Excluding certain types of participants from the analyses (e.g., cohabiters, widows, divorcees, & people in romantic relationships) did not change the results. Furthermore, there were no significant differences in the effects of stigma awareness between those with and without college diplomas.

*Did any relevant beliefs mediate or moderate the effect of stigma awareness on self-esteem?* Analyses were conducted to test whether potentially relevant beliefs held by participants might mediate or moderate the effect of stigma awareness on self-esteem. No mediators were found and the stigma awareness manipulation had no significant effects on the relevant beliefs. Although a few beliefs were found to moderate the effect of stigma awareness on self-esteem, these moderators were not consistent across



Experiments 2, 3, and 4. For that reason, they will not be discussed here. See Tables 13 and 14.

*Testing the hypothesis that rearview revision improves self-esteem.* To test the hypothesis that rearview revision will improve self-esteem upon learning one's group is stigmatized, the following analyses only included the three groups who were made aware of the stigma of being single. Each of the self-esteem and mood variables was entered into a 3 X 2 X 2 ANOVA. The independent variables were experimental condition (rearview revision, cognitive load, and no instructions), sex (male vs. female), and age (under 40 vs. 40 and older). I hypothesized that self-esteem would be higher when people were instructed to think about their own past experiences of being treated negatively or differently due to their marital status (rearview revision) than when they were given no such instructions or when they were instructed to do a cognitive task that would most likely prevent them from thinking about their past experiences.

This hypothesis was not supported. These analyses found no main effects or interactions. See Table 15. Planned contrasts did not find any differences between people under 40 and those 40 and older with regard to the effects of stigma awareness. Excluding participants of different relationship statuses did not affect the results. Furthermore, there were no significant differences in the effects of rearview revision between those with and without college diplomas.

*Did any relevant beliefs mediate or moderate the effect of rearview revision on self-esteem?* Analyses were conducted to test whether certain relevant beliefs held by participants might mediate or moderate the effect of rearview revision on self-esteem. No mediators were found and the rearview revision manipulation had no significant

effects on the relevant beliefs. To test for moderation, all of the dependent variables were entered into a 3 X 2 X 2 ANOVA with the independent variables being condition (rearview revision, cognitive load, no instructions), sex (male vs. female), and each moderator (high vs. low beliefs). Rearview revision caused lower implicit self-esteem as measured by the letter preference task than did cognitive load or no instructions among participants who had a low protestant work ethic,  $F(2,60) = 4.48, p = .02$ . Also, in-group identification had different effects on men and women. While women felt worse with rearview revision than cognitive load or no instructions if they were not highly identified with being single, men felt worse with rearview revision if they were strongly identified with being single,  $F(2,63) = 6.80, p = .003$

*The experience of rearview revision.* A repeated measures design was used to test whether participants in the rearview revision group thought that their emotions or attributions for a past negative event had changed now that they were aware of the stigma of being single. Participants reported that after becoming aware of the stigma, they now felt significantly less depressed, angry, and upset when they thought about the negative experience than they recalled having felt initially on the day when the event had happened. The decrease in self-blame was marginally significant as well ( $p = .16$ ). See Table 16. However, it is not clear whether becoming aware of the stigma made them feel better about their negative treatment or whether, unbeknownst to participants, the passage of time would have made them feel better anyway due to the nature of the psychological immune system (Gilbert, Pinel, Wilson, Blumberg, & Wheatley, 1998; Suh, Diener, & Fujita, 1996). Because of the lack of a proper control group and the potential inaccuracies of retrospective data, these findings should be considered cautiously.

When the sex of the participant was added to the analyses, the data revealed that women were more likely than men to recall blaming themselves and being depressed at the time of the negative event. Furthermore, women were more likely than men to report a decrease in self-blame and depression after they had become aware of the stigma. See Table 17. In effect, women were more likely than men to do or feel like they had done rearview revision (i.e., change their attributions from self-blame to external causes). For examples of the kinds of past experiences participants described, please see Appendix F.

## Summary and Discussion

When comparing the unaware group with the aware group that was given no addition instructions, the results of this experiment failed to replicate those of Experiment 2. There was no evidence that stigma awareness increased self-esteem or that this effect was larger among women than men. Furthermore, the moderators of the hypothesized effect were inconsistent across the three experiments.

The hypothesis that rearview revision would improve self-esteem over cognitive load or no instructions was not supported. In fact, participants had lower implicit self-esteem with rearview revision than with cognitive load or no instructions if they had a low Protestant Work Ethic.

Participants in the rearview revision group claimed that they now felt less angry, upset, and depressed than they recalled feeling in the past about an experience when they were treated negatively or differently because they were single. Although we cannot

assume that the retrospective data was accurate, it is interesting that women thought their attributions of self-blame and depression had decreased after becoming aware of the stigma more so than did men. It appears from the simple effects in Table 17 that the decrease in women's self-reported depression and self-blame was due to the fact that women were more likely than men to recall blaming themselves and being depressed at the time of the negative event. This gender difference at the time of the negative event may be due to the possibility that women are more likely than men to make internal attributions for negative events (Boggiano & Barrett, 1991). The gender difference in self-blame and depression disappeared after participants became aware of the stigma of being single presumably because the cause of the negative event was less ambiguous; this would account for the self-reported decrease in women's but not men's self-blame and depression over time. Thus it appears that women were more likely than men to feel like they had revised their earlier attributions. The implications of this gender difference in the experience of rearview revision will be explored further in the general discussion.

## General Discussion

This series of studies tested the hypothesis that stigma awareness improves self-esteem and tested two coping mechanisms people might use as they awaken to the fact that their group is the target of negative stereotypes and discrimination. I hypothesized that reevaluation and the rejection of negative group stereotypes would serve to improve the self-esteem of singles when they initially become aware of their stigmatized status.

In order to make the case that most singles are currently unaware of their group's stigma, I asked participants in Experiment 1 whether they thought singles were the targets of negative stereotypes and/or discrimination. Because this experiment found that most singles do not think of their singlehood as a stigma, singles were deemed an appropriate group in which to manipulate stigma awareness.

### The Inconsistent Relationship between Stigma Awareness and Self-Esteem

In support of the hypothesis, when single participants, particularly women, were made aware of the stigma of being single in Experiment 2, they felt better about themselves than did the unaware control group. However, these results failed to replicate in the identical cells of Experiments 3 and 4. Furthermore, the moderators of this effect tended to be inconsistent across Experiments 2, 3, and 4.

*Methodological limitations.* There is a methodological reason why the results may have been inconsistent across Experiments 2, 3, and 4; the number of participants in each of these experiments resulted in a lack of power. Unfortunately, the number of participants recruited for these experiments was somewhat constrained by the amount of funding available. In an attempt to overcome this possibility, the results for the comparison between the aware and unaware groups, the two groups which were identical across Experiments 2, 3, and 4, were combined in a meta-analysis. Although this meta-analysis found the effect sizes to be small (the largest  $d$  was .28), the effects were consistently in the predicted direction for all of the dependent variables. In general, stigma awareness improved the self-esteem and mood of participants. See Table 18. Furthermore, when separate effect sizes were computed for men and women in another meta-analysis, it was found that the positive effects of stigma awareness were stronger among women than men on four of the five dependent variables. See Table 19.

A second methodological limitation is that these experiments were an overly conservative test of the hypothesis. Taking the results of Experiment 1 into account, one could argue that approximately one-third of the participants in Experiments 2, 3, & 4 already knew singles were stigmatized. If that is indeed the case, then the effect of the manipulation was weakened because a percentage of people in the unaware control groups were already aware of their group's stigma. Perhaps the effects would have been larger if data had only been collected from the two-thirds of singles who did not think singles were stigmatized before the experiment began.

It is also possible that the effects of stigma awareness vary among different types of singles (e.g., divorced people vs. always-single people) due to their different life

experiences and/or the varying extent to which they might consider themselves truly single. When I took the participants' civil status into account by re-conducting the analyses with and without participants of different civil statuses, there were no differences in the results. However, due to small cell sizes (e.g., the small number of widows in the experiments), the possibility that stigma awareness has different effects on different types of singles cannot be completely discounted.

*What can be concluded about the relationship between stigma awareness and self-esteem?* From the small effect sizes shown in Table 14, it cannot be concluded that stigma awareness has a substantial effect on self-esteem. However, it is worth noting that, given the consistent positive direction of the effects, we can conclude that stigma awareness most likely causes no harm to self-esteem and women might even derive some a benefit from it. Contrary to Branscombe et al.'s (1999) rejection-identification model, even without in-group identification, self-esteem did not decrease with awareness of pervasive discrimination against one's group. It is possible that the importance of in-group identification found in Branscombe et al.'s work increases after people have already become accustomed to thinking of themselves as members of a stigmatized group.

*Why is there a gender difference in the benefits of stigma awareness?* Why might it be the case that stigma awareness has a positive effect on the self-esteem and mood of women but not men as discovered through the meta-analyses? Because men and women did not differ along any of the relevant beliefs that were measured in Experiments 2, 3, and 4, there are many possibilities that can be ruled out. For example, women and men did not differ in their in-group identification, the importance they placed on getting

married, their perceptions of how legitimate discrimination against singles is, or the extent to which they thought people have control over getting married or remaining single. Therefore, none of the relevant beliefs that were measured in Experiments 2, 3, and 4 can explain this gender difference.

Perhaps the gender difference in the benefits of stigma awareness was due to another variable that is related to gender. The results of Experiment 4 indicate that the experience of rearview revision may be different for men and women. When people were asked to think about a past negative experience in their lives related to their marital status, women reported that they now felt less depressed and blamed themselves less after learning of the stigma than they had on the day of the negative experience. Men did not think that stigma awareness changed how they felt about the past experience. Therefore, it appears that women are more likely than men to revise their attributions for past negative experiences after learning of their group's stigma. Or rather, because these were self-report measures, women are more likely to *think* that they had revised their attributions.

It is possible that stigma awareness had a more positive effect on women than men because women were more likely to do or think they had done rearview revision, perhaps even when they were not specifically instructed to do so. In order to explore this hypothesis, the self-reported change in both depression and attributions (from self-blame to external causes) were correlated with self-esteem for both the men and women in the rearview revision group of Experiment 4. These thirty-seven participants were the only people in this series of Experiments from whom this type of data was collected. Marginal support was found. The more participants thought they had revised their



attributions for past negative events (from self-blame to external causes), the higher their implicit self-esteem as measured by the IAT ( $r = .30, p = .09$ ). Similarly, the more participants reported improvement in their level of depression after learning of their group's stigma, the higher their implicit self-esteem as measured by the IAT ( $r = .37, p = .02$ ) and by the letter preference task ( $r = .30, p = .07$ ). Therefore, the finding that stigma awareness has a more positive effect on women than men may be due to the fact women are more likely to do rearview revision and people who successfully do rearview revision feel better about themselves.

However, there are several limitations to this theory. First of all, it should be noted that it is not clear whether actual changes in attributions are correlated with improved implicit self-esteem or whether it is just self-perceived changes in attributions that are important. Furthermore, the correlational nature of this data leaves the possibility that people who have higher implicit self-esteem are simply more likely to feel they have done rearview revision. Finally, the fact that self-perceived rearview revision was only associated with increases in implicit self-esteem is problematic in explaining the gender differences which occurred on the explicit measures as well.

Another potential explanation for why women might have benefited more than men from stigma awareness, is the possibility, consistent with popular conceptions, that the experience of being single is more stigmatizing for women than men. If this were true, stigma awareness might have a stronger effect on women than men because women would feel that the stigma was particularly relevant to them. However, the data from these experiments do not support the notion that single women feel more stigmatized than single men. Women did not differ from men in the extent to which they were happy

being single, thought others viewed singles negatively, internalized the negative stereotypes, or the number of times they recalled being the target of stereotyping or discrimination based on their marital status. Therefore, there is little support for this explanation. The question of why stigma awareness increased the self-esteem of women but not men remains a question for future research.

### Does Rearview Revision Improve the Self-Esteem of the Newly Stigma Aware?

The hypothesis that singles would feel better about themselves upon becoming aware of their group's stigma if they were instructed to do rearview revision than if they received no such instructions, was not supported when comparisons were made between the rearview revision group and the cognitive load group or the group that received no specific instructions. However, as described above, in support of the hypothesis, within the rearview revision group, it was found that the more effectively participants did rearview revision (i.e., the more they thought they changed their attributions for past negative experiences from internal to external causes), the higher their implicit self-esteem. When between group comparisons were made between the rearview revision group and the cognitive load and no instructions groups including only those participants in the rearview revision group who self-reported changes in their attributions or emotions, there were still no differences between the rearview revision group and the cognitive load or no instructions group. This null result may have been due to the possibility that some of the participants in the cognitive load or no instructions group may

have naturally recalled their own experiences of being a target of negative stereotypes and discrimination while reading the stigma awareness article (before the cognitive load was given). Thus, these participants may also have changed their attributions after becoming aware of the stigma even though they were not instructed to do so.

Although I only found mixed support for the rearview revision hypothesis when asking singles to reflect upon a negative experience in their past, my colleagues and I have found support for this hypothesis when we conducted an experiment in the lab with a stigmatized group (not singles) that was created for the purpose of the experiment. In the lab experiment, participants learned of their group's stigma shortly before or after they received negative feedback that could possibly have been construed as discriminatory (Warthen, Morris, & Sinclair, 2004). Consistent with Crocker & Major's (1989) work which has found that attributing negative feedback to an external cause protects self esteem, we found that participants felt worse about themselves after receiving negative feedback if they did not know they were members of a stigmatized group and most likely made an internal attribution to explain the negative feedback. However, when participants who were previously unaware of their group's stigma later became aware of the stigma over the course of the experiment their self-esteem improved. The possibility that this improvement in self-esteem was simply due to the brief passage of time was ruled out by a control group. Participants only experienced the boost in self-esteem if they were made aware of their group's stigma and could change their earlier attributions for the negative feedback from an internal cause to an external cause.

With respect to the current experiments, perhaps rearview revision would have been even more beneficial to participants if they had learned of their group's stigma very soon after they had experienced the negative event in their life. Based on the findings of Warthen et al., I would hypothesize that rearview revision is most likely to improve self-esteem if prior levels of self-esteem are still rather low due to the negative event. If I had somehow managed to make singles aware of their group's stigma very soon after they had experienced a negative event related to their marital status, perhaps stigma awareness would have helped their self-esteem recover from that negative event. However, in the case of the current experiment, it is likely that their self-esteem had naturally recovered from the negative event and returned to or near baseline after some time had passed (Suh, Diener, & Fujita, 1996).

### Does Stereotype Rejection Improve the Self-esteem of the Newly Stigma Aware?

The other hypothesis that was tested was whether singles would feel better about themselves upon becoming aware of their group's stigma if they could reject the validity of their group's stereotypes. This hypothesis was supported only among people, particularly women, who believed the stereotypes were true in general or descriptive of themselves personally. On the surface, it seems intuitive that learning the stereotypes of one's group are false would have the most beneficial effect upon those who previously believed the stereotypes to be true. However, learning the stereotypes were false did not actually cause a decrease in the belief in those stereotypes. Rather people who believed

the stereotypes just felt better about themselves if they were told the stereotypes were false even though they continued to believe the stereotypes. It is possible that, even though the experimental manipulation did not change participants' explicit beliefs about the stereotypes, it may have made high self-stereotypers in particular less certain of their beliefs and that may have made them feel better about themselves. Because high self-stereotypers had lower self-esteem and more negative mood than low self-stereotypers when they had no information about the validity of the stereotypes, high self-stereotypers may have had more motivation to entertain the possibility that their beliefs were wrong.

## Future Research

Although the current set of experiments only provided mixed support for the hypotheses, I do believe this line of research is worth pursuing in the future. The question of how people react to and cope with the realization that they are members of a stigmatized group has not been examined to any great extent. Most of the research on how people cope with stigma has focused on stigmatized group members who are already aware of their group's stigma. Thus it is not clear how self-esteem might be affected or whether there are specific coping mechanisms that are used when one first realizes one's group is stigmatized. Interestingly, the inconsistent results found in Experiments 2, 3, & 4 are reminiscent of the mixed conclusions found in the literature on feminist consciousness-raising. While some of these studies have found positive effects of consciousness-raising on self-esteem (deMan & Benoit, 1982; Smith, 1999; Weitz, 1982), others have not (Highly, 1998; Rodin, 1995).

*Is rearview revision a mediator rather than a moderator?* The concept of rearview revision could possibly explain the inconsistent results found in these experiments and in the literature on feminist consciousness-raising. As previously stated, the participants in Experiment 4 who were instructed to think about a negative event in their past were more likely to experience an increase in self-esteem if they thought they blamed themselves less for the event after learning of their group's stigma. This correlation raises a potentially fruitful question for future research. Might rearview revision mediate the effect of stigma awareness on self-esteem? It is possible that stigma awareness naturally causes people to reflect on their past negative experiences and change their attributions to be less self-blaming. The more effectively people do this rearview revision (i.e., the more they change their previous attributions or think they have changed their attributions), the better they feel about themselves. The current set of studies could not test this mediation hypothesis directly because rearview revision was manipulated rather than measured and we have no way to assess the extent to which people in the cognitive load group and no instructions group spontaneously did rearview revision while reading the stigma awareness article (before the cognitive load was given). Therefore, we do not know at this point if stigma awareness naturally leads people to do rearview revision. If future research finds that rearview revision does indeed mediate the relationship between stigma awareness and self-esteem, this could shed light on the inconsistent findings in the current research and the mixed conclusions found in the literature on feminist consciousness-raising. Measuring the extent to which stigma awareness causes participants to do rearview revision might help explain why stigma awareness increases self-esteem for some people but not others.

*Methodological issues for future research.* In order to improve upon the current research, it would be important to measure stigma awareness prior to manipulating it so that the effects of stigma awareness would only be studied using participants who come to the experiment truly unaware of their group's stigma. While it may be difficult to measure stigma awareness without making unaware participants aware in the process, the checklist task used in Experiment 1 could be an effective means of doing so. Future research could also directly compare people who have just learned of their group's stigma with those who already know they're members of a stigmatized group to see if they react differently or different moderators or mediators are involved in protecting their self-esteem when people are initially exposed to versus reminded of their group's stigma.

It will also be important for future research to use different methods to manipulate stigma awareness. While some have found that attributing specific, personal experiences to discrimination can protect self-esteem (Crocker & Major, 1989; Major & Crocker, 1993), others have found that perceiving pervasive discrimination against one's group more generally can harm self-esteem if one is not strongly identified with the in-group (Branscombe, Schmitt, & Harvey, 1999; Schmitt, Branscombe, Kobrynowicz, & Owen 2002). Major, Quinton, & McCoy (2002) have argued that these seemingly contradictory findings are due to the important distinction between attributing *specific* personal experiences to discrimination versus being aware of pervasive discrimination against one's group in general. Whereas the former makes people feel better because they can make external attributions for negative outcomes, the latter may have negative effects because people may view their environment as threatening (Feldman-Barrett & Swim,

1998). This distinction between personal experiences of discrimination and perceptions of pervasive discrimination against one's group might explain why we found that stigma awareness increased self-esteem in the lab immediately after participants had experienced a negative, personal outcome (Warthen, Morris, & Sinclair, 2004) but I did not find a consistent increase in self-esteem in this series of studies where most participants were made aware of discrimination against their group rather than against themselves personally (with the exception of the rearview revision group who wrote about their own personal experiences of discrimination).

It is possible that the current series of experiments failed to find strong support for the hypothesis that stigma awareness increases self-esteem because such an increase in self-esteem does not occur immediately after one learns of the stigma associated with one's group. It may take some time for the positive effects of stigma awareness to become apparent. Ideally, future research on stigma awareness should be longitudinal to capture the process of stigma awareness over time. I would predict that after people become aware of their group's stigma they may use this new information to make external attributions for subsequent negative outcomes and they may also feel more strongly identified with their group – both of which would improve their self-esteem over time.

*Filling a gap in the existing stigma research.* There is currently a dearth of literature on the coping processes of people who have just realized that their group is stigmatized. Studying singles provides a unique opportunity to observe a group before they are widely aware of their stigmatized status. The recent release of books and news



articles about the stigma of being single, as well as the newly founded organizations intent on lobbying for singles' rights, are indications that singles are on the verge of stigma awareness. By examining the consequences of stigma awareness among singles or other groups, future research can contribute to a broader understanding of the experience of stigmatized group members - from the emotional reactions people have when they first learn of their group's stigma to the coping strategies they develop over time.

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## Appendix A: Materials for Experiment 1

In our culture, members of many social groups or categories are the targets of negative stereotypes and discrimination. Do you belong to any such groups or categories? If so, please list each of them below:

Here is a list of groups of which you might consider yourself a member. Please look over the categories listed below and **follow both instructions below**.

- 1) In the first column, **circle yes or no** to indicate whether you identify yourself as a member of this group.
- 2) In the second column, **circle yes or no** to indicate whether you think the group is a target of negative stereotypes and/or discrimination.

	Are you a member of this group?		Is this group the target of negative stereotypes and/or discrimination?	
Activist	yes	no	yes	no
African-American	yes	no	yes	no
American	yes	no	yes	no
Artist	yes	no	yes	no
Asian	yes	no	yes	no
Athlete	yes	no	yes	no
Brown-eyed	yes	no	yes	no
Caucasian	yes	no	yes	no
Christian	yes	no	yes	no
Computer technician	yes	no	yes	no
Cooking enthusiast	yes	no	yes	no
Divorced	yes	no	yes	no
Elderly	yes	no	yes	no
Entrepreneur	yes	no	yes	no
Female	yes	no	yes	no
Gay	yes	no	yes	no
Hispanic	yes	no	yes	no
Immigrant	yes	no	yes	no
Male	yes	no	yes	no
Married	yes	no	yes	no
Musician	yes	no	yes	no
Native-American	yes	no	yes	no
Obese	yes	no	yes	no
Pedestrian	yes	no	yes	no
Single	yes	no	yes	no
Shopper	yes	no	yes	no
Student	yes	no	yes	no
Tall	yes	no	yes	no
Teacher	yes	no	yes	no
Unemployed	yes	no	yes	no
Vegetarian	yes	no	yes	no
Widowed	yes	no	yes	no
Young	yes	no	yes	no

## Demographic questionnaire

1. How old are you? \_\_\_\_\_.
2. Are you retired?        Yes        No
3. Please circle your sex:    Male        Female
4. Please circle your civil status.  
  
Single and not in a romantic relationship  
Legally single and in a romantic relationship (not living with partner)  
Engaged  
Married for the first time  
Separated  
Divorced and single  
Divorced and remarried  
Widowed  
Legally single and living with romantic partner  
Other (please describe): \_\_\_\_\_.
5. What is your race? \_\_\_\_\_.
6. Please circle the category that best describes your educational background.  
  
No diplomas  
High School  
Currently enrolled in college  
Completed College  
Degrees beyond college  
Other: please describe \_\_\_\_\_.
7. Please circle the range of your annual income.  
  
Unemployed        \$50,000-60,000  
Under \$10,000     \$60,000-70,000  
\$10,000-20,000    \$70,000-80,000  
\$20,000-30,000    \$80,000-90,000  
\$30,000-40,000    \$90,000-100,000  
\$40,000-50,000    More than \$100,000

## Appendix B: Stigma Awakening Manipulation used in Experiments 2, 3, & 4.

**Please read this page carefully and then fill out the questions on the following pages.**

Although singles comprise a relatively large portion of our society, recent research has found that people continue to hold generally negative stereotypes about single people and positive stereotypes about married people. According to popular stereotypes, compared to married people, single people are considered less responsible, interesting, attractive, happy, secure, and less interested in children and emotional closeness (Morris, Depaulo, Hertel & Ritter, 2002). Furthermore, singles are also thought to be more immature, self-centered, envious, lonely, shy, and fearful of rejection than their married peers (Morris, DePaulo, Hertel & Ritter, 2002). The negative stereotypes of singles have far reaching implications.

Singles are discriminated against in many contexts. Based on the stereotype that singles don't have as many outside obligations or interests, employers often expect singles to work overtime and during the holidays while receiving fewer financial benefits than their married peers (Burkett, 2000). Although employers expect singles to do more work, married people, particularly men, are rewarded more for their work (Budig & England, 2001). Studies have found that marriage is an asset to a man's career in that it increases his salary and his likelihood of receiving a promotion (Keith, 1986). In general, single men earn less than married men (Bellas, 1992; Jacoby, 1973; Keith, 1986; Toutkoushian, 1998). Most states do not have laws that prohibit employers from discriminating on the basis of marital status.

Singles are also discriminated against in their housing options. It is more difficult for single people to gain approval for a mortgage than married people ("Couple," 2000). Furthermore, studies have found that landlords tend to prefer to lease their properties to married people or require higher monthly rental payments from single people as if to insure against the stereotypically unstable single person (Morris, DePaulo, & Sinclair, 2002). A Michigan judge upheld landlords' rights to deny renting to unmarried people or cohabitating couples ("Michigan," 2000). This ruling, in effect, allows landlords to violate the state's fair housing act that prohibits marital status discrimination. In the military, housing discrimination is institutionalized. Married people receive an allowance to live and eat where they like while single people must live in the barracks sharing rooms with little privacy and eating whatever is served ("VMI," 2002).

Furthermore, singles are discriminated against by our country's taxation policies. There is currently a death tax whereby a married person may leave an unlimited amount of wealth to a surviving spouse but a single person's estate is taxed 25%-60% even if it is being transferred to a family member (<http://www.unmarriedamerica.org>). Similarly, singles do not benefit from privileges such as filing joint tax returns, employer-sponsored health insurance coverage for spouses, and medical decision-making rights for unrelated loved ones - privileges that are generally only granted to those who are married ("Daddy dearest," 2001).

Single people also have a more difficult time gaining approval for adopting children or in vitro fertilization (Millbank, 1997). The issues of singles are often ignored in politics. Although single adults constituted more than a third of the voting populations in the 2000 elections, much of the political rhetoric of the presidential election in 2000, both Democratic and Republican, centered around family values and policies which would only benefit those who were married or with children (Dilday, 2000). One journalist summarized this recurring theme of the presidential election in an article entitled, "O, to be single and have a politician pay attention."

Singles are also discriminated against socially. Once people marry, they often prefer to hang out with other married friends rather than their old single friends (Verbrugge, 1983). Singles often feel abandoned by their married friends or they feel like second class citizens on the rare occasions when they are invited to hang out with couples because the couples tend to make most of the decisions for them (Amador & Kiersky, 1998). Furthermore, married people often assume that their single friends must have some underlying personality flaws that might be preventing them from marrying (Schwartzberg, Berliner, & Jacob, 1995; Van Dusen, 1994). The fact that singles have not achieved what is considered to be a very important life task in our society, the act of marrying, leads to a great deal of social disapproval from others (Marini, 1984; Rook, Catalano & Dooley, 1989).

## Appendix C: Experimental Questionnaires used in Experiments 2, 3, & 4.

### State self-esteem (Heatherton & Polivy, 1991)

#### Current Thoughts Questionnaire

This is a questionnaire designed to measure what you are thinking at the moment. There are, of course, no right or wrong answers for any statement. The best answer is what you think is true for yourself at this moment. Be sure to answer all of the items, even if you are not certain of the best answer. Again, answer these questions as they are true for you right now.

Please respond to the following statements using the scale below. Pick the appropriate number from the scale and write it in on the line next to each item.

1.....	2.....	3.....	4.....	5.....	6.....	7
strongly disagree	disagree	somewhat disagree	neutral	somewhat agree	agree	strongly agree

- \_\_\_\_\_ 1. I feel confident about my abilities.
- \_\_\_\_\_ 2. I am worried about whether I am regarded as a success or a failure.
- \_\_\_\_\_ 3. I feel satisfied with the way my body looks right now.
- \_\_\_\_\_ 4. I feel frustrated or rattled by my performance.
- \_\_\_\_\_ 5. I feel that I am having trouble understanding things I read.
- \_\_\_\_\_ 6. I feel that others respect and admire me.
- \_\_\_\_\_ 7. I am dissatisfied with my weight.
- \_\_\_\_\_ 8. I feel self-conscious.
- \_\_\_\_\_ 9. I feel as smart as others.
- \_\_\_\_\_ 10. I feel displeased with myself.
- \_\_\_\_\_ 11. I feel good about myself.
- \_\_\_\_\_ 12. I am pleased with my appearance right now.
- \_\_\_\_\_ 13. I am worried about what other people think of me.
- \_\_\_\_\_ 14. I feel confident that I understand things.
- \_\_\_\_\_ 15. I feel inferior to others at this moment.
- \_\_\_\_\_ 16. I feel unattractive.
- \_\_\_\_\_ 17. I feel concerned about the impression I am making.
- \_\_\_\_\_ 18. I feel I have less scholastic ability right now than others.
- \_\_\_\_\_ 19. I feel like I'm not doing well.
- \_\_\_\_\_ 20. I am worried about looking foolish.

*Global self-esteem (Rosenberg, 1965)***In general, how do you usually think about yourself?**

Please respond to the following statements using the scale below. Pick the appropriate number from the scale and write it in on the line next to each item.

1.....2.....3.....4.....5.....6.....7  
 strongly disagree      somewhat neutral      somewhat agree      strongly agree  
 disagree      disagree      agree

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

*Collective self-esteem (Luhtanen & Crocker, 1992)*

Please respond to the following statements using the scale below. Pick the appropriate number from the scale and write it in on the line next to each item.

1.....2.....3.....4.....5.....6.....7  
 strongly disagree      somewhat neutral      somewhat agree      strongly agree  
 disagree      disagree      agree

- \_\_\_\_ 1. I often regret that I am single.  
 \_\_\_\_ 2. In general, I'm glad to be single.  
 \_\_\_\_ 3. Overall, being single is considered good by others.  
 \_\_\_\_ 4. Most people consider singles, on the average, to be more ineffective than married people.  
 \_\_\_\_ 5. In general, others respect being single.  
 \_\_\_\_ 6. In general, others think that being single is less worthy than being married.  
 \_\_\_\_ 7. Overall, being single has very little to do with how I feel about myself.  
 \_\_\_\_ 8. Being single is an important reflection of who I am.  
 \_\_\_\_ 9. Being single is unimportant to my sense of what kinds of a person I am.  
 \_\_\_\_ 10. In general, being single is an important part of my self-image.



**PANAS scale of positive and negative affect (Watson, Clark, & Tellegen, 1988)**

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

1-----	2-----	3-----	4-----	5
very slightly	a little	moderately	quite a bit	extremely
or not at all				
<input type="checkbox"/> interested	<input type="checkbox"/> distressed	<input type="checkbox"/> excited	<input type="checkbox"/> upset	
<input type="checkbox"/> strong	<input type="checkbox"/> guilty	<input type="checkbox"/> scared	<input type="checkbox"/> hostile	
<input type="checkbox"/> enthusiastic	<input type="checkbox"/> proud	<input type="checkbox"/> irritable	<input type="checkbox"/> alert	
<input type="checkbox"/> ashamed	<input type="checkbox"/> inspired	<input type="checkbox"/> nervous	<input type="checkbox"/> determined	
<input type="checkbox"/> attentive	<input type="checkbox"/> jittery	<input type="checkbox"/> active	<input type="checkbox"/> afraid	

**Legitimacy beliefs about marital status discrimination**

Please respond to the following statements using the scale below. Pick a number from the scale and write it in on the line next to each item.

1.....	2.....	3.....	4.....	5.....	6.....	7
strongly	disagree	somewhat	neutral	somewhat	agree	strongly
disagree		disagree		agree		agree

- \_\_\_\_ 1. In general, singles are treated differently than married people. *[Manipulation check included in experiments 3 & 4. Not part of legitimacy scale.]*
- \_\_\_\_ 2. Married men should be paid more or promoted more than single men because married men have families to support.
- \_\_\_\_ 3. Single people do not need as much privacy as married couples.
- \_\_\_\_ 4. Married couples should be eligible for 2-for-1 discounts but pairs of singles should not be.
- \_\_\_\_ 5. Married couples should have reduced insurance rates so that they pay less than 2 single people.
- \_\_\_\_ 6. It is OK for landlords to consistently choose married couples over single people as tenants.
- \_\_\_\_ 7. Married people should generally socialize with other married people and singles should socialize with singles.
- \_\_\_\_ 8. The president of the United States should be a married person.
- \_\_\_\_ 9. Tax codes should favor married couples over single people.
- \_\_\_\_ 10. Married people are generally more responsible than single people.

**Other potential mediators: importance of getting married, predictions about whether/when one will get married, perceptions of controllability of marital status, desire to take collective action**

Please **circle a number** from the scales below each question to provide your answers.

1. How important is it to you to get married at some point in your life?

Not important at all 1-----2-----3-----4-----5-----6-----7 Extremely important

2. How important is it to you to get married in the next few years?

Not important at all 1-----2-----3-----4-----5-----6-----7 Extremely important

3. What do you think the likelihood is that you will marry at some point in your life?

Definitely will not marry 1-----2-----3-----4-----5-----6-----7 Definitely will  
marry

4. How long do you think you will remain singles? \_\_\_\_\_.

5. To what extent do you think that people have control over whether they get married or remain single?

They have no control at all 1-----2-----3-----4-----5-----6-----7 They are very  
much in control

6. To what extent do you think you have control over whether you get married or remain single?

I have no control at all 1-----2-----3-----4-----5-----6-----7 I am very  
much in control

7. If you were asked to donate money to an organization working for the rights of single people, would you give to this cause? Please circle your answer: Yes No

8. If yes, how much would you give? \_\_\_\_\_.

9. Would you have any interest in joining such a group?

Not interested at all 1-----2-----3-----4-----5-----6-----7 Very  
interested

10. Would you have any interest in learning more about the ways that single people are stereotyped and discriminated against?

Not interested at all 1-----2-----3-----4-----5-----6-----7 Very  
interested

*Belief in validity of in-group stereotypes and self-stereotyping*

For each of the following questions, please **circle a number** to express your level or agreement or disagreement with each of the statements.

1. Single people are just as happy as married people.

Not true at all 1-----2-----3-----4-----5-----6-----7 Very true

2. Married people are generally less self-centered than single people.

Not true at all 1-----2-----3-----4-----5-----6-----7 Very true

3. Single people are just as responsible as married people.

Not true at all 1-----2-----3-----4-----5-----6-----7 Very true

4. Single people are more independent than married people.

Not true at all 1-----2-----3-----4-----5-----6-----7 Very true

5. Single people are more shy than married people.

Not true at all 1-----2-----3-----4-----5-----6-----7 Very true

6. Single people are just as emotionally secure as married people.

Not true at all 1-----2-----3-----4-----5-----6-----7 Very true

7. Single people are more career-oriented than married people.

Not true at all 1-----2-----3-----4-----5-----6-----7 Very true

8. I am just as happy as married people.

Not true at all 1-----2-----3-----4-----5-----6-----7 Very true

9. Married people are generally less self-centered than I am.

Not true at all 1-----2-----3-----4-----5-----6-----7 Very true

10. I am equally as responsible as married people are.

Not true at all 1-----2-----3-----4-----5-----6-----7 Very true

11. I am more independent than married people.

Not true at all 1-----2-----3-----4-----5-----6-----7 Very true

12. I am more shy than married people.

Not true at all 1-----2-----3-----4-----5-----6-----7 Very true

13. I am just as emotionally secure as married people are.

Not true at all 1-----2-----3-----4-----5-----6-----7 Very true

14. I am more career-oriented than married people.

Not true at all 1-----2-----3-----4-----5-----6-----7 Very true

**Social dominance orientation (Pratto, Sidanius, Stallworth, & Malle, 1994)**

Which of the following objects or statements do you have a positive or negative feeling towards? Beside each object or statement, place a number from 1 to 7 which represents the degree of your positive or negative feeling.

1-----2-----3-----4-----5-----6-----7  
 very      negative      slightly      neutral      slightly      positive      very  
 negative                      negative                      positive                      positive

- \_\_\_\_1. Sometimes groups of people are simply inferior to others.  
 \_\_\_\_2. In getting what you want, it is sometimes necessary to use force against other groups.  
 \_\_\_\_3. It's OK if some groups have more of a chance in life than others.  
 \_\_\_\_4. To get ahead in life, it is sometimes necessary to step on other groups.  
 \_\_\_\_5. If certain groups stayed in their place, we would have fewer problems.  
 \_\_\_\_6. It's probably a good thing that certain group are at the top and other groups are at the bottom.  
 \_\_\_\_7. Inferior groups should stay in their place.  
 \_\_\_\_8. Sometimes other groups must be kept in their place.  
 \_\_\_\_9. It would be good if groups could be equal.  
 \_\_\_\_10. Group equality should be our ideal.  
 \_\_\_\_11. All groups should be given an equal chance in life.  
 \_\_\_\_12. We should do what we can to equalize conditions for different groups.  
 \_\_\_\_13. Increased social equality.  
 \_\_\_\_14. We would have fewer problems if we treated people more equally.  
 \_\_\_\_15. We should strive to make incomes as equal as possible.  
 \_\_\_\_16. No one group should dominate in society.

**Protestant work ethic (Mirels & Garrett, 1971)**

Please respond to the following statements using the scale below. Pick a number from the scale and write it in on the line next to each item.

1.....2.....3.....4.....5.....6.....7  
 strongly      disagree      somewhat      neutral      somewhat      agree      strongly  
 disagree                      disagree                      agree                      agree

- \_\_\_\_1. Most people spend too much time in unprofitable amusements.  
 \_\_\_\_2. Our society would have fewer problems if people had less leisure time.  
 \_\_\_\_3. Money acquired early is usually spent unwisely.  
 \_\_\_\_4. Most people who don't succeed in life are just plain lazy.  
 \_\_\_\_5. Anyone who is willing and able to work hard has a good chance of succeeding.  
 \_\_\_\_6. People who fail at a job have usually not tried hard enough.  
 \_\_\_\_7. Life would have very little meaning if we never had to suffer.  
 \_\_\_\_8. The person who can approach an unpleasant task with enthusiasm is the person who gets ahead.  
 \_\_\_\_9. If people work hard enough they are likely to make a good life for themselves.  
 \_\_\_\_10. I feel uneasy when there is little work for me to do.  
 \_\_\_\_11. A distaste for hard work usually reflects a weakness of character.

Demographic questionnaire

Please **circle the appropriate answers** to the following questions:

1. What is your sex?                      Male      Female
2. Are you currently in a romantic relationship?      Yes      No      *[Experiment 2 only]*
3. If yes, how long have you been in this relationship? \_\_\_\_\_ *[Experiment 2 only]*
4. Have you ever been in a romantic relationship?      Yes      No
5. If yes, was this relationship a marriage?      Yes      No
6. How old are you? \_\_\_\_\_
7. Please circle you race
  - Asian
  - Black
  - Caucasian
  - Hispanic
  - Native American
  - Other: Please describe \_\_\_\_\_.
8. Please circle the category that best describes your educational background.
  - No diplomas
  - High School
  - Currently enrolled in college
  - Completed College
  - Degrees beyond college
  - Other: please describe \_\_\_\_\_.
9. Please circle the range of your annual income.
 

Unemployed	\$50,000-60,000
Under \$10,000	\$60,000-70,000
\$10,000-20,000	\$70,000-80,000
\$20,000-30,000	\$80,000-90,000
\$30,000-40,000	\$90,000-100,000
\$40,000-50,000	More than \$100,000
10. What is your romantic relationship status? **Please circle all that apply:**
  - Single and not in a romantic relationship
  - Legally single and in a romantic relationship (not living with partner)
  - Legally single and living with romantic partner
  - Engaged
  - Separated
  - Divorced
  - Widowed
  - Other (please describe): \_\_\_\_\_ *[Experiments 3 and 4]*

## Appendix D: Implicit Attitude Test Used In Experiments 3 &amp; 4

Headings consistent with positive self regard			Headings inconsistent with positive self-regard		
<b>NOT ME</b> unpleasant		<b>ME</b> pleasant	<b>ME</b> unpleasant		<b>NOT ME</b> pleasant
<input type="radio"/>	THEIR	<input type="radio"/>	<input type="radio"/>	friend	<input type="radio"/>
<input type="radio"/>	brutal	<input type="radio"/>	<input type="radio"/>	THEIR	<input type="radio"/>
<input type="radio"/>	OTHERS	<input type="radio"/>	<input type="radio"/>	rainbow	<input type="radio"/>
<input type="radio"/>	security	<input type="radio"/>	<input type="radio"/>	SELF	<input type="radio"/>
<input type="radio"/>	SELF	<input type="radio"/>	<input type="radio"/>	pollute	<input type="radio"/>
<input type="radio"/>	diamond	<input type="radio"/>	<input type="radio"/>	OTHERS	<input type="radio"/>
<input type="radio"/>	HIS	<input type="radio"/>	<input type="radio"/>	trust	<input type="radio"/>
<input type="radio"/>	rainbow	<input type="radio"/>	<input type="radio"/>	HERS	<input type="radio"/>
<input type="radio"/>	MINE	<input type="radio"/>	<input type="radio"/>	brutal	<input type="radio"/>
<input type="radio"/>	honor	<input type="radio"/>	<input type="radio"/>	MINE	<input type="radio"/>
<input type="radio"/>	I	<input type="radio"/>	<input type="radio"/>	merit	<input type="radio"/>
<input type="radio"/>	integrity	<input type="radio"/>	<input type="radio"/>	THEY	<input type="radio"/>
<input type="radio"/>	MYSELF	<input type="radio"/>	<input type="radio"/>	diploma	<input type="radio"/>
<input type="radio"/>	failure	<input type="radio"/>	<input type="radio"/>	MYSELF	<input type="radio"/>
<input type="radio"/>	ME	<input type="radio"/>	<input type="radio"/>	stink	<input type="radio"/>
<input type="radio"/>	disease	<input type="radio"/>	<input type="radio"/>	I	<input type="radio"/>
<input type="radio"/>	THEM	<input type="radio"/>	<input type="radio"/>	rotten	<input type="radio"/>
<input type="radio"/>	torture	<input type="radio"/>	<input type="radio"/>	SELF	<input type="radio"/>
<input type="radio"/>	MINE	<input type="radio"/>	<input type="radio"/>	caress	<input type="radio"/>
<input type="radio"/>	sunrise	<input type="radio"/>	<input type="radio"/>	OTHERS	<input type="radio"/>
<input type="radio"/>	THEIR	<input type="radio"/>	<input type="radio"/>	mutilate	<input type="radio"/>
<input type="radio"/>	affection	<input type="radio"/>	<input type="radio"/>	THEM	<input type="radio"/>
<input type="radio"/>	HERS	<input type="radio"/>	<input type="radio"/>	success	<input type="radio"/>
<input type="radio"/>	abuse	<input type="radio"/>	<input type="radio"/>	MINE	<input type="radio"/>
<input type="radio"/>	MYSELF	<input type="radio"/>	<input type="radio"/>	noble	<input type="radio"/>
<input type="radio"/>	health	<input type="radio"/>	<input type="radio"/>	MY	<input type="radio"/>

## Appendix E: Rearview Revision Scales Used in Experiment 4

**For the following set of questions, think back to the day of this experience and recall how you felt at that time. Please CIRCLE A NUMBER on the scales below to indicate your answer to each question.**

1. On the day that this experience occurred, how upset did this experience make you feel?

1-----2-----3-----4-----5-----6-----7  
Not upset at all Extremely upset

2. On the day that this experience occurred, how angry did this experience make you feel?

1-----2-----3-----4-----5-----6-----7  
Not angry at all Extremely angry

3. On the day that this experience occurred, how depressed did this experience make you feel?

1-----2-----3-----4-----5-----6-----7  
Not depressed Extremely  
at all depressed

4. On the day that this experience occurred, did you realize at the time that you were being treated in a particular way based on the fact that you were single?

1-----2-----3-----4-----5-----6-----7  
Not at all Yes

5. On the day that this experience occurred, how fair did you feel you were treated?

1-----2-----3-----4-----5-----6-----7  
Not fair at all Very fair

6. On the day that this experience occurred, to what extent did you blame the other person or yourself for how you were treated?

1-----2-----3-----4-----5-----6-----7  
Blamed other Blamed myself  
person completely completely

**For the next set of questions, please describe how you are CURRENTLY feeling about this past experience. Please **CIRCLE A NUMBER** on the scales below to indicate your answer to each question.**

7. When you think about this experience today, how upset does it make you?

1-----2-----3-----4-----5-----6-----7  
 Not upset at all Extremely upset

8. When you think about this experience today, how angry does it make you?

1-----2-----3-----4-----5-----6-----7  
 Not angry at all Extremely angry

9. When you think about this experience today, how depressed does it make you feel?

1-----2-----3-----4-----5-----6-----7  
 Not depressed Extremely  
 at all depressed

10. When you think about this experience today, how fair do you feel you were treated?

1-----2-----3-----4-----5-----6-----7  
 Not fair at all Very fair

11. When you think about this experience today, to what extent do you blame the other person or yourself for how you were treated?

1-----2-----3-----4-----5-----6-----7  
 Blame other Blame myself  
 person completely completely



## Appendix F: Examples of the Types of Past Experiences Participants in the Rearview Revision Group Described in Experiment 4

### **Doesn't apply to me/ no experiences of differential treatment**

“I have never been treated in a particular way because of being single. It does not apply to me.”

“I don't let it get in my way.”

### **People feel bad for me because I'm single**

“They think I have been hurt.”

“Pity.”

“There is not a family dinner I attend that does not include the conversation that sympathizes with my 'plight' as a single woman. Don't worry, I am told, someone will come along.”

### **Social exclusion**

“They don't want to hang out with me because they have a spouse.”

“I find it hard to spend time with friends who are now dating someone very seriously.”

“I am not invited along with married couples after work.”

### **Married people treat me badly when we're together**

“Married women are unfriendly”

“Husbands become suspicious when single men talk to their wives”

### **Positive social experiences**

“As newly divorced many friends tried to take time for me and help me out with my move.”

### **Feeling out of the mainstream**

“At my church, the women's ministry consistently, favorably and almost exclusively holds events that cater to the interests and schedules of stay at home mothers.

“I was born in 1950- attitude was that when I grew up I would marry and have children. I felt pressure to conform.”

**Financial issues**

“Airline packages are priced for doubles, so I can never get a package.”

“Singles pay the same price or more at hotels.”

“Back in 60’s-70’s I could not attain credit while married without husband’s signature.”

“They won’t give family money/estate to you because you’re single.”

“Less pay because they think singles don’t need as much money.”

**Living conditions**

“Difficulty renting an apartment because single.”

“Landlord said I would have to have children to get first option and better deal on apartment.”

“Forced to live on Post in the Army because single.”

**Career – positive**

“More job options because single with no kids.”

**Career – discrimination**

“Did not get hired because I was single.”

“Always expected to work on Christmas”

“Was often expected to work later hours than my married coworkers.”

**Positive or neutral Perceptions of singles**

People assumed I was mostly interested in dating or going out.

**Negative perceptions of singles**

“Grandparents think I’m selfish”

“People think that people who are single may be weird or there is something wrong with them.”

“My sister is happy I am not married because I can babysit for her. But it can be negative because she thinks I don’t do anything.”

“My glass is seen as half empty rather than half full. It would be very refreshing to hear that the reason I am single is because I enjoy my life as a single person, that I’m discriminating and careful, and independent, and smart enough to make it on my own. It is utterly disabling to have my family look at my life and think something is missing.”

“Contempt from family”

**People question why I'm single**

“They want to know why I never married.”

“They don't understand why I am not married because marriage is the norm.”

Table 1

*Percentage of People who Recognized the Stigma Associated with Various Groups, Experiment 1*

Group(n)	Group members		Non-group members
	Checklist task	Spontaneous	Checklist task
Gay (6)	100	17	78
Hispanic (7)	100	43	67
Obese (20)	90	20	78
African-American (22)	86	55	83
Native American (12)	75	17	68
Female (67)	72	28	59
Unemployed (30)	70	3	51
Activist (30)	70	13	46
Immigrant (12)	67	0	66
Elderly (28)	64	21	46
American (127)	61	4	25
Musicians (25)	60	0	12
Young (56)	59	4	29
Artist (26)	54	8	19
Athlete (37)	54	14	32
Christian (81)	51	7	48
Men (69)	48	14	19
Asian (15)	47	27	56
Divorced (23)	43	4	31
Teacher (33)	39	3	16
Caucasian (104)	38	11	27
Student (55)	36	11	13
<b>Single (83)</b>	<b>30</b>	<b>4</b>	<b>23</b>
Vegetarian (10)	30	20	28
Computer technician (7)	29	0	21
Tall people (41)	29	0	7
Pedestrian (78)	28	3	19
Entrepreneur (19)	26	0	17
Widowed (9)	22	0	15
Married (42)	19	0	6
Cooking enthusiasts (50)	16	0	6
Shopper (95)	14	0	16
Brown-eyed (68)	10	1	14

Table 2

*Reliabilities of all Scales Used in Experiments 2, 3, and 4*

Scale	Experiments		
	2	3	4
Global self-esteem	.91	.81	.87
State self-esteem			
Social	.83	.74	.87
Appearance	.86	.77	.83
Performance	.76	.77	.77
Collective self-esteem			
Private (glad to be single)	.73	.79	.61
Public	.67	.77	.62
Identification	.64	.61	.51
PANAS overall mood	.88	.85	.87
Negative affect	.92	.91	.89
Positive affect	.90	.85	.88
Legitimacy of discrimination	.78	.69	.62
Belief in stereotypes	.84	.56	.65
Self-stereotyping	.80	.59	.67
Social dominance orientation	.90	.88	.91
Protestant work ethic	.76	.82	.74

Table 3

*The Effect of Stigma Awareness on Self-Esteem and Mood, Experiment 2*

Dependent variable	<u>Aware</u> Mean (sd)	<u>Unaware</u> Mean (sd)	Difference
Explicit self-esteem $F(1,60) = 4.45$	5.43 (.16)	4.97 (.16)	0.46*
Glad to be single $F(1,60) = 3.10$	4.86 (.28)	4.16 (.28)	0.70
Mood $F(1,58) = 2.90$	4.01 (.10)	3.77 (.10)	0.24

*Note.* Difference = aware minus unaware.

\* $p < .05$ .

Table 4

*The Effect of Stigma Awareness on Men and Women, Experiment 2*

Dependent variable	Men		Women	
	Aware	Unaware	Aware	Unaware
	<i>M</i> ( <i>sd</i> )	<i>M</i> ( <i>sd</i> )	<i>M</i> ( <i>sd</i> )	<i>M</i> ( <i>sd</i> )
Explicit self-esteem $F(1,60) = 6.42^*$	5.29 (.22)	5.38 (.38)	5.58 (.22)	4.55 (.22) <sup>a</sup>
Glad to be single $F(1,60) = 0.06$	4.54 (.40)	3.75 (.40)	5.18 (.39)	4.58 (.39)
Mood $F(1,58) = 6.41^*$	3.86 (.14)	3.97 (.15)	4.17 (.14)	3.57 (.14) <sup>a</sup>

<sup>a</sup>Aware is significantly different from unaware at  $p < .05$ .

\*  $p < .05$ . \*\*\* $p < .005$ .

Table 5

*The Effect of Stigma Awareness among Always Single and Previously Married Participants, Experiment 2*

Dependent variable	Always single		Married in past	
	Aware	Unaware	Aware	Unaware
	<i>M</i> ( <i>sd</i> )	<i>M</i> ( <i>sd</i> )	<i>M</i> ( <i>sd</i> )	<i>M</i> ( <i>sd</i> )
Explicit self-esteem $F(1,62) = 4.17^*$	5.14 (.18)	4.97 (.17)	6.10 (.30)	4.80 (.40) <sup>a</sup>
Glad to be single $F(1,62) = 0.02$	4.62 (.33)	4.17 (.31)	5.00 (.54)	4.40 (.73)
Mood $F(1,60) = 7.13^{**}$	3.74 (.11)	3.76 (.11)	4.56 (.18)	3.67 (.24) <sup>a</sup>

<sup>a</sup>Aware is significantly different from unaware at  $p < .05$ .

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\* $p < .005$ .



Table 6

*The Effect of Stigma Awareness on Self-Esteem and Mood, Experiment 3*

Dependent variable	<u>Aware</u>		<u>Unaware</u>		Difference
	Mean	( <i>sd</i> )	Mean	( <i>sd</i> )	
Explicit self-esteem $F(1,46) = 0.09$	5.25	(.19)	5.17	(.21)	0.08
Glad to be single $F(1,46) = 1.57$	4.48	(.32)	5.07	(.35)	-0.59
Mood $F(1,46) = 0.01$	3.95	(.11)	3.97	(.13)	-0.02
IAT $F(1,46) = 1.51$	7.00	(.93)	5.30	(1.02)	1.70
Preference for initials $F(1,44) = 2.68$	1.18	(.37)	0.29	(.41)	0.89

*Note.* Difference = aware minus unaware.

Table 7

*Beliefs that moderated the effect of stigma awareness on self-esteem, Experiment 3*

Moderators with affected DV's below	Level of moderator			
	High		Low	
	Aware Mean (sd)	Unaware Mean (sd)	Aware Mean (sd)	Unaware Mean (sd)
<b>In-group identification</b>				
Glad to be single $F(1,47) = 5.23^*$	5.17 (.44)	4.61 (.50)	3.96 (.39)	5.39 (.40) <sup>a</sup>
<b>Perceived likelihood of marrying</b>				
Glad to be single $F(1,47) = 5.02^*$	3.91 (.42)	5.33 (.39) <sup>a</sup>	4.98 (.44)	4.41 (.53)

<sup>a</sup>Aware is significantly different from unaware at  $p < .05$ .

\*  $p < .05$ .

Table 8

*Beliefs that Moderated the Effects of Stigma Awareness on Self-Esteem Separated by Gender, Experiment 3*

Moderators with affected DV's below	Level of moderator			
	High		Low	
	Aware Mean ( <i>sd</i> )	Unaware Mean ( <i>sd</i> )	Aware Mean ( <i>sd</i> )	Unaware Mean ( <i>sd</i> )
<b>Perceived controllability over marital status</b>				
		<b>Men</b>		
Preferences for initials $F(1,45) = 6.82^*$	.97 (.77)	-.63 (.58)	.73 (.65)	1.04 (.58)
		<b>Women</b>		
	.49 (.65)	1.68 (1.00)	2.44 (.65)	.31 (.70) <sup>a</sup>
<b>Social dominance orientation</b>				
			<b>Men</b>	
Glad to be single $F(1,47) = 5.78^*$	4.88 (.55)	4.63 (.55)	3.60 (.70)	5.36 (.47) <sup>a</sup>
			<b>Women</b>	
	4.00 (.64)	5.60 (.70)	4.88 (.55)	4.25 (.78)

<sup>a</sup>Aware is significantly different from unaware at  $p < .05$ .

\*  $p < .05$ .

Table 9

*The Effect of Stereotype Rejection on Self-Esteem and Mood, Experiment 3*

Dependent variables	Condition (validity of stereotypes)					
	Rejection		Acceptance		No info	
	Mean	( <i>sd</i> )	Mean	( <i>sd</i> )	Mean	( <i>sd</i> )
Explicit self-esteem $F(2,66) = 0.83$	5.33	(.19)	5.00	(.19)	5.25	(.18)
Glad to be single $F(2,66) = 0.10$	4.60	(.36)	4.38	(.35)	4.48	(.34)
Mood $F(2,66) = 2.10$	3.95	(.11)	3.69	(.11)	3.95	(.10)
IAT $F(2,65) = 0.40$	7.72	(1.07)	6.35	(1.10)	7.00	(1.02)
Preference for initials $F(2,63) = 0.60$	0.72	(.39)	0.63	(.40)	1.18	(.38)

Table 10

*Beliefs that Moderated the Effect of Stereotype Rejection on Self-Esteem, Experiment 3*

Moderators with affected DV's below	Condition (validity of stereotypes)					
	Rejection		Acceptance		No info	
	Mean	( <i>sd</i> )	Mean	( <i>sd</i> )	Mean	( <i>sd</i> )
<b>Self-stereotyping</b>						
Explicit self-esteem: $F(2,66) = 4.25^*$						
High self-stereotypers	5.55 <sup>ab</sup>	(.26)	4.52	(.25)	4.75	(.23)
Low self-stereotypers	5.26	(.22)	5.33	(.24)	5.73	(.22)
Mood: $F(2,65) = 3.60^*$						
High self-stereotypers	4.06 <sup>a</sup>	(.15)	3.33	(.14)	3.73	(.13)
Low self-stereotypers	3.92	(.13)	3.98	(.14)	4.13	(.13)
<b>In-group identification</b>						
Glad to be single: $F(2,68) = 6.19^{***}$						
High identification	5.38 <sup>a</sup>	(.48)	3.70	(.44)	5.17	(.46)
Low identification	4.33	(.42)	5.24	(.44)	3.96	(.41)

<sup>a</sup>Difference between rejection and acceptance groups is statistically significant ( $p < .05$ ).

<sup>b</sup>Difference between rejection and no info groups is statistically significant ( $p < .05$ ).

\*  $p < .05$ . \*\*\* $p < .005$ .

Table 11

*Beliefs that Moderated the Effect of Stereotype Rejection Separated by Gender, Experiment 3*

Moderators with affected DV's below	Condition (validity of stereotypes)					
	Rejection		Acceptance		No info	
	Mean	( <i>sd</i> )	Mean	( <i>sd</i> )	Mean	( <i>sd</i> )
<b>Perceived controllability over marital status</b>						
Mood: $F(2,67) = 3.82^*$						
	<b>Men</b>					
High control	4.07	(.16)	3.69	(.24)	3.91	(.20)
Low control	3.73	(.20)	3.63	(.16)	4.11	(.18)
	<b>Women</b>					
High control	3.93	(.21)	4.23	(.20)	4.29	(.18)
Low control	3.90 <sup>a</sup>	(.20)	3.34	(.18)	3.41	(.18)
<b>Belief in stereotypes of singles</b>						
Explicit self-esteem: $F(2,67) = 2.98^*$						
	<b>Men</b>					
High belief in stereotypes	5.01	(.33)	5.36	(.31)	5.24	(.33)
Low belief in stereotypes	5.58	(.29)	5.08	(.39)	5.65	(.35)
	<b>Women</b>					
High belief in stereotypes	5.55 <sup>a</sup>	(.39)	4.02	(.39)	4.58	(.35)
Low belief in stereotypes	5.22	(.35)	5.22	(.31)	5.43	(.33)
Mood: $F(2,66) = 2.45$						
	<b>Men</b>					
High belief in stereotypes	3.86	(.19)	3.56	(.18)	3.95	(.19)
Low belief in stereotypes	4.00	(.18)	3.78	(.23)	4.09	(.21)
	<b>Women</b>					
High belief in stereotypes	4.19 <sup>ab</sup>	(.23)	3.33	(.23)	3.50	(.21)
Low belief in stereotypes	3.68	(.21)	4.02	(.18)	4.09	(.19)
<b>Self-stereotyping</b>						
Mood: $F(2,65) = 3.60^*$						
	<b>Men</b>					
High self-stereotypers	3.89 <sup>a</sup>	(.18)	3.34	(.18)	3.99	(.19)
Low self-stereotypers	4.11	(.18)	3.95	(.21)	4.04	(.18)
	<b>Women</b>					
High self-stereotypers	4.23 <sup>ab</sup>	(.24)	3.33	(.21)	3.46	(.18)
Low self-stereotypers	3.74	(.18)	4.02	(.17)	4.23	(.18)

<sup>a</sup>Difference between rejection and acceptance groups is statistically significant ( $p < .05$ ).

<sup>b</sup>Difference between rejection and no info groups is statistically significant ( $p < .05$ ).

\*  $p < .05$ .

Table 12

*The Effect of Stigma Awareness on Self-Esteem and Mood, Experiment 4*

Dependent variable	<u>Aware</u>		<u>Unaware</u>		Difference
	Mean	( <i>sd</i> )	Mean	( <i>sd</i> )	
Explicit self-esteem $F(1,24) = 0.26$	5.32	(.25)	5.52	(.30)	-0.20
Glad to be single $F(1,24) = 0.27$	4.51	(.35)	4.23	(.43)	0.28
Mood $F(1,24) = 0.05$	4.13	(.14)	4.09	(.17)	0.04
IAT $F(1,24) = 0.00$	8.48	(1.63)	8.63	(1.97)	-0.15
Preference for initials $F(1,24) = 1.07$	0.62	(.50)	1.42	(.60)	-0.80

*Note.* Difference = aware minus unaware.

Table 13

*Beliefs that Moderated the Effect of Stigma Awareness on Self-Esteem, Experiment 4*

Moderators with affected DV's below	Level of moderator			
	High		Low	
	Aware Mean (sd)	Unaware Mean (sd)	Aware Mean (sd)	Unaware Mean (sd)
<b>Controllability of marital status</b>				
IAT: $F(1,27) = 5.13^*$	7.25 (2.07)	10.63 (1.96)	9.97 (2.14)	4.00 (2.07) <sup>a</sup>
<b>Beliefs in stereotypes</b>				
IAT: $F(1,28) = 7.31^*$	9.08 (2.30)	2.88 (1.99) <sup>a</sup>	4.36 (2.26)	9.10 (1.94)

<sup>a</sup>Aware is significantly different from unaware at  $p < .05$ .

\*  $p < .05$ .



Table 14

*Beliefs that Moderated the Effect of Stigma Awareness on Self-Esteem Separated by Gender, Experiment 4*

Moderators with affected DV's below	Level of moderator			
	High		Low	
	Aware Mean ( <i>sd</i> )	Unaware Mean ( <i>sd</i> )	Aware Mean ( <i>sd</i> )	Unaware Mean ( <i>sd</i> )
<b>Self-stereotyping</b>				
Explicit esteem: $F(1,27) = 6.59^*$	<b>Men</b>			
	4.52 (.39)	5.33 (.35)	6.13 (.50)	5.42 (.39)
	<b>Women</b>			
	5.81 (.50)	4.26 (.61) <sup>a</sup>	5.39 (.35)	5.54 (.39)
IAT: $F(1,27) = 4.06$	<b>Men</b>			
	13.80 (2.53)	4.33 (2.31)	3.00 (3.27)	3.80 (2.53)
	<b>Women</b>			
	3.67 (3.27)	11.50 (4.00) <sup>a</sup>	9.00 (2.31)	10.60 (2.53)
<b>In-group identification</b>				
Mood: $F(1,27) = 11.65^{***}$	<b>Men</b>			
	3.98 (.17)	3.77 (.19)	3.40 (.30)	4.23 (.17) <sup>a</sup>
	<b>Women</b>			
	3.45 (.30)	4.02 (.24)	4.58 (.16)	4.04 (.21) <sup>a</sup>

<sup>a</sup>Aware is significantly different from unaware at  $p < .05$ .

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .005$ .

Table 15

*The Effect of Rearview Revision on Self-Esteem and Mood, Experiment 4*

Dependent variables	Condition					
	Rearview revision		Cognitive load		No instructions	
	Mean	( <i>sd</i> )	Mean	( <i>sd</i> )	Mean	( <i>sd</i> )
Explicit self-esteem $F(2,58) = 1.10$	4.98	(.17)	5.39	(.27)	5.32	(.26)
Glad to be single $F(2,58) = 1.04$	4.61	(.24)	5.21	(.39)	4.51	(.38)
Mood $F(2,58) = 1.82$	3.84	(.09)	4.08	(.15)	4.13	(.15)
IAT $F(2,58) = 2.66$	5.45	(1.12)	2.72	(1.81)	8.48	(1.73)
Preference for initials $F(2,57) = 0.07$	0.62	(.37)	0.86	(.59)	0.62	(.56)

Table 16

*Self-Reports of How Emotions Regarding Past Experiences had Changed, Experiment 4*

Dependent variable	Day of event	Post-awareness	Difference (present minus past)	<i>F</i>
Depressed	2.37	1.91	-.46	5.10 *
Angry	3.34	2.39	-.95	9.47 **
Upset	3.64	2.34	-1.30	18.42 **
Self-blame	3.16	2.87	-.29	2.06
Fairness	3.01	3.04	-.03	.02

*Note.* Degrees of freedom = (1,36).

\*  $p < .05$ . \*\*  $p < .005$ .

Table 17

*Gender Differences in the Self-Reports of How Emotions and Attributions Regarding Past Experiences had Changed, Experiment 4*

Dependent variable	Men		Women	
	Day of event Mean (sd)	Post-awareness Mean (sd)	Day of event Mean (sd)	Post-awareness Mean (sd)
Depressed $F(1,35) = 4.63^*$	1.93 (.32)	1.83 (.30)	2.94 <sup>ab</sup> (.37)	2.00 (.35)
Self-blame $F(1,32) = 5.47^*$	2.66 (.35)	2.76 (.34)	3.80 <sup>ab</sup> (.39)	3.00 (.38)

<sup>a</sup>Differs significantly from post-awareness at  $p < .05$ .

<sup>b</sup>Differs significantly from men's self-reports of the day of event at  $p < .05$ .

\*  $p < .05$ .

Table 18

*Meta-Analysis across Experiments 2, 3, & 4: The Effect of Condition (Aware vs. Unaware) on Self-Esteem and Mood*

Dependent variable	Expt 2 <i>d</i>	Expt 3 <i>d</i>	Expt 4 <i>d</i>	Overall <i>d</i> (overall <i>p</i> )
Explicit self-esteem	.45	.18	-.07	.23 (.07)
Glad to be single	.37	-.34	.22	.08 (.31)
Mood	.32	.07	.16	.19 (.12)
IAT	---	.37	.15	.28 (.09)
Preference for initials	---	.43	-.37	.10 (.31)

*Note.* All *d*'s and *p*'s were weighted by the sample size of each study.

Table 19

*Meta-Analysis across Experiments 2, 3, and 4: The Effect of Condition (Aware vs. Unaware) on Self-Esteem and Mood for Men and Women*

Dependent variable	Expt 2 <i>d</i>	Expt 3 <i>d</i>	Expt 4 <i>d</i>	Overall <i>d</i> (overall <i>p</i> )
Explicit self-esteem				
Men	-.15	.26	-.28	-.03 (.45)
Women	1.15	.08	.35	.59 (.008)
Glad to be single				
Men	.40	-.46	-.16	-.04 (.43)
Women	.38	-.29	.62	.22 (.18)
Mood				
Men	-.31	.32	-.33	-.07 (.37)
Women	1.00	-.12	.68	.54 (.01)
IAT				
Men	---	.69	.94	.76 (.005)
Women	---	.15	-.60	-.15 (.33)
Preference for initials				
Men	---	.36	-.96	-.12 (.34)
Women	---	.36	.28	.32 (.16)

*Note.* All *d*'s and *p*'s were weighted by the sample size of each study.