CAN NEWSCASTS REDUCE PREJUDICE?

TELEVISION'S POTENTIAL IMPACT

UPON THE MALLEABILITY OF

IMPLICIT ATTITUDES

by

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ABSTRACT

Despite a preponderance of evidence that news reports increase negative racial attitudes, some researchers have demonstrated that the print media can reduce such effects. Research has yet to examine television news can similarly reduce negative racial attitudes among viewers, even though television suffers from a worse reputation for encouraging such biases than does print. Building upon psychological research into the malleability of prejudice, the present research explores television's potential to affect viewer prejudice.

Psychological research (e.g., Dasgupta and Greenwald, 2001; Wittenbrink, Judd, and Park, 2001) shows that targeted manipulations can both positively and negatively affect implicit prejudices. Media research (e.g. Power, Murphy, and Coover, 1996; Casas & Dixon, 2003; Ramasubramanian, 2005) demonstrates that print media can produce positive and negative effects upon stereotypes and prejudice, though such research remains somewhat contradictory. Capitalizing on psychology's differentiation between implicit and explicit attitudes, this study is the first specifically to explore the potential for television news to prime counter-prejudicial attitudes. Specifically, the study uses an Implicit Association Test (IAT) to measure television news' facility to serve as a prime to strengthen or weaken racial schema and impact racial attitudes.

After recording base-level prejudice through the IAT, researchers showed national news segments featuring famous and infamous Whites and Blacks to 130 White participants. Each segment was chosen either for visual impact or for the potential emotional impact of its subject.

Pairs of segments served as either stereotypical or counterstereotypical manipulations. Following presentation of the segments, researchers measured post-manipulation implicit prejudice using the IAT and recorded levels of explicit prejudice as responses to semantic differentials and feeling thermometers.

Data did not support initial hypotheses concerning the segments' effects upon explicit and implicit prejudice, but the experiment did yield interesting results that should help future media researchers. This dissertation provides a guide for future media research designs utilizing the IAT, suggests that television may possess a positive capacity to curb pro-White biases in society, and implies that television's propensity to increase anti-Black attitudes may be more limited than previous media research studies seem to suggest.

DEDICATION

Although a number of people helped me finish this project, I'd like to dedicate this dissertation to a few key people. First, the document you are reading is dedicated to my husband, Creighton J Miller, Jr., for his everlasting patience, support, and cooperation. This treatise is also dedicated to my mother, a.k.a., Princess Samsonite, for her fun-loving inspiration and guidance. And finally, it is dedicated to my friend, Angie Balius, who I could always depend upon for a helping hand.

LIST OF ABBREVIATIONS AND SYMBOLS

df	Degrees of freedom: number of values free to vary after certain restrictions have been placed on the data
η	Mean square
F	Fisher's *F* ratio: A ratio of two values
μ	Mean: the sum of a set of measurements divided by the number of measurements in the set
N	Size of a population or sample
n	Size of a cell or group
p	Probability associated with the occurrence under the null hypothesis of a value as extreme as or more extreme than the observed value; significance level
s.d.	Standard deviation
t	Computer value of *t* test
χ^2	Chi-square
<	Less than
=	Equal to
%	Percentage

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Completing a dissertation in a reasonable amount of time appears to take divine intervention. Regardless, somehow it got done. Although what hair I have left is greyer than last year, anything good is thanks to those who helped me.

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CHAPTER 1

Newscasts That Reduce Prejudice: Possibilities Based upon Past Research

Introduction

Critics have denounced televised depictions of racial minorities for more than 50 years. In 1951, the NAACP attacked *Amos and Andy* for "strengthen[ing] the conclusion among uninformed and prejudiced people that Negroes are inferior, lazy, dumb, and dishonest" (News from the NAACP as quoted in Simpson & Yinger, 1953, p. 638). Sixteen years later, following race riots that erupted in several U.S. cities, President Lyndon Johnson formed the Kerner Commission to investigate, in part, how the media might have contributed to the unrest. The Commission found that the nation's media had, indeed, played a part in creating an environment of racial strife. It rebuked the media for "bask[ing] in a white world"—focusing entirely on the interests and concerns of White America while ignoring those of Black America (Kerner Commission, 1968, p. 389). Commissioners warned that the media's racial bias against Blacks, or racial preference in favor of Whites, increased racial divisions and encouraged "two societies, one black, one white—separate and unequal" (Kerner Commission, p. 1). In a report that followed nine years later, the U.S. Commission on Civil Rights (1977) found no improvement in media coverage and condemned televised news and entertainment programs for inaccurate and inadequate portrayals of Blacks, Native Americans, Asian Americans, Hispanics, and women of all races. The latter commission strongly recommended expanded employment opportunities for minorities and women in the broadcasting industry and called for "extensive research on the

impact of these portrayals . . . not only to assess effects but also to explore ways to mitigate them" (p. 48).

More recent signs suggest that problems have continued despite the passage of three decades. Don Imus stirred vehement controversy in April 2007 when he used offensive racial and sexual stereotypes to describe a college athletic team. Although NBC television and CBS radio removed Imus from the airwaves shortly thereafter, Imus soon had a new show, only to again face criticism for comments that many deemed racially insensitive. The original Imus controversy inspired other actions. One not-for-profit group examined diversity in television news last year and discovered that guests on Cable news networks were predominantly White males. This group, Media Matters, has recently replicated their study and found that a heavy reliance on White male guests continues in 2008 (Media Matters for America, n.d.).

In addition, race was obviously a key factor in the 2008 presidential campaigns and in much of the media coverage of that campaign. Whether or not the media can be implicated, polls show that Americans remain divided along racial lines. Whites and Blacks report very different perspectives concerning racial barriers and problems. Many Blacks think that discrimination limits them in multiple ways; more than a third of Whites think most racial tension today is created by Blacks (Babington, n.d.). Such tension and differences in opinion may not be caused by the media, but as a prevalent force in society, the media's role in race relations continues to merit scrutiny.

Research suggests that media regularly provide viewers a diet of racial bias whether or not the viewers ever turn to Don Imus' programs. Over the past few decades, researchers have found a prevalent racial bias throughout the media (Dates & Barlow, 1990). This general bias appears to be most evident in the news media (e.g., Dixon & Azocar, 2006; Dixon & Linz,

2000; Heider, 2000; Rada & Wulfemeyer, 2005). For instance, Heider has found that local journalists regularly practice incognizant racism. In other words, minorities are simply excluded from the news or relegated to ethnic and crime stories because news people do not seek out other types of stories about minorities. Dixon and his collaborators have found that Black criminals are consistently overrepresented and White criminals are consistently underrepresented in local newscasts (Dixon & Azocar, 2006; Dixon & Linz, 2000). Additionally, media-priming research has found that such depictions can have negative impacts upon viewers (Dixon, 2006a; Dixon & Azocar, 2007; Dixon & Maddox, 2005; Domke, 2001; Domke, McCoy, & Torres, 1999; Gilliam Jr & Iyengar, 2000; Givens & Monahan, 2005; Valentino, 1999). Most recently, Dixon (2008b) found that exposure to network news increased beliefs in African American stereotypes and higher racism scores. A separate survey also found that heavy viewers of crime stories on local television newscasts were more likely than light viewers to see Blacks as violent and that viewers who paid more attention to crime news saw race-unidentified and Black suspects as more culpable than White suspects (Dixon, 2008a).

Analysts investigating media content frequently urge the media to include more "democratic" or positive images of minorities (Seiter, 1986, p. 20), yet research on the actual effects of portrayals that defy common stereotypes is scarce. Studies have analyzed such counterstereotypical portrayals in print media, in entertainment television, and in children's television, but no one has empirically demonstrated that positive depictions of minorities in television news actually improve racial attitudes among viewers. Until the impact of positive portrayals—or counterstereotypes—are investigated and shown to be effective at countering racial bias in some way, television professionals have little impetus for change. The present study will investigate the impact of stereotypical and counterstereotypical segments upon the

implicit racial attitudes of viewers. Such research answers the U.S. Commission on Civil Rights' 50-year-old call for studies addressing how broadcast news can mitigate the impact of its negative portrayals of minorities and suggests a new path for broadcast news research. Although Black criminals and other stereotypes regularly appear in news as journalists continue their goal of balanced reporting, there is no reason for counterstereotypes like Black businesswomen to not also be present. This research constitutes a first step in understanding what if any impact such counterstereotypes may have on viewer prejudice.

Existing research investigating the potential prosocial use of media to achieve prejudice reduction generally falls within one of three categories: research on children's television programming (for reviews see Bernstein, 2000; Fisch & Truglio, 2001; Mares, 2005); parasocial contact studies building upon Allport's (1954/1966) contact hypothesis (Fujioka, 1999; Schiappa, Gregg, & Hewes, 2005; Tan, Fujioka, & Lucht, 1997); and media studies attempting to prime short-term improvements in racial beliefs and attitudes (Casas & Dixon, 2003; Power, Murphy, & Coover, 1996; Ramasubramanian, 2007; Ramasubramanian & Oliver, 2007). The work in children's programming stems from social learning theory, a theory that can be applied to adults but has only been used in this context to examine the media's impact on children and teens. The parasocial contact literature is growing, but many of its mechanisms and details remain unexplained in the literature. Further, this line of media research that flows from the contact hypothesis predominately focuses on entertainment rather than news media. With priming as a framework, however, researchers have frequently been able to learn more about how the media in general and even televised news specifically can affect adults.

Most of the media priming research related to race has focused on understanding and describing the effects of media as it is now—biased against minorities (Dixon, 2006a; Dixon &

Azocar, 2007; Dixon & Maddox, 2005; Domke, 2001; Domke et al., 1999; Gilliam Jr & Iyengar, 2000; Givens & Monahan, 2005; Valentino, 1999). Only a handful of studies has examined the extent to which news content can have a positive influence on racial attitudes. Results from these studies are mixed. One study suggests editorials that are written by minorities and that do not cue racial stereotypes will discourage readers from using stereotypes in later judgments about minorities (Power et al., 1996). On a less positive note, other research suggests that because news is so frequently biased, consumption of any print news—whether it mentions minorities positively, negatively, or even not at all—can prime negative judgments about minorities (Casas & Dixon, 2003). A third study points in yet another direction, suggesting that media literacy training can moderate the negative impact of newspaper stories (Ramasubramanian, 2005, 2007; Ramasubramanian & Oliver, 2007).

Thus, the existing literature on the prosocial uses of racial priming in news yields inconsistent results and remains wholly focused on the print medium. The contradictions and lack of specific broadcasting applications leave television news professionals with no clear evidence that providing positive portrayals of minorities will mitigate the prejudicial effects attributed to broadcast news by previous media studies (e.g., Busselle & Crandall, 2002; Dixon, 2006a, 2006b; Dixon & Azocar, 2007; Gilliam, Iyengar, Simon, & Wright, 1996; Gilliam, Valentino, & Beckmann, 2002; Peffley, Shields, & Williams, 1996). This literature also leaves media researchers with little guidance regarding the best direction for future research in prosocial priming. Consistent and long-term psychological research in reducing prejudice continues to provide psychologists with a better understanding of how prejudice can be changed. However, for media scholars, the question of how the media can prime such a response remains unanswered. The current experiment is intended to test one way that television news media may

work as a mechanism for strengthening or for weakening racial schema—specifically schema that connect specific groups to positive or negative attitudes.

Literature Review: What Does Past Work Suggest?

Basic Definitions

Stereotypes. Stereotypes and prejudice seem intuitively different, yet scholars often appear to use them interchangeably because of their similarities and interconnectedness. After all, they both denote negativity towards groups of people, usually outgroups, outcasts, or minorities. However, stereotypes are really only mental maps that we use to fill in unknown details about individuals based upon our preconceptions about the groups to which the individuals belong (Lippmann, 1922/1965).[1] Stereotypes are ideas we have about groups. These ideas are typically connected and interrelated as schema. The affective attitudes we hold towards various groups are prejudices. Allport (1966) specifically defined prejudice as an antipathy towards a group or towards individuals in that group that is based upon a faulty or inflexible generalization—a stereotype (p. 9). Although Allport argued that prejudice could not be attacked by countering stereotypes, today's psychological research suggests that certain forms of prejudice can be attacked by priming counterstereotypes. Today, psychologists know that by triggering, or priming, certain ideas—activating certain stereotypes or counterstereotypes—researchers can measurably change subjects' prejudices—at least temporarily. Such changes seem to act at an implicit or unconscious level, and psychologists have developed sophisticated tools for analyzing this implicit prejudice.

[1] While the APA defined stereotypes as cognitive structures that are like schema (VandenBos, 2007), Moskowitz (2005) refers to stereotypes as "expectancies we hold about a category" and further explained that "Lippmann's use of the term *stereotype* is essentially equivalent to what we have earlier defined as a *schema*, except that it is a schema about a group of people" (pp. 438 & 439).

The concept of schemas is integral to modern psychological theory regarding implicit prejudice. Moskowitz (2005) defined schemas as "organizational structure[s] for the knowledge that comprises one's categories" (p. 155). Schemas work as cognitive maps; they are groups of associations about things. These maps may be based upon accurate and verified knowledge, logical assumptions, information retrieved from outside sources, or pure imagination (Lippmann, 1922/1965). Regardless of their potential for inaccuracy, schemas serve to organize and, thus, make usable our information about the world and its contents.

Modern researchers define stereotypes as knowledge structures about groups of people (Moskowitz, 2005). Because stereotypes often fall within schema—because they can make up some of the individual components of schema—they allow individuals to assume a number of details about a new acquaintance. Based upon a single trait exhibited by an acquaintance, we can differentiate the person from others (Lippmann, 1922/1965).

Although the idea of stereotypes generally has negative connotations in modern America, Lippmann (1922/1965) explained that these structures are essential to our lives. He compared stereotypes to maps of the world: "To traverse the world men must have maps. . . . Their persistent difficulty is to secure maps on which their own need, or someone else's need, has not sketched in the coast of Bohemia" (p. 11). In other words, stereotypes, like maps, have their uses but often include inaccurate information—such as the coast of Bohemia, a landlocked region. Nonetheless, "the need of economizing attention is so inevitable, that the abandonment of all stereotypes . . . would impoverish human life" (p. 60).

Even though stereotypes provide vital maps of our world, we can reject them when appropriate. As Lippmann's (1922/1965) Bohemian map suggests, stereotypes are not always accurate; they are simply generalities that people use to navigate the world. Because human

beings can reflect on their use of stereotypes, stereotypes need not fully dictate the way humans see the world. As Lippmann himself suggested, "when we use our stereotypes, we tend to know that they are only stereotypes, to hold them lightly, to modify them gladly" (p. 60).

Many years after Lippmann (1922/1965), Devine (1989) further explicated stereotypes by relating them to general societal beliefs and comparing these societal beliefs to personal beliefs. She described stereotypes as general, societal beliefs about a group of people. Although children absorb such stereotypes from the media and from the people around them, as children grow older they may decide that the stereotypes are inappropriate. If so, they must replace the stereotypes with newer cognitive structures that better represent their individual beliefs.

For instance, a personal belief in equality would weaken stereotypical cognitive associations that suggest Blacks are less intelligent than Whites. However, a long held stereotype is not quickly or easily discarded. Because the stereotype is older, it has been used to process information more often than the newer beliefs and, therefore, continues to be used because of its strong accessibility. Even though the societal stereotypes may influence such people, Devine (1989) considered these people low in prejudice. Those whose personal beliefs converged with societal stereotypes she considered high in prejudice.

To summarize, stereotypes are the elements of cognitive associations we hold about groups of people, associations that we extract primarily from our social environment. Although people can reject stereotypes, it is important to realize that widely held and enduring stereotypes are often seen as a foundation for the continuation of patriarchal and racist social structures. They are seen as integral to such structures because they inherently differentiate the other as inferior in relation to the dominant culture (Seiter, 1986).

For instance, one female stereotype is the flighty housewife. This stereotype is both a result of inequalities in society and a justification for the same inequalities (Perkins, 1979; Seiter, 1986). In the 20th century, White woman were usually expected to fulfill childrearing and domestic roles. That combination of responsibilities requires multitasking and flexibility. The stereotype devalues those traits as merely "flighty" while also maintaining the hegemony (Seiter). Stereotyping housewives as "flighty" makes it harder for housewives to transition into other jobs by implying that housewives lack focus—an attribute associated with White men and with success in paid work outside of the home.

Two forms of prejudice. The structure of a stereotype is built upon beliefs. Psychologists conceptualize the attitudes justified by those beliefs as prejudices. Stereotypes are based upon our knowledge or belief about a group of people, and prejudices represent our affective attitudes towards that group (Moskowitz, 2005). Psychologists have discovered that such attitudes may be explicit or implicit (Greenwald & Banaji, 1995). Essentially, they are conscious and unconscious attitudes. The explicit are always attitudes "of which a person is consciously aware," and the implicit involve little or no awareness (VandenBos, 2007, pp. 356 & 470).

Although implicit and explicit attitudes may be perfectly consistent, they can often be quite divergent. For example, a White woman with low explicit prejudice would normally maintain that all people are equal. However, she may hold an implicit prejudice against minorities despite her positive explicit attitude. Research suggests that her implicit prejudice may not be evident in the words she uses but—despite her egalitarian attitude—should be revealed by her body language (Dovidio, Gaertner, Kawakami, & Hodson, 2002). Her eye contact, maintenance of personal space, and other, largely unconscious, forms of communication will demonstrate the unconscious negative attitude that she feels during interactions with Black

individuals. Just like one's speech and body language, measures of implicit and explicit prejudice sometimes show loose correlations but rarely correlate exactly. Given such contrasts, it is no surprise that psychologists have yet to agree upon whether implicit and explicit prejudice are loosely related or totally separate concepts (Aberson & Haag, 2007; Gawronski & Bodenhausen, 2006; Hofmann, Gawronski, Gschwendner, Le, & Schmitt, 2005; Kruglanski & Dechesne, 2006; Rydell & McConnell, 2006; Sherman, 2006). The formal definition of implicit and explicit prejudice stipulates that explicit prejudice "is consciously held, even if its not expressed publicly," whereas implicit prejudice "is not consciously held" (VandenBos, 2007, pp. 356 & 470).

Psychologists use two sharply different methods to measure these two types of prejudice. Because explicit prejudice is a conscious attitude, basic questionnaires measure that attitude through research participants' self-reports. Dasgupta and Greenwald (2001) measured explicit prejudice using feeling thermometers and semantic differential questionnaire items regarding Whites and Blacks. Others have measured explicit prejudice through questionnaires that ask respondents to rate the job suitability of specific targets for specific jobs, social roles, and so forth (e.g., Givens & Monahan, 2005). Implicit prejudice is best measured by examining automatic decisions that are influenced by attitudes of which the individual may remain unaware. In other words, the best measure of implicit racial prejudice currently available is the strength of the schema linking racial beliefs to valenced attitudes.

Psychologists have developed lexical decision tasks and the Implicit Association Test (IAT) to measure the strength of schemas. Both of these tools force participants to quickly and automatically select one of two options in response to stimuli. The selections are made by pressing one of two buttons on opposite sides of a typical computer keyboard, such as the "e"

and “i” keys. Prejudice is determined by how quickly the participant responds to stimuli. A quicker response theoretically implies a stronger association, or a stronger schema, connecting two otherwise unrelated concepts, such as “Black” with “bad” or “White” with “good.” Alternatively, a slower response implies weaker associations and, depending upon the associations being tested, possibly implies that a strong stereotype is interfering with a quick response (Greenwald, McGhee, & Schwartz, 1998; Neely, 1977; Ramasubramanian, 2007).

The IAT, which will be used in this research, often has participants categorize primes related to people (i.e., names or pictures of people) and valenced words. The primes, in such a test, can either be classified racially (i.e., Black and White) or can be classified as good or bad. The key portion of the IAT pairs the apparently disparate categories with one response key. When participants use the same key to categorize people of one race that they use to categorize adjectives as Good or Bad, researchers can measure how closely the groups and the attitudes are linked in the participants’ unconscious minds. Theoretically, participants who more quickly categorize a word such as “friendliness” as good when that judgment is made with the same response key as White have a higher level of implicit bias in favor of Whites and against Blacks (Greenwald et al., 1998).

Speed of response is a comparative measurement in the IAT. The dexterity with which a participant responds to the word when the valence judgment is paired with White as opposed to Black reveals the level of prejudice. This technique and its use of response latencies as a measurement of connected schema has been validated in multiple studies (see Lane, Banaji, Nosek, & Greenwald, 2007).

Priming. When psychologists use the IAT, they often prime respondents to see if showing the respondents something immediately before measurement affects the respondents’

implicit attitudes. The theory behind such an experimental manipulation is that preceding events may consciously or unconsciously affect later behavior. Bartlett (1932/1995), whose work led directly to the development of priming as a psychological concept, explains how primes work by comparing the impact of one event on our behavior to factors that influence the execution of a single tennis stroke:

> How I make the stroke depends on the relating of certain new experiences, most of them visual, to other immediately preceding visual experiences and to my posture, or balance of postures, at the moment. The latter, the balance of postures, is a result of a whole series of earlier movements, in which the last movement before the stroke is played had a predominant function. When I make the stroke I do not, as a matter of fact, produce something absolutely new, and I never merely repeat something old. The stroke is literally manufactured out of the living visual and postural 'schemata' of the moment and their interrelations. (pp. 201-202)

New events can influence our behavior, just as the balance of postures and preceding visual experiences influence a tennis stroke. Each new event, real or mediated, that we experience primes a response—whether or not we are aware of its affect. The eventual response may be a behavior, but first the event will likely prime a schema that frames any behavioral response to the event. As in tennis, the most recent event has the most direct effect and filters the impact of previous events.

Priming theory addresses how a recent event primes a particular response within a short period of time (Roskos-Ewoldsen, Roskos-Ewoldsen, & Dillman Carpentier, 2002). According to psychological theory, a prime strengthens some schema connections, while weakening others. When a schema is strengthened, one concept is more likely to remind an individual of another concept with a strong schematic connection to the first concept. McDonald (2004) suggests that this understanding of priming differs from how the term is used in media. He suggests that psychological priming is about "the activation of mental connections," whereas media priming is about "the dominance of certain learned connections." However this dominance McDonald

refers to only addresses the media's impact, the psychological theory behind priming addresses why repetition in the media may have an impact.

Bartlett's (1932/1994) tennis metaphor shows that those two allegedly disparate theories can be perfectly aligned. While the most recent prime may have the largest impact, repetition of certain primes can have a lasting impact. Repeated practice of a tennis stroke perfects one's ability to execute the stroke as desired. Additionally, the work of Kawakami and colleagues (Kawakami, Dovidio, Moll, Hermsen, & Russin, 2000; Kawakami, Dovidio, & van Kamp, 2005; Kawakami, Spears, & Dovidio, 2002), which is discussed in depth later in this text, suggests that repetition and training can have an impact on explicit and implicit processing.

Turning to how the media often works, a common televised prime is the Black robber. According to media priming theory, watching a news story about a robbery involving a young, Black man reinforces the connections between "young", "Black", "man" or male, and "robber." There is no reason to specifically disassociate such "connections: from "schematic connections"—or schema—used in psychology. Psychological priming theory also suggests this would reinforce negative attitudes about African Americans. After all, "Black" and "robber" frequently have negative connotations in society. Therefore, the news story can also reinforce prejudice against all Black people, all young, non-White men, and all young men in general.

Counterstereotypes. While psychological theory suggests that primes can reinforce negative attitudes, it also suggests that counterstereotypes can weaken connections between stereotypes, groups, and negative attitudes. It seems that counterstereotypes can work as debiasing information (Blair & Banaji, 1996; Dasgupta & Asgari, 2004; Moskowitz, 2005; Power et al., 1996; Ramasubramanian, 2005; Wittenbrink, Judd, & Park, 1997). As primes, they can unfreeze one judgment to encourage further processing and a more appropriate judgment

(Kruglanski, 1990, p. 362). This involves more than simply putting the stereotype in a positive light or suggesting a positive stereotype, such as passivity or warmth; "counter-stereotypes contain elements that directly contradict or disconfirm the cultural stereotype" (Power et al., 1996, p. 38). Because stereotypes developed in opposition to expected generalizations about the mainstream, dominant group—normally heterosexual, White men—counterstereotypes of Blacks have been operationally defined both as stereotypes of Whites and as the opposite of stereotypical Black traits (Ramasubramanian, 2005; Wittenbrink et al., 1997).

Defined in such a way, counterstereotypes are what many lobbyist groups demand when fighting stereotypical depictions in the media. At first glance, the requests may simply appear to be requests for nonstereotypical depictions, but the groups often ask for counterstereotypes—for portrayals that connect the minority group with a trait that is not stereotypical of that group and is often associated with a more dominant group. This connection should shift the mind from other stereotypes and can open the mind to additional judgments outside of the stereotypical schema.

For instance, the National Gay Task Force has demanded more "mainstream" depictions of gays where sexual orientation was "incidental" (Montgomery, 1989, p. 89). "Mainstream" may appear to be a nonstereotypical word. However, as an amorphous and rather all-encompassing descriptive of people, "mainstream" essentially defines the dominant group. That group is, by definition, mainstream. Implicit in such a request for counterstereotypes is the assumption, supported by psychological theory and research, that counterstereotypes would influence people to avoid using a stereotype in their next judgment of another person.

Using Stereotypes, Counterstereotypes, and Priming in Psychological Research

In numerous experiments, researchers have manipulated implicit prejudice by priming the activation or inhibition of stereotypes. Interestingly, these psychologists have had significantly less success manipulating explicit prejudice. Priming seems to reliably influence only implicit attitudes, a result explained most effectively by research flowing from Devine's (1989) work applying the cognitive dual-process model to stereotypes and prejudice. This model, which provides an overarching framework for cognitive research on prejudice, posits that although some actions are automatic, others are thought about and implemented in a deliberate, controlled manner (Neely, 1977). For example, when a person consciously decides to listen to music and, thus, turns on an mp3 player, the action is a result of controlled processing. In contrast, when a person then becomes involved in another activity while the music is on in the background, but suddenly finds himself or herself singing along to one of the songs, the action is implemented through automatic processing—initiated without deliberate intent.

With regard to racial attitudes, Devine (1989) showed that the decision to inhibit prejudicial responses results from controlled processing. Individuals holding personal beliefs in conflict with racial stereotypes can control the influence of the stereotypes on their conscious behavior by actively choosing to do so. The key to the dual-processing of stereotypes, as discussed by Devine, is that a prime will initiate controlled processing to inhibit a stereotype response only if the prime is clearly related both to the stereotype and to the resulting behavior. If either connection is unapparent, individuals with personal egalitarian beliefs will have no motivation to control the stereotype and will not initiate controlled processing; instead the prime will likely trigger a prejudicial response as a result of automatic processing. Specifically, Devine's work suggests that society's prejudicial attitudes are so ingrained they are manifested

unconsciously through automatic processing even by those with explicit egalitarian attitudes. In other words, if an explicitly egalitarian person is unaware of how a prime is stereotypical or unaware of how that prime may influence later action, then the subject will not inhibit the stereotype through controlled processing If the person is aware that a stereotype may influence their action, they use controlled processing—either when the stereotype is initially processed or during a later action or thought that could be influences by the stereotype—to resist that influence.

Devine's research (1989) suggests that stereotype-influenced responses can be stopped only through controlled processing, but subsequent research has demonstrated that training can influence the automatic and controlled application or inhibition of stereotypes (Kawakami, Dovidio, Moll, Hermsen, & Russin, 2000; Kawakami, Dovidio, & van Kamp, 2005; Kawakami, Spears, & Dovidio, 2002). This research focused on counterstereotype association training intended to weaken stereotypical schema and strengthen alternative schema related to a target group by making participants repeatedly classify targets in non-stereotypic ways. By training people to make counterstereotypical associations, researchers have been able to facilitate the inhibition of stereotypes through controlled processing and eventually make stereotype inhibition automatic (Kawakami et al., 2000; Kawakami et al., 2002). Further experiments in this line of research dealt with sexism and have shown that controlled processing can actually interfere with stereotype inhibition (Kawakami et al., 2005). Research participants who recognized the influence of counterstereotype association training over their later decisions tended to overcorrect, making stereotype-influenced decisions at the same rate as those who received no training at all. The only subjects who successfully demonstrated stereotype inhibition were those who completed a distractor task or filler task after the training but before the potentially

stereotype-influenced decision task. The distractor or filler task evidently disguised the role of the training, thus suppressing participants' tendency to correct for the influence of the training through controlled processing.

In addition to Kawakami et al.'s (Kawakami et al., 2000; Kawakami et al., 2005; Kawakami et al., 2002) success inhibiting stereotype activation with training, other researchers showed that exposure to images of minorities and Whites can affect respondents' implicit attitudes toward minorities even when the respondents are unaware of the primes. For example, Olson and Fazio (2006) prompted respondents to associate images of Whites with negative feelings and to associate images of Blacks with positive feelings, yielding lower implicit prejudice among respondents, even when prejudice was assessed days after the initial, subconscious training. Barden, Maddux, Petty, and Brewer (2004, experiment 3) found that images implicating social roles could also affect prejudice. Priming Whites with pictures of White and Black lawyers diminished the participants' implicit prejudice in favor of other Whites, while the conventional racial bias won out when participants responded to pictures of Black and White prisoners.

In a study that largely serves as the model for the present research, Dasgupta and Greenwald (2001) used the IAT to prime participants with images of famous and infamous Black and White men. The famous primes were nationally known for doing good things, such as participating in the civil rights struggle, and the infamous primes were known for doing bad things, such as committing heinous crimes. The researchers found that reminding participants of highly admired Blacks and of repugnant Whites diminished participants' implicit bias towards Whites. Pro-White bias was significantly lower following the counterstereotypical manipulation

(famous Black and infamous White) than it was either for a control cell or for a cell that experienced a stereotypical manipulation (famous White and infamous Black).

Wittenbrink, Judd, and Park (2001) achieved similar results in a study that stands out as the only psychological study published to date to manipulate implicit prejudice using video images. Using the IAT to measure implicit prejudice, researchers found that White participants who viewed a film clip of Blacks in a positive family gathering showed more than a 50% decrease in bias against Blacks relative to baseline prejudice measured with a pre-test. Participants who viewed a clip of Blacks in a gang-related context showed no significant change in implicit prejudice relative to baseline, though they did show post-manipulation implicit prejudice scores significantly higher than those of participants in the first group. Thus, the positive movie clip decreased implicit prejudice against Blacks, while the negative movie clip showed no significant effect on such attitudes. Both sets of participants engaged in filler tasks before the manipulation and before the IAT post-test.

In both of the investigations by Dasgupta and Greenwald (2001) and Wittenbrink et al. (2001), additional explicit measures of prejudice appeared unaffected by the manipulations. The counterstereotypic training research (Kawakami et al., 2000; Kawakami et al., 2002) and Devine's (1989) dual-processing experiments found similarly insignificant changes in explicit prejudice. Both stereotype-consistent and stereotype-inconsistent responses seem amenable to manipulation through priming and can be measured as changes in apparent levels of implicit prejudice. These results, however, seem to occur only through automatic processing. When subjects are alerted to the stereotype or counterstereotype effect of a prime, they often use controlled processing to behave in accordance with their personal beliefs. It is then no surprise

that measures of explicit prejudice, which ask for conscious responses to overtly stereotype-relevant questions, show no response to priming or counterstereotypical training.

Using Stereotypes and Counterstereotypes as Primes in Media Effects

In a line of inquiry parallel to the psychological research, mass communication scholars have sought to analyze the media's capacity to prime stereotypical and counterstereotypical responses. Traditionally, race-related media effects research has not grounded itself in the psychological theory of dual-processing or examined the often contrary roles of implicit and explicit prejudice. Researchers have sought, instead, to intuit media's effect on prejudice by examining its effect on stereotypical beliefs about minorities. Ignoring the deeper theoretical questions surrounding stereotypes as cognitive schema and prejudice as affective attitude, the mass communication research generally has measured only an audience's facility in applying a particular stereotype to a later situation in response to a prime. This literature clearly documents the media's ability to reinforce stereotypes or encourage the application of stereotypes (Dixon & Azocar, 2007; Gorham, 2006; Mastro, 2003; Peffley et al., 1996), but the research yields confusing and conflicting results regarding the ability of media to explicitly discourage the application of stereotypes through counterstereotypical primes (Casas & Dixon, 2003; Power et al., 1996). Much of this confusion may be explained by variations in study design and the unexplored impact of dual-processing.

A few, more recent media studies have openly explored dual-processing theory, two with the primary goal of examining the media's capacity to manipulate implicit prejudice (Givens & Monahan, 2005; Ramasubramanian, 2007; Ramasubramanian & Oliver, 2007). The results of these studies are generally consistent with the psychological research. Together, the studies

successfully manipulated implicit prejudice through countersterotypical primes, while further exemplifying the difficulties in manipulating explicit prejudice.

Media research into explicit prejudice. Only two studies, both focusing on the print media, have applied traditional mass communication research methods to explore the effects of counterstereotypes (Casas & Dixon, 2003; Power et al., 1996). These studies generated largely contradictory results. Power et al. found that, relative to a control group, participants who read a counterstereotypical essay written by a member of a stereotyped group were less likely to make explicit judgments consistent with the stereotype about a newsmaker who was also a member of the stereotyped group. In contrast, participants who read a stereotypical essay were more likely than the control group to apply the stereotype to their judgments about the newsmaker. This research demonstrated that it is possible to manipulate explicit beliefs about minorities and women, but it does little to explicate the mechanism through which such beliefs can be manipulated.

Casas and Dixon (2003) obtained very different results. They found that both stereotypical and counterstereotypical newspaper stories encouraged readers to believe that Blacks and Latinos were irresponsible. That is, rather than inhibiting a stereotype by means of a counterstereotypical prime, Casas and Dixon actually found an increase in stereotyping. This result appears to be completely at odds with the findings reported by Power et al. (1996).

Neither Power et al. (1996) nor Casas and Dixon (2003) expressly considered contemporary cognitive psychological theory related to stereotyping and prejudice. In both cases, the studies measured participants' reliance upon stereotypes when making subsequent judgments, rather than investigating the effects of the primes upon implicit or explicit prejudice.

Nonetheless, insights from psychological research may help explain the conflicting results reported in the two studies.

Methodological differences no doubt account in part for the divergent results. In particular, there are key differences between the researchers' scales of measurement. The largest difference may lie in Power et al.'s (1996) choice to measure stereotypical judgments applied to specific individuals. By asking participants to rate their beliefs about specific well-known newsmakers, Power et al. may have disguised the connection between the prime and the application of the stereotype thereby triggering automatic processing of the counterstereotype. Casas and Dixon (2003), on the other hand, measured participants' express beliefs about Blacks and Latinos as groups, thereby potentially triggering controlled processing of the counterstereotype. As in Kawakami et al.'s (2005) counterstereotypic training research, the recognition by Casas and Dixon's participants that they were being primed with a counterstereotype may have led them to overcorrect, yielding results more rather than less consistent with the stereotype.

Media research into implicit prejudice. Unlike Casas and Dixon (2003) and Power et al. (1996), Givens and Monahan (2005) drew more directly from cognitive theory related to dual-processing. Givens and Monahan examined the varying impact of priming specific stereotypes about Black women. Participants watched either a control movie clip that featured a White male, a priming clip that featured a Black "jezebel" character, or a priming clip that featured a Black "mammy" character. Participants then completed a "job applicant" study ostensibly unrelated to the stereotyping study. In this second part of the experiment, participants watched a video with either a Black or White female job applicant and rated her via measures designed to probe the effects of automatic processing and via measures designed to explore the effects of controlled

processing. As the psychological research would suggest, Givens and Monahan found that the prime impacted implicit measures more than explicit measures. The “mammy” prime encouraged participants to respond faster to “mammy” stereotypes than participants who saw the “jezebel” prime; the “jezebel” prime encouraged participants to respond faster to “jezebel” stereotypes than to “mammy” stereotypes. Additionally, Givens and Monahan—much like Kawakami et al. (2005)—found that participants aware of an outside influence strove to correct it in an attempt to remain unbiased by that influence. In Givens and Monahan, the stereotypical media prime appeared to make respondents less biased against the job candidate according to explicit measures. Although participants who rated a White, female job candidate appeared unaffected by any of the recently viewed movie clips, participants who rated a Black, female candidate seemed biased against the candidate only if they had viewed the control clip featuring a White man.

Ramasubramanian and Oliver’s work (Ramasubramanian, 2005, 2007; Ramasubramanian & Oliver, 2007) differs from previous media research in that it is not only modeled on psychological research regarding the dual-processing of stereotypes, but it is also concerned with counterstereotypes. Ramasubramanian and Oliver (2007) explored explicit attitudes, and Ramasubramanian (2007) explored implicit attitudes. In the study on explicit attitudes, stereotypical and counterstereotypical stories about Blacks appeared to have no impact on prejudice towards Blacks. In the study on implicit attitudes, Ramasubramanian reduced implicit prejudice towards Blacks when participants both watched a media literacy video and read a counterstereotypical news story about Blacks. Although the psychological research suggests that a prime can reduce implicit prejudice on its own, Ramasubramanian’s work suggests that media literacy training strengthens the impact of counterstereotypical media primes.

The Current Research

This study differs from typical media research regarding the effects of priming stereotypes and counterstereotypes in that this study more directly relies on the theory and methods that have emerged from the field of psychology. This study attempts to manipulate implicit prejudice both positively and negatively through stereotypical and counterstereotypical primes. The study is intended to further our understanding of priming theory—the idea that media primes can affect audience attitudes—in three original ways. First, it explores the impact of counterstereotypical primes on implicit and explicit racial attitudes. Second, it explores the impact of such primes on their own—without the added influence of separate media literacy training. Third, it explores the impact of such primes in the context of television news, as opposed to print news. In addition to potentially expanding the basic media theory of priming, this study tests the validity of the psychological dual-process model within the media context. This research used television news segments that feature Black and White men in part because television news has received particular criticism for its depictions of racial minorities, especially for depicting Blacks in a negative context (i.e., as criminals: Busselle & Crandall, 2002; Dixon, 2006a, 2006b; Dixon & Azocar, 2007; Entman, 1994; Gant & Dimmick, 2000; Gilens, 1996; Gilliam Jr & Iyengar, 2000; Peffley et al., 1996; Romer, Jamieson, & de Coteau, 1998). In addition, it used news segments that feature men to enable comparisons between the results of this study and the results reported by Dasgupta and Greenwald (2001), who used photographs of Black and White men as primes.

The investigations by Dasgupta and Greenwald (2001) as well as the work of Wittenbrink et al. (2001) suggest that counterstereotypes of Whites combined with counterstereotypes of Blacks will reduce implicit prejudices in favor of Whites, and stereotypes of Whites combined

with stereotypes of Blacks will increase implicit prejudices in favor of Whites. The work of Devine (1989) and Kawakami (Kawakami, Dovidio, Moll, Hermsen, & Russin, 2000; Kawakami, Dovidio, & van Kamp, 2005; Kawakami, Spears, & Dovidio, 2002) suggest that when a person is not aware of how a prime affects a later action, the prime and the reaction are processed implicitly and automatically—the prime is not inhibited. While the psychological research appears clear on what to expect and why it should occur, the media research is less consistent. The following hypotheses should help clarify many of the inconsistencies in related media research:

H1a: Exposure to countersterotypes will decrease implicit prejudice among White viewers.

H1b: For White viewers, exposure to stereotypes will increase implicit prejudice.

The hypotheses are limited to reactions among a White population because that was the dominant racial and ethnic group among the population of potential subjects and the extreme predominance of Whites within the subject pool would have made it difficult to randomly sample a large number of non-Whites for statistical comparison.

The hypotheses predict how posttest scores will differ from pretest scores. Pretests were used primarily to maintain consistency with two previous studies. Casas & Dixon (2003) found that reading any news story made White readers more apt to blame Blacks and Latinos for the crime and poverty they faced. Wittenbrink et al.'s (2001) findings relating to the intensity with which their manipulations changed implicit prejudice were only possible through an IAT pretest and posttest. As mentioned earlier, the stereotypical manipulation in that study did not significantly increase baseline prejudice, but it did significantly raise viewer prejudice as compared with the effects of the counterstereotypical manipulation. By recording a pretest and a

posttest IAT, the current experiment was expected to show which pairs of segments actually changed viewers' levels of prejudice.

A two-way ANOVA tested both of the above hypotheses. That analysis examined the within-group differences between each group's average pretest and posttest score and the differences between all posttests. An ANOVA examining pre and posttest scores on the racially congruent IAT and racially incongruent IAT provided additional exploratory data.

The psychological research suggests that individuals resist counterstereotypical primes or training when they are aware of both the primes and the way that such primes can impact later judgments. In Kawakami et al. (2005), counterstereotypes increased explicit prejudice against female job applicants. In other studies (e.g., Dasgupta and Greenwald, 2001; Wittenbrink et al, 2001; Casas and Dixon, 2003), counterstereotypes simply had no effect upon explicit prejudice. Givens and Monahan (2005) did not use counterstereotypical primes, but they found that stereotypical primes, when compared to a control, decreased explicit prejudice against Black women. Taken together, this research suggests that racial primes will either have no effect on explicit measures or encourage oppositional responses among viewers at an explicit level. In other words, counterstereotypes of Blacks and Whites will either have no explicit impact or will increase explicit prejudice, while stereotypes will either have no explicit impact or will decrease explicit prejudice. Theoretically, the participants will realize the connection between the primes and the explicit questions and inhibit the influence of the prime. This would mean that the countersterotypes would lead to equal or higher levels of explicit prejudice as suggested in the following hypothesis:

H2: White viewers exposed to countersterotypes will not exhibit less explicit prejudice than White viewers exposed to stereotypes.

In addition to testing the above hypotheses, this study examines the impact of two separate stereotypical and two separate counterstereotypical primes and controls for the influence of experimental order in the IAT. The high number of variables in this study accomplishes a variety of objectives in order to increase the validity of the experiment. By including stereotypes and counterstereotypes, the experiment was intended to verify that varying stereotypicality has differential effects upon prejudice. By including separate stereotypical and counterstereotypical primes, the experiment was intended to explore whether different primes with the same levels of stereotypicality would have similar effects upon prejudice. By including both a pretest and a posttest IAT, the experiment was intended to explore the amount of change each prime had upon viewers' implicit prejudice. By including separate IAT order groups, the experiment was intended to confirm that IAT order would not impact viewers' implicit prejudice.

CHAPTER 2

Methods

Experimental Design

This experiment used a 2 (pretest/posttest) x 2 (stereotypical/counterstereotypical) x 2 (exemplar set one / exemplar set two) mixed design. The first variable is within subjects, while the latter two variables are all between subjects. Stereotypicality and exemplar set are the main independent variables. Additionally, the researcher randomly assigned participants into two separate IAT order groups, Congruent IAT First and Incongruent IAT First, to control potential order effects that can be inherent in the measurement tool.

Manipulation Check

Goals

As previously discussed, this study attempts to replicate the results of Dasgupta and Greenwald's (Nilanjana Dasgupta & Greenwald, 2001) research on the malleability of implicit prejudice using television news segments rather than photographic representations. Dasgupta and Greenwald found that priming participants with photographs of 10 famous Black men and 10 infamous White men led to lower implicit prejudice than did priming participants with photographs of 10 famous White men and 10 infamous Black men. The current research was designed to use manipulations as closely analogous as possible to the photographs used in that earlier study.

Dasgupta and Greenwald (2001) masked their experiment's focus on race by asking participants to quickly match each photograph to an appropriate description using an identification task similar in concept to those presented through the IAT. Due to the speed with which each identification had to be made, participants presumably lacked the opportunity to recognize that all of the "good guys" were of one race and all of the "bad guys" were of another race. Dasgupta and Greenwald gave participants a matter of seconds in which to see and identify the primes. However, the increased attention that video brings to an exemplar, as opposed to the attention paid to a photograph, increases the chance that the exemplar's race will be explicit to the participant and processed in a controlled manner. Automatic processing must occur for the manipulation to affect any implicit attitude. As Devine (1989) suggested after exploring stereotypes and personal beliefs, awareness of a prime and the prime's impact on judgment and behavior leads to controlled processing. Therefore, rather than using 10 depictions of separate exemplars for each category, the present experiment used only a single video clip portraying a single exemplar. Thus, each manipulation consisted of two segments—one famous person and one infamous person. Of the two exemplars, one was White, and the other was Black.

The researcher ran a manipulation check designed to determine the precise video segments that would be most effective as manipulations for the main experiment. By measuring opinions held by typical undergraduate students about potential news segments and the exemplars depicted therein, the check attempted to verify the likeability of potential exemplars and each segment's potential to emphasize an exemplar's good or bad qualities. To judge an exemplar's potential, the manipulation check asked participants to rate each portrayal as positive or negative, rate the fairness of the portrayal, and rate how much the segment improved or worsened their opinions of the exemplar (See Appendix A).

Although the main experiment required only a single news segment depicting a single exemplar for each race/fame category, the manipulation check was designed to yield two complete and separate sets of segments and exemplars. By using two separate sets of manipulations, the researcher hoped to determine whether any measured results were actually caused by the manipulated variable (stereotypicality) or whether they were linked to extraneous, unrecognized factors present within a particular video segment. One potential set of four news segments was chosen by the researcher prior to the manipulation check in the hopes that the manipulation check would confirm her choices. Because visual and auditory redundancy encourages viewers to process material better and increases spreading activation (Zhou, 2005), this set (Set 1 or the "visual set") contained segments that stood out for their frequent visual and verbal references to their subjects. These segments also included exemplars that the researcher expected to be well known and appropriately liked or disliked by participants. These expectations were confirmed through the manipulation check. A second set of segments was chosen based entirely on the results of the manipulation check. This set (Set 2 or the "emotional set") consisted of segments, not chosen for the visual set, that featured exemplars with the highest and lowest likeability scores. Although each of the segments in Set 2 was appropriately focused on its exemplar, that focus was not necessarily emphasized through repetitive visual and auditory cues.

Selection of Potential Segments

To choose appropriate exemplars and segments for the manipulations, the researcher culled news segments from the Vanderbilt Television News Archive that are available at http://tvnews.vanderbilt.edu through an advanced search by record number (see Appendix B for record numbers). The researcher considered each of the 40 men, listed in Appendix C, used as

primes by Dasgupta and Greenwald (2001). Many of these men, however, were not featured in television news segments available for online retrieval. Therefore, the list of potential exemplars was expanded to include men who achieved fame or infamy more recently, such as New Orleans Mayor Ray Nagin.

At this stage in the process, 16 separate segments were identified. Four segments with particularly frequent visual or auditory references to their subjects were chosen by the researcher for inclusion in the visual set. These segments featured President John F. Kennedy (famous White), Howard Stern (infamous White), Tiger Woods (famous Black), and Mike Tyson (infamous Black). The 12 remaining segments were considered for inclusion in the emotional set. Famous Whites portrayed in these segments were Paul McCartney and Dan Rather. Infamous Whites were represented by Timothy McVeigh and Michael Brown. Famous Blacks consisted of Bill Cosby, the Tuskegee Airmen, Michael Jordan, Martin Luther King, Jr., and New Orleans' Mayor Nagin. Finally, infamous Blacks included in the segments were Michael Vick, O. J. Simpson, and the D.C. Snipers, John Allen Muhammad and Lee Boyd Malvo.

Procedure

Undergraduates taking an upper level-communication research course participated in the manipulation check. Fourteen students responded to two sets of questions presented through the MediaLab program using computers located in the same computer lab later used for the main experiment. The lab has 15 computers with headsets and 16" computer screens. Each screen is situated on a table against the wall and faces a chair. The screens and chairs are divided by office partitions.

In the first set of questions, students were asked whether they knew of each potential exemplar and were directed to provide their opinion of each individual. For example, a section

on Bill Cosby read, “This page is about Bill Cosby, a comedian. Do you know who he is?” A yes or no response was requested, followed by a 7-point scale ranging from 3 (favorable) to -3 (unfavorable) on which the students were asked to rate their opinion of Cosby. A negative response indicated that they did not like the person; a positive response indicated they did like the person. MediaLab recorded these responses on a scale ranging from 1 (favorable) to 7 (unfavorable).

The second set of questions asked students to rate news segments featuring the exemplars. Students watched a segment being tested and then rated how the featured exemplar was portrayed, how fair the story was, and whether the story changed their opinion of the individual. The computer then continued to the next news segment. This process was repeated for each potential exemplar, except the two D. C. Snipers. Their segment was followed by questions about both individuals. First, the computer presented the three questions in reference to one of the two accomplices, immediately followed by three questions about the other accomplice.

Each question in this set was accompanied by a 7-point scale that ran from 3 to -3 for the students and that was recorded as 1 to 7 in the collected data. The portrayal scale and the change scale were anchored with the statements “Very Positively” and “Very Negatively.” The fairness scale was anchored with the statements “Very Fair” and “Very Unfair.” Low averages in the analysis correspond with more positive attitudes about the individual or the fairness of the story. A recorded score of four corresponds to the middle of the scale that respondents saw—the zero mark.

Results of the Manipulation Check

The manipulation check verified the validity of Exemplar Set 1, the four segments chosen by the researcher for visual and auditory content. As expected, students who participated in the manipulation check generally liked John F. Kennedy (M = 2.4, SD = 1.3) and Tiger Woods (M = 1.4, SD = 0.6). They generally disliked Howard Stern (M = 4.8, SD = 2.3) and Mike Tyson (M = 5.1, SD = 1.3). As can be seen below in Table 1, the scores recorded for those four exemplars on the portrayal, fairness, and change scales created no real cause for concern about the validity of the segments for the manipulation.

Although the segments in Exemplar Set 1 appeared to adequately replicate the manipulation of Dasgupta and Greenwald (2001), four additional segments, which made up Exemplar Set 2, were chosen from among the original possibilities solely based upon students' preferences. Student preferences, as demonstrated in Table 1, actually highlighted five segments as strong candidates for the manipulations. For three of the categories, results based upon respondents' opinions of the exemplars provided relatively unambiguous choices for manipulation segments. Among the infamous Whites tested as exemplars, Timothy McVeigh averaged the highest, or least likable, score (M = 6.4, SD = 0.9). Among the infamous Blacks, O.J. Simpson averaged the highest, or least likable, score (M = 6.4, SD = 1.4). Among the famous Whites, Paul McCartney received the lowest, or most likeable, score (M = 2.2, SD = 1.3). In the final category, however, Martin Luther King, Jr. (M = 1.9, SD = 0.9) and Bill Cosby (M = 1.9, SD = 1.2) received equally low, or equally likeable, scores. Since participants in the manipulation check generally felt that King's segment was more positive and fairer than Cosby's, the counterstereotypical manipulation for Set 2 used King's segment.

Table 1

Means of Chosen Segments in the Manipulation Check

	Opinion		Portrayal		Fairness		Change	
Name	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Kennedy*	2.4	1.3	1.9	1.2	2.1	1.5	3.6	1.2
McVeigh	6.4	0.9	6.4	1.1	2.1	1.1	5.1	1.2
King	1.9	0.9	1.6	1.0	1.9	0.9	3.5	1.1
Simpson	6.4	1.4	6.2	1.1	2.4	1.5	4.1	0.4
McCartney	2.2	1.3	2.1	1.3	2.6	1.3	3.4	1.1
Stern*	4.8	2.3	5.4	1.2	3.2	1.4	3.9	1.5
Tyson*	5.1	1.3	6.1	0.9	3.6	1.3	4.2	0.4
Cosby	1.9	1.2	3.6	1.3	3.3	1.5	4.3	0.5
Woods*	1.4	0.6	1.6	1.1	1.3	0.6	3.9	0.3

Note: Starred exemplars were featured in Exemplar Set 1.

Main Experiment

Experimental Participants

More than 150 University of Alabama undergraduates representing three separate Colleges participated in the primary experiment of this study.[2] Research participants were recruited from classes in the College of Communication and Information Sciences, the College

[2] I will omit the name of the university when this dissertation is revised for submission to external publishing outlets.

of Commerce and Business Administration, and the Department of American Studies within the College of Arts and Sciences. Most participants received a small amount of class credit in return for participating. Fewer than five students received no incentives. As detailed in the Data Manipulation section below, one participant's responses appeared to have been entered carelessly and were excluded from analysis. Nine students failed to finish the experiment due to various technical problems; their responses were also excluded.

During the experiment, all participants answered basic demographic questions regarding their age, gender, race, ethnicity, and geographic origin. White students constituted 83% of the sample, Black students made up 13%, and students who identified in other racial categories made up only 4% of the sample, or six students. Only one student, who was non-white, reported non-American origins. The 26 non-White students were excluded from the data analyses since the present study only focuses on the responses of White viewers.

Although the 130 White participants ranged in age from 17 through 43, the majority, 80%, were 22 years of age or younger. Only 3%, or 4 students, were over the age of 26. The other 17% were 23 through 26 years of age. Fifty-three percent of White participants were male; 47% were female. One of the students (0.8%), identified as Latino as well as White. Students from the Southeast United States made up 89% of the White participants, including 68% who lived in Alabama before college. Three of the White participants, or 2.3%, reported living abroad immediately before college.

All students for whom data were analyzed participated in both an IAT pretest and an IAT posttest. Participants were randomly assigned to one of four main cells for the experiment (Stereotypicality x Set) and were assigned at random among cells that varied the order in which the IAT tests were presented (Congruent First x Incongruent First). The Whites split into the two

broad experimental cells equally, with 65 watching a counterstereotypical manipulation and 65 watching a stereotypical manipulation. Each of the four main cells contained between 31 and 34 White students. Participants were almost equally divided into the two IAT order cells: 49%, or 64 Whites, took the congruent IAT tests first, and 51%, or 66 Whites, took the incongruent IAT tests first.

Materials

Manipulation. As explained above, eight segments were chosen for the manipulation. Each segment was originally produced and aired by CNN and was acquired from the Vanderbilt Television News Archive database. Each segment can be accessed by record number using the advanced search function provided by the database. Respondents saw no more than three minutes of any one segment. Table 2 shows how each segment fit the combination of cells (Stereotypicality and Set). The Vanderbilt Television News Archives' record number for each segment is in Appendix B.

Table 2

Manipulation Details

Variable	Famous	Infamous
Set 1 (Visual)		
Stereotypical	John F. Kennedy	Mike Tyson
Counterstereotypical	Tiger Woods	Howard Stern
Set 2 (Emotional)		
Stereotypical	Paul McCartney	O. J. Simpson
Counterstereotypical	Martin Luther King, Jr.	Timothy McVeigh

Implicit Association Test. This experiment used an Implicit Association Test (IAT) administered using the web-based version of the Inquisit software program to test and measure participants' implicit prejudice. Generally, the IAT involved sorting tasks that displayed words or pictures on a computer screen and asked participants to sort the displayed items quickly but correctly within three general category pairs: Black/White faces, good/bad words, and insects/flowers. The last category was included as a filler task intended to divert attention from the researcher's interest in race. The images of Black and White human faces used in the primary sorting task were originally developed for the Project Implicit website (Nosek, Banaji, & Greenwald, 2002). All other images and the words displayed during the IAT originated in a sample script offered by Millisecond Software (Millisecond Software, n.d.), the maker of Inquisit.

In the IAT, each group of sorting tasks is called a block. Each task in a block has the same categorization directions. For instance, all the sorting tasks in one block involved using the "E" key to identify both good words and Black people and using the "I" key to identify both bad words and White people. Trials are the individual sorting tasks that make up a block. A trial begins when the computer randomly presents one of the stimuli used in the block and ends when the participant correctly sorts that stimulus. Incorrect responses do not stop the clock or end a trial; the computer simply informs the participant that the response was incorrect and continues to wait for another, correct response. The length of each trial, measured in milliseconds, is referred to as a latency.

The present experiment included 13 blocks, 3 filler blocks, 9 practice blocks and 4 critical blocks. Practice blocks contained 20 trials per block. Test blocks, or critical blocks, contained 40 trials per block. The first 6 blocks preceded the manipulations and represented the IAT pretest. The pretest was followed by 3 filler blocks, the experimental manipulation, and 4 blocks making up the IAT posttest.

In the first block of the pretest, the computer asked participants to identify a variety of words as either "good" (e.g., happy, lucky) or "bad" (e.g., poison, disaster). Participants pressed "E" to sort a word into the "good" categorization and pressed "I" to sort a word into a "bad" categorization. In the next block (Block 2), respondents used the same computer keys to sort images of human faces according to whether the depicted person appeared to be Black or White.

Block 3 combined the face and word categorization tasks—randomly displaying either a word or an image of a face that participants had to properly categorize using the appropriate response key. Approximately half (49%) of the participants began by using "E" for the good and the White categories and "I" for the bad and the Black categories (Congruent condition). The

other half of the participants began by using ”E” for good and Black and ”I” for bad and White (Incongruent condition). Block 3 represented a practice block. The same task was next repeated in a critical block (Block 4); then the category combinations for each group of participants were reversed for an additional practice block (Block 5) and an additional test block (Block 6).

Following completion of the pretest, participants continued the IAT with three filler blocks. In these blocks, participants categorized pictures of flowers and insects (Block 7), combined that task with the categorization of good and bad words (Block 8), and finally completed the combined task with the associations reversed (Block 9). Specifically, respondents categorized flowers and good words with the “E” key in Block 8 and categorized flowers and bad words with the “I” key in Block 9.

Participants next viewed the news segment manipulations presented in QuickTime video format. Following the manipulations, respondents completed four additional blocks—two practice blocks (Blocks 10 and 12) and two critical blocks (Blocks 11 and 13)—that again combined the sorting of good/bad words and Black/White faces. Participants received tasks representing the congruent and incongruent conditions in the same order that they completed these tasks in Blocks 3 through 6 of the pretest.

Explicit measures. Like Dasgupta and Greenwald (2001, experiment 1), this study used two measurements of explicit prejudice: a set of semantic differential items and a feeling thermometer. However, since the specific measurements were updated in Greenwald, Nosek, & Banaji (2003), this experiment used those updated scales. The semantic differential items, which were presented first, asked participants to rate the two groups (Whites and Blacks) on a seven point scale across the following five dimensions: ugly/beautiful, bad/good, unpleasant/pleasant, honest/dishonest, and awful/nice. The feeling thermometer asked participants to rate their

favorability toward the racial groups in question (White/Black) on an eleven point scale that ranged horizontally from “coldest” on the left to warmest on the right, with a midpoint representing “neutral.”

Procedures

Experimental procedure. Students were either recruited for the main experiment by the researcher during a class session or informed of the project by their instructor. During recruitment, potential participants were only told that the study would examine how the media affected their ability to react to stimuli. Students were asked to come to the lobby of the research facility in the College of Communication and Information Sciences during a specific time period if they wished to participate. For each session, a researcher led attendees to the computer lab described above, where each participant randomly selected one of twelve numbered sheets from a bag. The randomly chosen number became a student’s individual participant identification number. Each identification number was linked to a particular computer associated with particular experimental cells. A researcher next told students that the experiment used three separate computer programs and that the students would need assistance to navigate in and out of the programs.

The specific implementation of the IAT was designed and administered using the web-based version of Inquisit. At the beginning of the experiment, students entered their participant information numbers into the IAT program and received additional, on-screen information about the study as well as on-screen instructions for completing the IAT. Participants then took the IAT pretest, followed by the filler task discussed in the Materials section above.

Inquisit then paused, directing students to get a researcher who helped the participants launch, in sequence, two QuickTime video files. Each file contained a news segment, and

together the two segments comprised an experimental manipulation. After watching the videos, participants returned to Inquisit to complete the IAT posttest. Following the posttest, a researcher directed students to open the MediaLab program in which they finished the experiment.

In MediaLab, students were first presented with the semantic differential scales and asked to rate—as separate groups—rich people, poor people, young people, and old people. The program then presented the same scales rating Blacks and Whites. Then, participants responded to feeling thermometers rating Blacks and Whites, and MediaLab provided the participants with debriefing information. The demographic questions followed the debriefing. As students finished and left, they received a hard copy of the debriefing statement and were offered a hard copy of the study information sheet.

Data processing and collection. Only partial data were recorded for nine participants, who are excluded from the analysis presented here. Three participants skipped over the manipulation phase of the study, neglecting to indicate to the researcher that the Inquisit screen had directed the participant to summon the researcher. Computer failures that could not be remedied in a timely manner lead to incomplete data collection from three further participants. Faulty Internet connections prevented Inquisit from recording the responses of two participants. Finally, one participant's explicit prejudice scores were found to be missing after data collection ended.

As a standard IAT research precaution, latencies longer than 10,000 milliseconds were excluded from analysis. There were only 20 such latencies, and no participant had such unusually long latencies more than twice. Additionally, the first trial of each test block was deleted, thus allowing participants one practice trial as they began each block.

All results for one participant were excluded because the participant was deemed to be careless in providing data. More than 25% of this participant's responses occurred in less than 300 milliseconds. This participant also had the highest error percentage among all participants (26%) and the highest number of latencies under 400 milliseconds (40%). Although other participants occasionally responded in less than 300 milliseconds, such responses comprised less than 10% of each remaining participant's latency (or response time) scores.

The remaining IAT trial data was aggregated to create *D* measures for each participant. The *D* measure uses the standard deviation of practice and critical trials to minimize the variance between various individuals' responses. This IAT scoring algorithm was offered by Greenwald et al. (2003) to minimize the impact of prior experience on IAT measurements.

Computing the D measure requires five basic steps. First, the researcher computed an average latency score for each practice and critical block completed (Blocks 3, 4, 5, 6, 10, 11, 12, and 13). Second, SPSS was used to compute standard deviations for the latencies in each paired block (e.g., compatible and incompatible test in the pretest or compatible and incompatible practice in the posttest). Third, the compatible mean for one black was subtracted from its paired block. Fourth, each difference score was divided by the standard deviation for those blocks. Finally, the practice and critical ratios were averaged together, resulting in one D measure for the pretest and one for the posttest.

CHAPTER 3

Results

Implicit Prejudice

Main Analyses

All analyses were conducted at the alpha level of .05. A two-way ANOVA served to test the first hypotheses—which were presented in two parts. Contrary to expectations, the only significant difference revealed in the 2 (pretest/posttest) X 2 (stereotypical/counterstereotypical) X 2 (Set 1/Set 2) ANOVA was an average *D* score difference within all groups, $F(1, 130) = 43.16$, $p = .00$. As the information in Table 3 shows, neither the stereotypicality of the manipulation nor the video set shown appeared to influence implicit prejudice as measured by the *D* score. Table 4 shows that all average posttest *D* scores, within the sample as a whole and within each group, were lower than average pretest *D* scores. Implicit prejudice against Blacks, as measured by the *D* score, was lower in the full sample posttest ($N = 130$, $M = 0.40$, $SD = 0.34$), than in the pretest ($N = 130$, $M = 0.61$, $SD = 0.36$). The average *D* score of the full sample was representative of each group's average pre and posttest *D* scores. Average pretest *D* scores ranged from 0.55 to 0.65, and average posttest *D* scores ranged from 0.32 to 0.45—always staying within about 0.21 of any one group's average pretest score.

Table 3

Analysis of Variance for Implicit Prejudice

Source	*df*	*F*	η	*p*
Between subjects				
Manipulation (M)	1	0.17	0.03	0.68
Set (S)	1	2.02	0.37	0.16
IM x S	1	0.58	0.11	0.45
S within-group error	126	(0.18)		
Within subjects				
D score (*D*)	1	43.16	2.93	0.00
D x M	1	0.00	0.00	1.00
D x S	1	0.07	0.00	0.94
D x M x S	1	0.12	0.01	0.73
D within-group error	126	(0.07)		

Note. Values enclosed in parentheses represent mean square errors. *S* = subjects.

Table 4

D Score Means

Cell	*N*	Pretest *M*	Pretest *SD*	Posttest *M*	Posttest *SD*
All Groups	130	0.61	0.36	0.40	0.34
Stereotypical	65	0.62	0.37	0.41	0.32
Counterstereotypical	65	0.60	0.35	0.39	0.36
Visual Segments					
Stereotypical	31	0.64	0.35	0.42	0.31
Counterstereotypical	33	0.65	0.32	0.45	0.36
Emotional Segments					
Stereotypical	34	0.60	0.40	0.40	0.34
Counterstereotypical	32	0.55	0.39	0.32	0.36

Covariate Analyses

An additional ANOVA, shown in Table 5, explored the potential impact of a subject's race in the first news segment and the potential impact of IAT order. While IAT order did create a significant within subject contrast in that ANOVA, $F(1, 130) = 6.26$, $p = .01$, an additional ANOVA focusing only on the pretest and posttest scores in combination with IAT order showed that IAT order was not significant when examined alone, $F(1, 130) = 3.78$, $p = 0.5$. Additionally, the difference between the pretest and posttest *D* scores still showed strong significance, $F(1, 130) = 44.61$, $p = .00$. The information in Table 6 shows that participants' average posttest *D*

scores varied by 0.14 between the two IAT groups, with participants who had the incompatible IAT first showing less prejudice (having a lower *D* score) in the posttest.

Table 5

Analysis of Variance with Covariants

Source	*df*	*F*	η	*p*
Between subjects				
IAT Order (IAT)	1	0.90	0.17	0.34
Race of Exemplar in 1st Segment (R1)	1	0.00	0.00	1.00
Manipulation (M)	1	0.22	0.04	0.64
Set (S)	1	0.79	0.15	0.38
M x S	1	0.57	0.11	0.45
S within-group error	124	(0.18)		
Within subjects				
D score (*D*)	1	1.57	0.10	0.21
D x IAT	1	6.26	0.41	0.01
D x R1	1	2.32	0.15	0.13
D x M	1	0.03	0.00	0.87
D x S	1	1.45	0.10	0.23
D x M x S	1	0.15	0.01	0.70
D within-group error	124	(0.07)		

Note. Values enclosed in parentheses represent mean square errors. *S* = subjects.

Table 6

D Score Means Within IAT Order Groups

		Pretest		Posttest	
	N	*M*	*SD*	*M*	*SD*
Compatible IAT 1st	64	0.62	0.32	0.47	0.31
Incompatible IAT 1st	66	0.60	0.40	0.33	0.36

Group Latency Analyses

Implicit prejudice as measured by the IAT is normally analyzed through *D* score measures. Unfortunately the measure simply compares change without allowing researchers an understanding of how Pro-White associations may have changed and how Pro-Black associations may have changed. Because of this, the researcher conducted another analysis to better understand biases in favor of Whites (congruent IAT in which White and "good" share a response key) separately from biases in favor of Blacks (incongruent IAT in which Black and "good" share a response key).

As shown in Table 7, the 2 (congruent/incongruent) x 2 (pretest/posttest) x 2 (stereotypical/counterstereotypical) x 2 (set 1/set 2) analysis continued the trend observed in the initial ANOVA—pretests and posttests were still significantly different—but it was observed in this analysis that manipulation and set variables significantly impacted average group response times on the incongruent IAT. The average pre and posttest latencies of the full sample were still significantly different when congruent pre and posttest latencies, F (1, 130) = 183.66, p = .00, were considered separately from incongruent pre and posttest latencies, F (1, 130) = 16.65, p =

.00. A significant interaction between congruent and incongruent reaction times was also obtained, F (1, 130) = 15.55, p = .00. Not only was a significant difference observed when manipulation and set interacted with incongruent pre and post test latencies, F (1, 130) = 4.65, p = .03, but also—as can be seen in Table 8—manipulation and set approached significance in the between group results, F (1, 130) = 3.15, p = .08.

Table 7

Within Subjects ANOVA for Congruent and Incongruent IAT Blocks

Source	*df*	*F*	*η*	*p*
Congruent Blocks (C)	1	183.66	3,816,605	.00
C x Manipulation (M)	1	0.11	2,300	.74
C x Set (Set)	1	0.24	5,031	.62
C x M x S	1	0.29	6,092	.59
C within group error	126	(20,781)		
Incongruent Blocks (I)	1	16.65	199,684	.00
I x M	1	0.48	5,778	.49
I x S	1	0.78	9,312	.38
I x M X S	1	4.65	55,763	.03
I within group error	126	(11,994)		
C x I	1	15.55	115,608	.00
C x I x M	1	0.43	3, 208	.51
C x I x S	1	0.95	7,094	.33
C x I x M x S	1	1.19	8,824	.28
C x I within group error	126	(7,436)		

Note. Values enclosed in parentheses represent mean square errors.

Table 8

Between Subject ANOVA for Congruent and Incongruent IAT Blocks

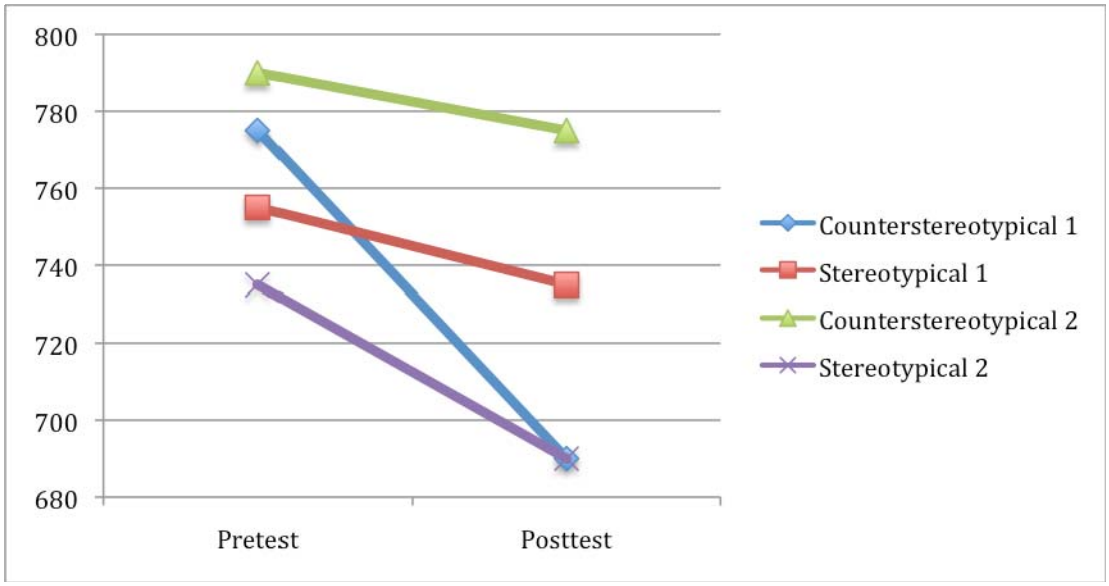
Source	*df*	*F*	η	*p*
Manipulation (M)	1	2.04	144,260	.16
Set (S)	1	0.11	7,771	.74
M x S	1	3.15	222,724	.08
S within-group error	126	(70.796.19)		

Note. Values enclosed in parentheses represent mean square errors. *S* = subjects.

Figure 1 below suggests that only one manipulation had an unusual effect. Participants who saw the Woods and Stern segments (counterstereotypical group #1) had a much larger difference between their pre and post incongruent IAT latencies than other participant groups. All groups sorted primes in the incongruent blocks faster in the posttest than the pretest, but those who saw the Woods/Stern manipulation improved their incongruent reaction times the most. Participants who saw the Paul McCartney & O. J. Simpson segments (stereotypical group #2) reacted just as quickly in the incongruent posttest, but they also responded quicker in the pretest.

Figure 1

Estimated Marginal Means of Incongruent Latencies



Case summaries of the individual compatible and incompatible IAT cell latencies in Table 9 provide additional information. As suggested in Figure 1, above, the visual counterstereotypical manipulation, of Woods and Stern, resulted in the most dramatic decrease in response times within the incongruent tests. That cell's pretest-posttest average group latencies differed by more than 100 milliseconds, unlike all other similar comparisons. This suggests that the Black-good associations and White-bad associations were much stronger for those respondents after the manipulation.

Table 9

Case Summaries of Cell Reaction Latencies

		Incongruent				Congruent			
		Pretest		Posttest		Pretest		Posttest	
	N	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Stereotypical									
Visual Set	31	859	176	804	183	644	91	658	135
Emotional Set	34	825	222	745	152	635	97	626	96
Counterstereotypical									
Visual Set	33	879	229	763	155	663	106	629	109
Emotional Set	32	884	242	858	267	698	120	691	138

Note: Means and standard deviations are in milliseconds.

Explicit Prejudice

Explicit prejudice toward Whites and Blacks was measured by five semantic differential scales and by a feeling thermometer. The scales were converted into one average racial score for each participant (after the appropriate reverse coding for one semantic differential item). Next, a participant's average response on the Black scale was subtracted from the participant's average response on the White scale. The thermometer scale scores were also used in the ANOVA as a difference score: "White score" minus "Black score".

As can be seen in Table 10, the ANOVA provided conflicting results in relation to Hypothesis 2. Examining only the average levels of explicit prejudice as measured by the thermometer scales, viewers who saw counterstereotypical portrayals exhibited less prejudice (*N*

= 65, M = 1.00, SD = 1.67) than viewers who saw the stereotypical portrayals (N = 65, M = 1.78, SD = 2.44). As Table 11 shows, this finding was significant when both viewing sets were combined, $F(1, 130) = 4.70$, $p = .03$. However, White viewers exposed to counterstereotypes did not exhibit significantly less explicit prejudice on the semantic differential measurements than White viewers exposed to stereotypes, $F(1, 130) = 1.87$, $p = .18$. While the semantic differentials support the hypothesis, which basically predicted that counterstereotypes would not reduce explicit prejudice when compared to the effects of stereotypes, the thermometer scales directly counter that hypothesis. Therefore, the results do not support Hypothesis 2.

Table 10

Mean Explicit Differences

	Stereotypes			Counterstereotypes		
	N	*M*	*SD*	*N*	*M*	*SD*
Scalar Difference						
Visual Segments	31	0.99	1.29	33	0.58	0.86
Emotional Segments	34	0.71	0.87	32	0.64	0.97
Total	65	0.84	1.09	65	0.61	0.91
Thermometer Difference						
Visual Segments	31	2.10	2.40	33	0.76	1.48
Emotional Segments	34	1.50	2.48	32	1.25	1.83
Total	65	1.78^{a}	2.44	65	1.00^{b}	1.67

Note. Superscripts denote that the two means are significantly different ($p < .05$).

Table 11

Analysis of Variance for Explicit Prejudice

	df	*F*	η	*p*
Scalar Difference				
Manipulation (M)	1	1.84	1.87	0.18
Video Set (S)	1	0.39	0.39	0.54
M x S	1	1.01	1.03	0.32
Error	128.02	(1.02)		
Thermometer Difference				
Manipulation (M)	1	4.70	20.50	0.03
Video Set (S)	1	0.02	0.09	0.89
M x S	1	2.20	9.63	0.14
Errors	549.27	(4.36)		

Note. Values enclosed in parentheses represent mean square errors.

Table 12 provides some light onto why the thermometer scores contradicted H2. The information in that table shows the average thermometer rating for each racial group within each participant group. It appears that participants who saw the visual set of counterstereotypical segments, featuring Tiger Woods and Howard Stern, felt less warmth towards Whites than all other groups. While most groups gave Whites an average score of 8 or a little above, participants who saw segments that featured Woods and Stern gave Whites an average score of 7.39 on the

thermometer. Again, 6 was the participants' neutral point, and 11 represents the warmest rating they could give a group. The average rating for Blacks was less warm and closer to neutral. While the thermometer scores contradict H2, this finding seems to be caused by a negation of one group's positive attitudes towards Whites, not a change in attitudes towards both Whites and Blacks.

Table 12

Mean Thermometer Ratings for Each Racial Group

		Whites		Blacks	
	N	*M*	*SD*	*M*	*SD*
Visual Set					
Counterstereotypes	33	7.39	1.62	6.64	1.45
Stereotypes	31	8.23	1.88	6.13	2.09
Emotional Set					
Counterstereotypes	33	8.00	1.81	6.75	1.63
Stereotypes	31	8.15	1.73	6.65	1.81

CHAPTER 4

Newscasts That Reduce Prejudice: Possibilities Suggested by This Research

Study Overview

This study was intended to explore how broadcast news media may affect implicit and explicit prejudice by testing three hypotheses. The first two hypotheses predicted that television news segments featuring counterstereotypical portrayals of White and Black men—that is, portrayals in opposition to typical American expectations—would reduce implicit prejudice and that similar segments featuring stereotypical portrayals would increase implicit prejudice. The third hypothesis predicted a different result for explicit prejudice—that counterstereotypical portrayals would not lead to lower explicit prejudice scores among viewers than would stereotypical portrayals.

None of these hypotheses received significant support from the research data. With regard to the first two hypotheses, results demonstrate that the stereotypicality of the segments viewed by participants had no significant effect on measured levels of implicit prejudice. Instead, something—most likely a practice effect—reduced viewer prejudice nearly equally across all experimental groups.

While the results of this study do not provide a bright spotlight into many of the mechanisms that allow race-related media primes to impact implicit and explicit prejudice, it does provide new directions for further research. The study provides further evidence that the exploration of implicit attitudes can provide valuable information for media researchers and

provides food for thought on how multiple photographic primes can compare to single video primes. Additionally, unlike previous research, it shows that television news does not necessarily increase negative racial attitudes. It also points to the importance of using IAT pretests with particular care and examining a variety of attitudes towards Whites and Blacks separately while also analyzing such attitudes as a larger measure of overall prejudice.

Understanding the Results

An Implicit Quandary

The most significant result of the experiment was the reduction in implicit prejudice. Unlike many previous studies, the news in this experiment appeared to reduce implicit prejudice even when the segments were stereotypical. Since television has been shown to have a negative impact on prejudice time and time again, why would this experiment show the opposite effect? Either participants' levels of implicit bias were lower by the time they began the posttest, or participants' abilities to react to the IAT stimuli were faster by the time they began the posttest—regardless of their implicit attitudes towards the stimuli.

If participants' prejudice actually changed before they took the posttest IAT, each manipulation lowered implicit prejudice—possibly in combination with a race-related IAT—or prompted participants to control their implicit tendency towards a White bias. Either conclusion would contradict the current research in psychology and the media. As a recent overview of the media literature states, there is "a broad base of evidence that media portrayals of stereotyping can result in several harmful outcomes" (Oliver, Ramasubramanian, & Kim, 2007, p. 285). Therefore, the possibility that stereotypical segments had an equally positive impact upon prejudice as the counterstereotypical segments seems unlikely. As for the psychological research, the theory behind the IAT is that it assesses automatic attitudes, which cannot be controlled by

participants (Nosek, Greenwald, & Banaji, 2007; Schneider & Shiffrin, 1977). A handful of psychologists have extensively tested and refined the IAT and continue to find that it does indeed measure implicit bias (Banaji, 2001; Cunningham, Preacher, & Banaji, 2001; Greenwald et al., 2003; Nosek et al., 2002; Nosek et al., 2007)

A practice effect is the likely culprit. It is not mentioned frequently in the plethora of research using the IAT, but some studies do refer to it. Apparently, prejudice is normally more apparent in any individual's initial IAT than in the same individual's later IATs (Greenwald et al., 2003; Nosek et al., 2007; Teachman & Woody, 2003; Wittenbrink et al., 2001). Wittenbrink et al. in particular, had results similar to the current study. When examined in one analysis, all of their pretest and posttest scores revealed a practice effect, $p = .00$. When examined individually, participants in the counterstereotypical manipulation cell had significantly different pre and posttest IAT scores. Their stereotypical manipulation, however, created no significant differences between the pre and posttest scores when the scores in that cell were examined alone.

Why did the average *D* scores in the stereotypical and counterstereotypical cells of the current study individually exhibit a practice effect when both cells of the previous research (i.e., Wittenbrink et al., 2001) did not? Most likely, the additional IAT blocks used in the current research explain the varying results between this study and previous dual-processing studies of racial attitude that used the IAT. Wittenbrink et al. is one of the few in that area which, like the current research, used a pretest-posttest design. But, whereas Wittenbrink et al. used 10 IAT blocks, the current research had students participate in 13 blocks. Moreover, Wittenbrink et al.'s participants concluded the posttest in Block 10. In contrast, participants of the current research began the posttest in Block 10.

The extra three blocks may have increased the practice effect to such a degree that other manipulation effects were minimized and insignificant. Researchers know that participants who have previously taken the IAT exhibit lower bias than those who are taking the IAT for the very first time (Greenwald et al., 2003). This practice effect seems to stabilize after a person's initial experience with the IAT. Participants' second and third experiences do not seem to lower overall IAT scores, only the initial experience.

Since most participants of the current study were communication undergraduates, it should be safe to assume that most participants were new to the IAT. That certainly appeared to be true during data collection. The practice effect may have been more prevalent in the current research than Wittenbrink et al's (2001) because the pretest in the current study was longer and therefore worked more like an independent IAT than the pretest in Wittenbrink et al.'s work .

Only future research that eliminates the practice effect as a confounding variable can verify whether the manipulations can impact prejudice on their own. Studies using the IAT to measure participants' changing phobias to snakes and spiders provide one idea for future pretest/posttest designs. Teachman, Gregg, and Woody (2001) used a spider-phobic group and a snake-phobic group in one study. Like the current study, Teachman et al.'s study had unexpected results. Teachman and Woody (2003) were able to eliminate the problem with a pretest-posttest IAT design by including a group of participants with no strong phobias to snakes or spiders. The researchers argued that the control group in the second study improved their ability to interpret the study's results because the control group "provided a less extreme counterpoint to the spider-phobic group than the snake-fearful group" in the first study. So, a group that goes through the whole IAT protocol but does not watch any media, or possibly watches media without any people, could serve as a less extreme comparison. Based upon that research and the work of

others, Nosek et al. (2007) suggests that researchers use a "control IAT for comparison purposes that is not expected to change as a function of the manipulation or intervention" (p. 273). In other words, adding additional distractor blocks with insects and flowers into the posttest and examining how the insect and flower bias scores change in comparison to the prejudice scores may have improved the current research.

An Explicit Contradiction

Not only did the implicit results counter the implicit hypotheses, but the explicit results also countered the explicit hypothesis—at least partially. Whereas the hypotheses that made up H1 suggested that implicit prejudice among the counterstereotypical viewers would be lower than implicit prejudice among the stereotypical viewers, H2 predicted that explicit prejudice would work differently. H2 did not indicate whether explicit prejudice would be similar or higher among the counterstereotypical group than the stereotypical group; it merely stated that explicit prejudice would *not* be lower within the counterstereotypical group than the stereotypical group.

This hypothesis was supported by the results of the semantic differentials but not by the results of the feeling thermometers. The two measurements contradict each other. However, explicit measures are generally distrusted in psychology because researchers are not certain how to predict them or certain about what they measure. Psychologists see explicit measures of attitude as difficult to measure because participants are distinctly aware of what their responses mean. Participants with the motivation and opportunity to deliberate can be expected to provide explicit measures of prejudice that differ markedly from implicit measures (Fazio & Olson, 2003). Whether or not racism is prevalent in American society, Whites understand that pre-civil rights era racial attitudes are no longer socially acceptable (McConahay, Hardee, & Batts, 1981).

Therefore, even if a White person has conscious or unconscious animosity against African Americans, psychologists would not expect the person to be comfortable expressing that animosity. After all, the person should be aware that racial animosity is socially unacceptable and may even find it personally unacceptable (Devine, 1989).

In contrast, attitudes towards Whites are not as socially restricted. While social identity theory suggests that Whites will prefer other Whites because of self-identity (Tajfel & Forgas, 2000), negative attitudes about Whites are not as explicitly discouraged in American society as negative attitudes about minorities. This would allow White participants, the only group included in this study's statistical analyses, to feel freer to express negative attitudes about Whites than about Blacks. And, it appears the participants in the Stern-Woods manipulation cell were more comfortable expressing lower levels of warmth towards Whites than expressing lower evaluations along the more specific attributes included in the semantic differentials (ugly, bad, unpleasant, dishonest, awful).

Unfortunately, this study does not provide solid evidence regarding why that particular manipulation, featuring Howard Stern in one segment and Tiger Woods in another, resulted in participants reporting less explicit warmth towards Whites. It could be that participants needed a positive Black exemplar and a negative White exemplar, as suggested by Dasgupta and Greenwald (2001). They may only have expressed less warmth about Whites, because of the contrast between a negative White person and a positive Black person in the segments. Their warmth towards Whites may not have decreased with only one individual reminder of Howard Stern or Tiger Woods. Once other segments are found to have similar effects, further research is needed to see if such an effect can be caused merely by a White exemplar, merely by a Black exemplar, or by both.

Additional Analyses

An examination of the separate implicit attitudes towards Whites and Blacks also indicated that the Woods-Stern manipulation affected audience members differently than any other manipulation. Although the explicit measurements individually pointed towards an attitude about a specific race, the individual implicit IAT blocks measure attitudes towards both groups. And, all the analyses here were based upon each manipulation group's average latency in one particular IAT block. Consequently, each measurement is based upon an average that combines attitudes towards Whites with attitudes towards Blacks—it is not based upon an attitude towards one group or another.

How, exactly, do those blocks differ? The incongruent IAT judged how easily participants could respond to adjectives and pictures of people when "good" had the same response key as Black and "bad" had the same response key as White. It measured how easily one associates Blacks and Whites with the positive and negative attitudes opposite of what the two groups are normally paired with in American society. The congruent IAT measures how quickly one can associate "good" and White as well as "bad" and Black—the typical American attitude cultivated by our society and the media. In other words, the congruent IAT represents a prejudice in favor if Whites, while the incongruent IAT represents a prejudice in favor of Blacks.

Examining the explicit and implicit scores together suggests that the Woods-Stern manipulation decreased explicit and implicit feelings of warmth towards Whites. Since the incongruent blocks measure both negative attitudes towards Whites and positive attitudes towards Blacks, this research cannot confirm that explicit and implicit feelings were equally affected. Nonetheless, it does suggest the possibility. As suggested in the above discussion of the explicit results, the explicit and implicit measures could theoretically agree with each other in

this case because participants were not explicitly uncomfortable with this decrease in warmth. Therefore, it showed up in both the implicit and explicit attitude results.

This is a unique finding in the IAT literature. As explained earlier, the *D* score essentially subtracts the average congruent latency from the average incongruent latency in each cell. The prevalent acceptance of the *D*-score in psychology shows that psychologists do not frequently examine congruent and incongruent scores separately (e.g., Aberson, Porter, & Gaffney, 2008; Chassard & Kop, 2008; Nosek & Hansen, 2008; Snowden, Wichter, & Gray, 2008). However, these individual latency averages, of the congruent and incongruent blocks, suggest positive attitudes towards one group and negative attitudes towards another. This means that comparison is inherent in the measurement, and one cannot use a low average incongruent latency as proof of low prejudice without a comparison to the average congruent latency (Teachman & Woody, 2003). Still, in this pretest-posttest design, it is possible to compare the average incongruent pretest with the average incongruent posttest. It does not necessarily argue for low prejudice nor for a better attitude towards one racial group over another. It does, nevertheless, suggest that between the posttest and pretest there was an attitude change that leaned contrary to the prolific racial message undercutting much of the American media—that Whites are better than Blacks.

To best understand what did happen and advance psychological theories of the mechanism behind explicit prejudice at the same time, such research must look at attitudes towards Whites and Blacks individually and in contrast. The basic measures of contrast in this research did not suggest that attitudes towards Blacks remained constant across cells while attitudes towards Whites changed within only one cell. Only when the congruent and incongruent scores were compared individually and contrasted with the individual explicit scores, was such a possibility suggested by the data. However, further studies would have to

confirm whether or not implicit attitudes towards Whites did actually diminish while implicit attitudes towards Blacks stayed the same.

Since the hypotheses were not upheld, minor limitations to the study, such as the impact of a student sample, seem rather irrelevant. Of much more obvious consequence, as detailed elsewhere, was the over all design and limitations in that design. Limitations such as the possible impact of IAT order, which appeared to only minimally impact significant findings from the analyses, do not change the tentative areas for future research based upon the possible reasons that the hypotheses were not upheld.

Conclusion

Despite problems with the pretest-posttest experimental design, the study has opened up many new areas in media priming research. First, as one of the first of two studies in counterstereotypical media effects, it can help future researchers understand some of the difficulties inherent in using the IAT and guide them in their research designs. Second, the results suggest that media researchers need to examine not just how attitudes towards a minority group are affected but also how attitudes towards the majority group are affected. Finally, since none of these participants showed any increased bias against African Americans following stereotypical media effects, it does suggest the possibility that something within the American public is preventing such portrayals from having the negative effects that were apparent in past studies.

To limit the impact of extraneous variables, this researcher would recommend that media scholars wait to attempt pretest/posttest IAT designs until the impact of the media upon implicit prejudice is better understood in our field. Although understanding how each group is changed by a manipulation has an important utility in research, developing a firm understanding of the

media's affect before risking the confusion that is apparently inherent in a pretest-posttest IAT design would be prudent. Additionally, a comparison of average pretest *D* scores in Table 4 of the last chapter shows that participants in each experimental cell had almost the same average score before watching the videos. If pretest scores do not vary much, a control group can work effectively at establishing how the media changes prejudice without creating an overly complicated design.

Once the effect upon implicit prejudice is better understood, media researchers can use a control group within a pretest-posttest design or simply use a control measure of implicit bias along with a measure of implicit prejudice. It would also be useful, eventually, for researchers to replicate some of the psychological work on how implicit measures of bias translate into human behavior. A pretest-posttest design that used the IAT and a behavior test, such as examining participants' body language around a White and/or Black confederate, would be useful for understanding media effects.

Such pretest-posttest designs, would also allow media researchers to collect a wealth of data that can further our understanding of the connections and differences between media effects upon implicit and explicit attitudes. Because those attitudes often share loose statistical correlation, the fact that a manipulation which affected one measure of explicit attitudes also affected a simplified measure of implicit attitude is striking. It points to the importance of examining many aspects of implicit and explicit prejudice within the scope of each study and could provide a useful basis for future hypotheses that examine how the two types of attitudes are related. Since the implicit data suggested that prejudices in favor of Blacks could be impacted, when prejudices in favor of Whites were not, and that explicit warmth towards Whites was increased when explicit attitudes towards Blacks remained unaffected, future research

should examine all possible aspects of prejudice in addition to over all or comparative measures of prejudice.

Finally, even though studies conducted elsewhere suggest that the strong positive effects seemingly induced by all of the media manipulations in this research were actually caused by a practice effect, the possibility of positive effects from stereotypical content should be further examined. The impact of the media may not be as dire as the current body of media research suggests. At the very least, these results show that negative effects from television are not so robust that they appear despite other influences. Media researchers should examine what else may minimize or reverse an apparent negative affect of commonly distributed television content. One imagines that the recent presidential election will naturally inspire a plethora of research to better understand the potential effects of the media's attention on a Black President of the United States. At the same time, it is also possible that America is finally far enough past the Civil Rights Era that those who are now in their early twenties really do have strikingly different racial attitudes and are impacted by the media in strikingly different ways than those in their early twenties just a decade ago.

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Appendix A

Manipulation Check Screen Examples

Example of the screens that preceded the news segments:

This page is about Bill Cosby, a comedian.

Do you know who he is? Yes No

Please rate your opinion of Bill Cosby on the following scale.
If you do not know who he is, please choose "0".

I don't like this person	-3	-2	-1	0	1	2	3	I like this person

The survey continued with questions in the same basic format, except the questions concerned all of the people featured in manipulation check segments, including Bill Cosby, and each subject was presented randomly. Once respondents answered all of these questions about each subject, they watched a news segment and responded to a screen like the example below.

Example of the screens that followed each news segment:

Now, that you've watched a news segment about [Bill Cosby or one of the other individuals featured] please answer a few questions about that segment.

How do you think he was portrayed in that story?

Very Negatively	-3	-2	-1	0	1	2	3	Very Positively

How fair do you think the story was?

Very Unfair	-3	-2	-1	0	1	2	3	Very Fair

Did the story change your opinion of him, and if so in what direction?
(If the package did not change your opinion of the person in any way, please circle "0")

Very Negatively	-3	-2	-1	0	1	2	3	Very Positively

Appendix B

Segments in Manipulation Check and Accompanying Record Number

President John F. Kennedy	731732
Howard Stern	749453
Tiger Woods	786776
Mike Tyson	734456
Paul McCartney	428650
Dan Rather	782701
Timothy McVeigh	787213
Michael Brown	808098
Bill Cosby	730769
Tuskegee Airmen	867968
Michael Jordan	427189
Martin Luther King, Jr.	427268
Mayor Ray Nagin	830091
Michael Vick	871138
O. J. Simpson	844711
Both of the D.C. Snipers	742449

Appendix C

Exemplars Used in Dasgupta and Greenwald's (2001) Experiment (p. 811-812)

The list also uses the descriptions written by Dasgupta and Greenwald to identify some of the less well-known individuals.

Black Famous: Martin Luther King, Jesse Jackson, Colin Powell, Denzel Washington, Eddie Murphy, Michael Jordan, Tiger Woods, Will Smith, Bill Cosby, Gregory Hines

Black Infamous: O. J. Simpson, Mike Tyson, Louis Farrakhan, Marion Barry, Arthur Washington (On the FBI's list of most wanted criminals. Member of militant Black prison groups.), Lonny Gray (Member of the Denver Crips street gang), Tyshawn Williams (Wanted by the FBI for murder), Charles Brackett (Wanted by the FBI for murder and narcotics charges), Michael McClinton (Leader of a robbery ring), Stanley Obas (Accused of kidnapping and murdering a 13-year-old girl).

White Famous: Clint Eastwood, Jim Carey, Tom Cruise, David Duchovny, Tom Hanks, Jay Leno, John F. Kennedy, Robert Redford, Norman Schwarzkopf, Peter Jennings

White Infamous: Ted Bundy, Jeffrey Dahmer, Timothy McVeigh, Charles Manson, Al Capone, Ted Kaczynski, Terry Nichols, Howard Stern, John Gotti, John Dillinger