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TESTING TESTS: DETERMINATION OF THE EFFICACY OF PREJUDICE
MEASURES

by

B. ZEUS SIMEONI

(Under the Direction of William D McIntosh)

ABSTRACT

Numerous scales and measures exist to determine the level of prejudice in an individual. This study compared six prejudice measures in an attempt to explore the strengths and faults of each measure. Each measure was correlated with a Social Desirability Scale, and each explicit measure was administered both within and without a Bogus Pipeline procedure to determine how susceptible it is to participant deception. In an examination of the Modern Racism Scale, Old Fashioned Racism Scale, Subtle Prejudice Scale, Blatant Prejudice Scale, Implicit Association Test and Seat Choice Task, none of the explicit measures correlated with the implicit measures. In addition, the implicit measures could not distinguish between target groups of blacks, females, and a control group.

INDEX WORDS: Prejudice, IAT, racism, sexism, MRS

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Chapter 1 - Introduction

One of the first measures of prejudice was written by Katz and Braly in 1933. The measure consisted of a simple checklist in which individuals would check off beliefs they held, and not check off beliefs they did not hold. While this may seem an oversimplistic measure of prejudice to most modern scientists, this checklist was used for 40 years. Work in the study of and measure of prejudice has evolved as the study of psychology has evolved.

While the earliest psychological inquiry on prejudice studied only the functional aspects of employing stereotypes as a valuable heuristic device (Lippman, 1922), scholars of the subject soon looked into the actual components of prejudice. Allport's classic book *The Nature of Prejudice* (1954) breaks the subject down into eight dynamics, including group differences, perceiving group differences, preferential treatment, how prejudice is acquired, and even a section on how to reduce prejudice. Although Allport's work was merely an amalgamation of the work done to that point by various researchers, it is still known to be the best work done on prejudice during that time period. Unfortunately, at that period psychologists were generally more interested in behavior than internal cognitive processes, so the follow up work was minimal due to lack of interest.

Lippman (1922) originally examined prejudice as merely another heuristic device. Heuristics in general are valuable methods of cognitive short cuts. When we view something we have seen in the past, we bring to mind the typical example of what we are viewing, so we do not need to create new memories with each new experience. Without heuristics, our memories would be little more than unrelated episodes in our minds.

Unfortunately heuristics can be inaccurate when applied to humans, as human variation is extreme at the very least. When these categorizing heuristics are applied to humans, the results are stereotypes. When stereotypes are used as a determining factor for action or inaction, prejudice ensues.

Many psychologists have found it appealing to examine stereotypes as a useful heuristic. Stereotypes themselves have been examined as not only useful but efficient time and energy saving devices (Monteith, Spicer, & Tooman, 1998). Most likely this school of thought is based upon the easy accessibility and general accuracy of heuristics themselves. However, stereotypes do not work as well as other heuristics or categorization methods, because they are used on humans. Humans are susceptible to psychological damage, a fact that psychologists sometimes overlook. For example, if I see a cow, I may use the stereotype of cows “Cows give milk”. If I try to milk the cow and this particular cow is incapable of giving milk, then no harm is done – effectively the stereotype of cows has been unsuccessful, but undamaging. If I apply a stereotype to a human, however, damage is far more possible.

Dion and Earn (1975) showed that being an object of prejudice can cause psychological stress and negative affect. Jewish participants were set in a strategy game against three other individuals. During the course of the game, each participant is led to believe that they have lost, due to each of the three other participants simultaneously ganging up on him. Half the participants are led to believe that their opponents are Christians who know that the participant is Jewish, and feelings of prejudice and discrimination are brought out in these individuals.

Those who felt victimized or discriminated against reported higher levels of sadness, egotism, anxiety and aggression, and felt less social affection than did the participants who did not feel discriminated against. These participants also self-identified more with their Jewish heritage and held more favorable opinions of Jews than did those who did not feel victimized during the course of the game. This change in affect could very easily effect general temperament over long periods of time, and cause further rifts in our society.

Prejudice can have more negative consequences than hurt feelings, however. In February of 1999, a black immigrant was shot 41 times by police (McFadden & Roane, 1999). The police had asked the immigrant to stop, and when he did, he produced an item from his pocket, and the resulting barrage of bullets ensued. The item turned out to be a wallet, nothing even remotely shaped or held like a gun. Recent research has shown that in light of current racial stereotypes, the face of a black man primes the concept of weapons (Payne, 2001). During a series of experiments in which participants were primed with a black or white face, those primed with the black face were able to identify a gun more accurately and faster than those primed with a white face.

A question that plagues all researchers who delve into the tumultuous topic of prejudice is the question of how to gauge the prejudice of their participants. Whether you are trying to reduce prejudice, testing prejudice levels as a possible 3rd variable, or merely collecting demographic data on the prejudice levels of your participants, researchers are required to find out how prejudiced their participants are toward a target group, and obtaining this information can be problematic. Most agree that prejudice exists, and if

something exists it should be measurable, but there has been little agreement on how to measure this variable. The present study proposes to compare various measures of prejudice, and determine if certain measures work better for certain kinds of prejudice.

Analyzing various prejudice levels comes with complications, beginning with defining prejudice and its various components. Allport (1954) deliberated over the definition of prejudice itself, and in the end came up with a definition that included “Antipathy” that “may be felt or expressed”. Not only would the felt prejudice be much harder to measure than the expressed prejudice, but modern theories have found that prejudice may be a more complicated process than originally thought.

According to Devine (1989), stereotypes and prejudice are two widely different concepts. When presented with a member of a stereotyped group, the activation of stereotypic knowledge is automatic. As an example, if someone sees a gay male, the knowledge of the stereotype of gay males is activated, or brought to mind automatically. Devine found that no one is exempt from this stereotypic knowledge – if a gay male sees another gay male, he still has the same stereotypic knowledge of gay men as would a heterosexual man. A gay man’s inclusion in the stereotyped group does not exclude him from activating the stereotypic knowledge.

After the stereotypic knowledge is activated, controlled processes come to the forefront. An individual’s prejudice level allows them to choose whether or not to act on the stereotypic knowledge – and their beliefs dictate whether or not they believe the stereotypic knowledge is true. To continue the example, if a heterosexual male sees a gay male, the stereotypic knowledge of gay males immediately comes to mind – effeminate, fragile, and oversexed. If the viewer does not believe this stereotype is

realistically appropriate to gay males, due to personal experience or purely philosophical beliefs, then he could choose to not act on this stereotypical knowledge when dealing with the gay male. In essence, the heterosexual male would treat the gay male as he would treat anyone else in the same situation. He does not allow the knowledge that comes to the forefront of his mind to control his actions.

In addition, Devine proposed that one method that low prejudice people use to control their actions, and not act in a prejudiced manner, is to suppress their stereotypic thoughts. When stereotypic knowledge is activated, stereotypic thoughts are much more likely to occur unless the knowledge is suppressed. Devine & Monteith (1999) reported that not only do low prejudice individuals consciously suppress stereotypes, but high prejudice people lack the motivation to suppress stereotypes. Studies have also found that individuals require both the motivation to suppress stereotypes, and available cognitive capacity. Those with little cognitive capacity are less likely to be able to successfully suppress their stereotypic thoughts, and are therefore more likely to act in a prejudiced manner (Wyer, Sherman, & Stroessner, 2000). The implications of requiring cognitive capacity to suppress stereotypes are many. If a normally non-prejudiced individual is busy, distracted, or doing multiple tasks at once, this non-prejudiced person may act in a prejudiced manner.

When researchers do need to find the prejudice levels of their participants, many scales are available to them, which poses the problem of which scale to use. Each scale could be measuring a different concept, as it is difficult to even get people to agree on a definition of prejudice. Prejudice is not a static construct, so scales and measures for prejudice must be updated to keep up with the way prejudice is expressed in our changing

world.

While large overt signs of prejudice such as open violence towards minorities seems to be dwindling, it is generally agreed that prejudice itself is still widespread (Judd, Park, Ryan, Brauer, & Kraus, 1995; Swim, Aikin, Hall, & Hunter, 1995). The reason for this shift in prejudice stems from Social Desirability (Messik, 1960; Devine, 2001). Edwards (1957) first addressed the issue of social desirability by developing his social desirability scale. Originally Edwards (1953) addressed the issue of why people lie on personality inventories that attempt to deduce psychopathology – getting many of his test questions from the MMPI. Shortly thereafter the Marlowe-Crowne scale was designed, and is more useful with respect to prejudice because it is free of implications of psychopathology on the part of the participants. This is the test that is most often used today to determine a participant's susceptibility to social desirability. His test was essentially a large version of a lie subscale, commonly placed in many scales and measures.

Societal norms have changed, making it undesirable to be seen as prejudiced. When people still feel prejudiced, they now use an alternative way of expressing their prejudice. In addition, participants in a prejudice experiment will be compelled to hide their prejudiced emotions and actions from the experimenter, making it an arduous concept to measure. Many modern scales have attempted to look at this new kind of prejudice and form their scales to get around the problem of social desirability.

The goal of the present research is to examine several measures of prejudice to compare and evaluate them. I will be using various prejudice measures - those that take social desirability into account and those that do not - and I will run these tests targeting

multiple minority groups.

Some evaluations have occurred comparing various prejudice measuring techniques in the past. The first to put prejudice measures to the test was Brigham (1972) when he tested the then current prejudice measure by Katz and Braly (1933). At the time the method for accessing prejudice was to have the participant fill out a checklist form of attitudes, and Brigham ran this measure in several experiments, each time changing the instructions to try to get the most out of the measure. In the long run it was concluded that the measure was simply no longer an acceptable measure of prejudice, no matter how it was changed.

One method of measuring non-overt prejudice is social distancing. When individuals perceive that they are being evaluated by peers, they will have more of a tendency to distance themselves from minorities (Allen, 1975; Swim, Ferguson, & Hyers, 1999). This distancing may be obvious, such as not speaking to minorities or stepping away from them, or it may be quite subtle, such as merely not speaking of issues regarding minorities, or keeping opinions on minorities ambiguous.

Symbolic racism is yet another way to describe this 'new' racism. Instead of being characterized by violence and open hatred, it is subtle, symbolic, and cold. This concept was introduced by Sears and Kinder (1971). The term "symbolic" was chosen because it reflects opinions and ideas based on values, not experiences. Generally, symbolic racism reflects the opinion that blacks do not take responsibility for their own lives, and therefore anger over poor treatment, special treatment and the attention given to racism is all believed to be unfounded.

There have been six different measures of this subtle form of racism over the

course of ten years: subtle racism (Pettigrew and Meertens, 1995), modern racism (McConahay, 1986), racial resentment (Kinder and Sanders, 1996), aversive racism (Gaertner and Dovidio, 1986), and racial ambivalence (Katz, Wackenhut, and Hass, 1986).

As an example of some of the new forms of prejudice we will examine two of the most commonly used measures: the Subtle Prejudice Scale and the Modern Racism scale. The Modern Racism Scale (McConahay, 1986) has been hailed as the first popular racism scale that measures less overt attitudes. However, it has come under much scrutiny (Henry et al., 2002). There are some concerns that it relies too heavily on political topicality, and due to this requires constant updates to stay modern. For example, when the scale was designed a question regarding school desegregation still had some impact, but school desegregation has far less impact on people's daily lives today than it did in the early 80's, when the scale was devised. In addition, its reliance on political topics can lead to the conclusion that it is heavily confounded with political conservatism, and although political conservatism itself is well correlated with racism in general, they are still separate topics.

The Subtle Prejudice Scale (Pettigrew & Meertens, 1995) has sparked a much different controversy. Subtle prejudice is based on a ten point scale, with subtle prejudice defined as derogatory emotions expressed in socially acceptable ways. This typically comes in the form of thinking that we need to defend our traditional values, that minorities are getting too much undue favor, and it exaggerates the differences between the perceiver and the outgroup. It has been described as cold and aloof. Blatant prejudice on the other hand is unconcerned with socially acceptable ways, and is the

belief that the outgroup is a threat, and all contact is to be avoided however possible.

Such definitive labels have sparked the issue of whether this subtle racism is truly racism at all (Coenders, Scheepers, & Sniderman, 2001; Pettigrew & Meertens, 2001; Pettigrew & Meertens, 1997). Another possible option is that this subtle prejudice is merely cultural differences, or the lack of ability to empathize with an outgroup. However as mentioned by Glick et al., (1996), prejudice based upon belief in traditional values is still a hostile, if not openly hostile form of prejudice, as it encourages lack of freedom and promotes submission of a minority to the majority.

Rattazzi, Manganelli, and Chiara (2003) examined the subtle prejudice scale in great detail. In order to evaluate whether or not the subtle prejudice scale really did detect and compensate for social desirability, they had their participants not only take the subtle prejudice scale, but the Marlowe-Crowne Social desirability scale as well. They found that those who were subtly prejudiced were much more concerned with social desirability than those who were not, and that subtle prejudice is far more socially acceptable than blatant prejudice. The minority group for this particular study were immigrants in European countries, and whether or not their finding would relate to modern racism in America is somewhat debatable, as switching either the ingroup or the targeted outgroup could make a large difference on the social desirability of, and the nature of, a specific prejudice. Racism, for example, differs widely from sexism.

The more inconspicuous form of prejudice facing women differs from the rather staunch prejudice facing blacks in America. While racism has been characterized by determining factors such as hostility, feeling that the opposing race is a threat, or possibly avoiding them altogether, sexism has never reached that intensity. Sexism is far less

conspicuous, and recent theorists have actually assessed that benevolent actions and attitudes can be a sign of sexism (Glick & Fiske, 1996). This ‘benevolent sexism’ is characterized by continuing stereotypes of women as vulnerable, less capable, and in need of help by men, or the belief that women should stay in traditionally female roles. Timmers, Fischer, and Manstead (2003) show that norms on how men and women can express emotions may lead to these stereotypes, and even in 2004 the stereotypic beliefs of how women should express emotion still hold strong.

As the present study seeks to examine whether different measures of prejudice can accurately measure varying kinds of prejudice, suitable target groups for prejudice are required. These target groups need to differ on levels of social desirability. Due to the less conspicuous nature of sexism as compared to racism, and previous study in measures of sexism, women make an ideal group to compare to blacks in the present study. Previous study has found the Modern Sexism Inventory to be very comparable to the Modern Racism Scale (Swim, Aikin, Hall, & Hunter, 1995) making comparisons between the two groups ideal. In addition, while there is a large amount of social desirability to be non-racist, ‘benevolent’ sexism has far less social desirability constraints (Glick & Fiske, 1996) and the stereotypes of women are thought of by Americans at large as norms, not beliefs (Timmers, Fischer, & Manstead 2003). Because there is less social desirability surrounding sexism as compared to racism, I predict that there will be less discrepancy between the various prejudice measures for sexism than for racism. While I predict a discrepancy between the various measures of sexism, I expect it to be significantly less than I will find with racism.

An important consideration in viewing various measures is to ensure that we

measure the prejudice the individual has, not the stereotypic thoughts that are primed when a minority group member is made salient. Fein and Spencer (1997) conducted an experiment in which the participants were shown a videotaped word completion task. The videotape consisted of an Asian woman holding up cards with non-completed words, and the participant's task was to add a letter to complete the word. For example, she would hold up a card that read S_Y, RI_E, or SH_RT. If the participants were thinking in a non-stereotypical manner, they would answer say, ride, and shirt, for example. If the participants were thinking in a stereotypical manner, they would answer shy, rice, or short - things associated with Asians. While this paradigm was exemplary for the task at hand, it must be noted that this measure does not measure prejudice, as defined by a set of attitudes, but rather taps into stereotypes primed at a subconscious level.

While the activation of the stereotypic information may be an automatic process, the decision to act upon that information is a controlled one. The issue of controlled versus automatic processes, however, is just as prevalent in the issue of measuring prejudice as it is in the theories of prejudice. Many researchers have looked into using priming techniques to access prejudice (Bargh, 1994; Dovidio, Evans & Tyler, 1986; Dovidio & Gaertner, 1996; Greenwald & Banaji, 1995) with mixed results. The researchers have hoped to look into the automatic processes of stereotype and prejudice activation by using an automatic measure, but like all measures, we cannot always be sure we are measuring what we are trying to measure.

Dovidio, Kawakami, & Johnson (1997) employed a classic example of subliminal priming to measure prejudice. They primed each participant with a picture of a black or a white face, masked by either a picture of a person or a house. They then displayed target

words or stimuli consisting of evaluatively positive and negative non-stereotypical words. It was the participant's job to determine if this word was appropriate to what they think they saw – a house or a person. They found that participants responded faster to a positive word after a white face prime than to a negative word after a white face prime. After a black face prime, participants responded faster to a negative evaluatory word than a positive evaluatory word.

Fazio, Jackson, Dunton & Williams (1995) used very similar techniques. They presented a target word, either evaluatively positive or negative, and then masked the target word with a black face and asked the participant to judge whether or not the word was positive or negative. The response latency of the participant was measured – upon seeing a black face, a racist subject should take longer to identify a good word, and less time to identify a bad word. This procedure was dubbed “the bona fide pipeline”, suggesting that it produces a direct window to the true attitudes of the participant.

If we determine that in making judgments of blacks versus whites there is more latency in the positive assessments of blacks, we cannot assume that this is because of stereotype activation. It could just as easily be caused from a *lack* of stereotype activation – the participant may recognize they have little information to base a judgment on, so they balk at making that judgment.

In addition, it is quite possible that priming tests on latency do not measure prejudice at all, but levels of stereotype activation as described by Devine (1989). If stereotype activation is indeed an automatic process, but separate from the controlled response of acting on that stereotype in a display of prejudice, then determining that a black individual causes a latency in making assessments does not demonstrate prejudice.

Dovido et al (1997) found that white participants responded faster to positive words after being primed by a white face in comparison with a black face. In contrast, the participants responded slower to negative words when primed with a white face in comparison with a black one. This could still be checking stereotype activation, not prejudice. The authors claim to have found implicit negative attitudes of blacks, however another likely explanation is that this latency is not caused by increased prejudice, but rather the need of the low-prejudiced participants to take extra time to suppress the stereotypic knowledge and not act upon it.

Judd, Park, Ryan, Brauer and Kraus (1995) had very different results when using priming tasks to deduce prejudice. Although no plausible explanation was found to explain why this series of experiments differed from other priming research, in a battery of experiments using nearly identical procedures to that of Dovido et al (1997), they found no negative correlations using a priming task to access the attitudes participants had toward a racial outgroup. White students did not display negative impressions of blacks, and blacks did not display negative impressions of whites. Because this went against the hypothesis that a priming task would be able to cause outgroup prejudice, they theorized that participants were able to control their responses for social desirability, as the prime was 2000 milliseconds, which could be enough time to be cognizant of the prime and control prejudice responses. However, even when the prime was changed from 2000 to 500 milliseconds, the results did not change. No negative reporting or assessment of outgroup members was found. Judd et al.'s (1995) explanation was that their priming measure was unable to detect levels of prejudice, because even at a speed of 500 milliseconds social desirability was active, and this removed prejudiced responses

from the participant, regardless of how prejudiced the participant may or may not be.

This priming task did exhibit differences based on age. When replicating their experiment in a non-university setting, Judd et al. found that those who were younger were less likely to self report negative impressions of a racial outgroup, and those who were older were more likely to report negative impressions of a racial outgroup. This would indicate either that racism is deteriorating over the generations, or our ability to hide our racism is improving.

Despite its potential problems, subliminal priming techniques are still commonplace for testing prejudice. Fazio, Jackson, Dunton, and Williams (1995) argue that measures of prejudice are better if the participant does not know that their attitudes are being measured. While this is a primary reason why so many researchers use priming techniques to measure prejudice, it is important that we consider whether priming techniques are really measuring prejudice. Testing stereotype accessibility is not the same as testing prejudice itself, and as mentioned above, it can be argued that many priming techniques test stereotype accessibility, not prejudice. Because stereotype activation is an automatic process, and the prejudice itself is a controlled process, we must use measures to test prejudice that are controlled – not automatic. Fazio seems to base much of his work on the theories of Devine (1989) and seems to be attempting to measure automatic attitude activation – but the attitudes that are brought to mind would also be found through many priming procedures, and there can be a large difference between accessible attitudes and attitudes that an individual agrees with and believes in.

However, Fazio et al.'s point still stands strong – we need to find a controlled measure of prejudice that keeps the participants unaware that they are being tested for

prejudice. Macrae, Bodenhausen, Milne, & Jetten (1994) used such a method. The paradigm they employed was seat choice. Participants were informed that they would be meeting with a skinhead, then were led to a room with 8 chairs lined up against a wall. A jacket and a denim bag were sitting in the first chair, and the participants were told that the items belonged to the skinhead, and that he had obviously just stepped out for a second. The participants were told to have a seat and wait for the skinhead to return. The further away the participants sat from the seat the skinhead had chosen, the more prejudice they were judged to have shown towards the skinhead. This measure fits all of the criterion to best measure prejudice – it uses a controlled process of activity (seat choice) and yet the participants are not aware that they are being tested for prejudice. This paradigm has also been tested in schools, examining seating aggregation as an index of racist attitudes (Campbell, Kruskal, & Wallace, 1996). This field-testing provides this particular paradigm with a degree of external validity that is not often found in many of the pen-and-paper tests used in most psychological experiments.

Yet another measure to test prejudice is the Bogus Pipeline (Jones & Sigall, 1971). In attempting to ascertain the true feelings that a participant had on any particular topic, Jones and Sigall made a simplistic deduction: the most direct way to compensate for social desirability would be if no participants ever lied. While this may seem an overly optimistic goal, it is possible to drastically reduce the amount that a participant will lie, and thus get very close to the true attitude of the participant. The method they devised was dubbed ‘the Bogus Pipeline’. The Bogus Pipeline technique involves hooking a participant up to a polygraph test, convincing the participant that the device is working very well and that any lies will be displayed to the experimenter. Using this

paradigm Jones and Sigall found that participants were far more likely to acknowledge negative attitudes towards groups such as the handicapped or blacks, both groups with a strong social desirability effect to hide negative attitudes.

The most recent prejudice measure to be developed is the Implicit Association Test (Greenwald, McGhee, & Schwartz, 1998). The IAT is a measure that tests correlations of ideas, to see how well connected they are in memory. Contrary to many methods of associative prejudice such as the Bona Fide Pipeline (Fazio, Jackson, Dunton, & Williams, 1995) which use priming to get at correlative associations leading to prejudice, the IAT uses no such priming techniques. In the IAT, a participant can be tested for negative attitudes toward nearly anything: in this explanation we will use blacks as the target group (see figure 1). The participant uses two buttons – in the first trial they use the left button whenever they are presented with a name that is stereotypical of a black girl, and the right button when they see a name more thought of as a white girl's name. Each trial consists of 25 words. In the second trial they use the left key when they see a pleasant word, and the right key when they see an unpleasant word. In the third trial they use the left key when seeing a black girl's name, or a pleasant word, and the right key for a white girl's name or an unpleasant word. If mental associations between pleasant things and blacks are weak, there should be a good deal of response latency in this trial on the left key. In the fourth and fifth trials they reverse keys as a control. Using this paradigm Greenwald et al. (1998) have found very consistent results as an implicit measure of prejudice, and one that is not affected strongly by social desirability (Devine, 2001). Brendl, Markman, & Messner, (2001) tested the IAT using stereotype controls. They argued that if someone has no attitudes of blacks at all, they

Figure 1

Sample of IAT trials.

Sequence	1	2	3	4	5
Task Description	Initial target-concept discrimination	Associated attribute discrimination	Initial combined task	Reversed target-concept discrimination	Reversed combined task
Task Instruction	● black white ●	● pleasant unpleasant●	● black ● pleasant white ● unpleasant●	● white black ●	● pleasant ● white black ● unpleasant●
Sample Stimuli	Meredith ○ ○ Latonya ○ Shavonn Heather ○ ○ Tashika Katie ○ Betsy ○ ○ Ebony	○ Lucky ○ Honor Poison ○ Greif ○ ○ Gift Disaster ○ ○ Happy Hatred ○	○ Jasmine ○ Pleasure Peggy ○ Evil ○ Colleen ○ ○ Miracle ○ Tameka Bomb ○	○ Courtney ○ Stephanie Shereen ○ ○ Sue-ellen Tia ○ Sharise ○ ○ Meagan Nichelle ○	○ Peace Latisha ○ Filth ○ ○ Lauren ○ Rainbow Shanise ○ Accident ○ ○ Nancy

will be seen as racist, because their positive attitudes towards whites will provide a comparable difference with their attitudes towards blacks. They employed nonwords such as nonsense syllables in place of black names to demonstrate the shortcomings of the IAT. One might expect some response latency when people have to process something they have never seen before assuming that nonwords are difficult to process, and this could appear to be the response latency of prejudice. In fact, they did find response latency with nonwords, be they positive or negative. Researchers must be careful to ensure that the two groups used as comparison in the IAT (such as black female names and white female names in the example above) are not only comparable, but equally familiar to the participants. Also, these tests are problematic to compare to most American studies – Brendl et al. (2001) conducted this study in Europe, using tourists for participants. This is as select a sample as college freshman, but a completely different sample.

While there is no published research comparing several kinds of prejudice measures, most new scales pit themselves against the more established scales. These pre-established scales are employed to norm the newer scales, and the MRS has been used as a comparison by many (Bobo, Kluegel & Smith, 1997; Greenwald, McGhee, & Schwartz, 1998; Kinder & Sanders, 1996; Pettigrew & Meertens, 1995). Currently the IAT itself, like so many of its predecessors, is under scrutiny. The IAT was compared with the Bona Fide Pipeline (Olson & Fazio, 2003) and it was found that the two share little correlation, raising the possibility that these two seemingly similar implicit prejudice measures may be testing two different things. After comparing the two measures, it was postulated that The BFP and IAT measure two different kinds of

prejudice – namely, the BFP measures prejudice toward individuals, or specific exemplars of a group on an individual basis, and the IAT measures prejudice toward the group as a whole.

The goal of the present study was to compare various prejudice measures and determine how applicable they are to various forms of prejudice. Also of interest was how extensively each measure is constricted by social desirability. In the past, people have used blacks (Dovidio et al., 1997), females (Swim et al., 1995), skinheads (Macrae et al., 1994), homosexuals (Devine, Monteith, & Zuwerink, 1991), foreigners (Pettigrew & Meertens, 1995), immigrants (Brendl, Markman, & Messner, 2001), transvestites, welfare recipients (Maurer, Park, & Judd 1996) and people of varying religious beliefs (Dion & Earn 1975) as target groups for prejudice measures, to name just a few. I argue that different measures will have varying effects when employed to examine prejudice against different groups, because the social desirability of prejudice against each group will differ. For example, it is currently not socially acceptable to be prejudiced against blacks in this country, as racism is rife with open expressions of hate. It is more acceptable to act in a sexist fashion however, as long as you act in a manner befitting benevolent sexism (Swim, et al. 1995). These varying degrees of social acceptability of stereotypes and prejudice should cause drastically different outcomes on measures of prejudice.

For the present study, I used three target groups for prejudice – prejudice against blacks, females, and people with Irish last names, referred to as “Irish” for purposes of semantics. While racism and sexism are comparable in terms of scales and measures, they are widely different in terms of outlook and social desirability (Swim et al., 1995). While racism is a very conspicuous and direct form of prejudice, sexism is a more subtle,

nuanced, and inconspicuous form of prejudice. The participant population will have little to no stereotypes or associations with Irish at all, making them an ideal control group – as close as possible to a baseline of zero prejudice.

The measures were a battery of tests ranging from implicit to explicit, with varying degrees of susceptibility to social desirability. Each participant was given a Subtle Prejudice Scale (SPS), Blatant Prejudice Scale (BPS), a Modern Racism Scale (MRS), Old Fashioned Racism Scale (OFRS), a Bogus Pipeline procedure, a seat choice task, a Social Desirability Scale, and an Implicit Association Test (IAT). The SPS, BPS, MRS, and OFRS were modified for the black, female and Irish groups when needed. Because these tests have varying levels of susceptibility to social desirability, I predicted a high degree of correlation between the scores of the explicit tests (MRS, SPS) and the Social Desirability Scale. In contrast, I predicted a lower degree of correlation between the implicit tests (IAT, seat choice) and the Social Desirability Scale. I hypothesized that each of the explicit tests will be more sensitive to sexism than to racism, as derived by higher levels of prejudice being displayed. Specifically, scales such as the Modern Racism Scale will be less sensitive to prejudice than the Modern Sexism Scale, as shown by higher degrees of prejudice being shown in the Modern Sexism Scale. As each measure is analyzed between groups, a clear picture of which scales are most sensitive to sexism or racism should become apparent. Many other analyses will be run to further understand the correlations each of these measures have to each other, as discussed below.

Chapter 2 - Method

Participants

63 introductory psychology students participated in this study as either part of a course requirement or as extra credit. No limitations on participants is warranted – although I am testing prejudice against blacks and women, both blacks and women will participate in the study. The only limitation is that black participants will not be placed into the racism condition, as some of the questions would not be appropriate for blacks, and allowing blacks into this condition would dramatically alter the results.

Materials

Each participant completed a Modern Racism Scale (McConahay, 1986), Subtle prejudice scale (Pettigrew, Meertens, 1995) and Social Desirability Scale (Crowne, Marlowe, 1960). Swim et al., (1995) previously devised a set of methods in which the Modern Racism Scale was transformed into the Modern Sexism Scale, and each scale has been modified slightly using these methods to reflect the three target groups we are examining – blacks, females and Irish. In addition, each of these scales can be tested using a Likert-scale, and therefore scores may be averaged and compared across scales.

Modern Racism Scale: The Modern Racism Scale (McConahay, 1986) consists of seven questions. It is complimented by its sister scale, the Old Fashioned Racism scale (OFRS), which consists of seven questions as well and is an integral part of the scale. The Modern Racism Scale was designed to be vastly different from the Old Fashioned Racism Scale, and therefore we should expect different results from the two scales when compared to each other. Both of these scales have been altered by Swim et al. (1995) to determine prejudice against women. The scales were broken into three categories –

Denial of continuing discrimination, antagonism toward the group's demands, and resentment about special favors for the target group. Using the same principles, I made similar alterations so the measure fit prejudice against Irish, however one complication occurred. No questions could be generated in the category of 'denial of continuing discrimination against Irish', as there is no discrimination against Irish to deny. Elimination of this category is feasible, as the categories are not equal in the Modern Racism Scale and the Modern Sexism Scale – the MRS has one question in the 'denial of continuing discrimination' category, while the MSS has five questions in this category – displaying that relevant questions are more important than filling quotas in each category.

Subtle Prejudice Scale: The Subtle Prejudice Scale (Pettigrew, Meertens, 1995) consists of 10 questions. Similar to the Modern Racism Scale, this scale also has a sister scale, the Blatant Prejudice Scale (BPS), which consists of 10 questions. The methodology developed by Swim, et al. (1995) was used to convert this scale to measure prejudice against blacks, women, and Irish. The original scale was written to determine prejudice against West Indians by the British, and this original scale is listed in the appendix for comparison.

The Subtle Prejudice Scale is broken down into three categories: traditional values items, Cultural differences items, and positive emotions items. The Blatant Prejudice Scale is broken into the two categories of Threat and rejection items and Intimacy factor items. In both cases transforming questions originally written to measure prejudice of the British towards West Indians was quite simple when applying it to racism – only the names needed to be changed. Similar ease was found in transforming the scale to measure prejudice toward Irish.

In both the sexism and racism cases however, modifying the Intimacy factor category was somewhat troublesome. Three questions in this category were quite applicable to measure racism assuming the participant is white, but not if the participant is black. An example of such a question is “I would be willing to have sexual relationships with a West Indian”. Because black participants may answer based on their race and not their opinion, these kinds of questions were a primary motivating factor in disallowing blacks to be part of the racism condition. In addition to creating problems with racism, this question is completely unusable when changed for measuring sexism. Modified to “I would be willing to have sexual relationships with a female” would not be an adequate question for discerning sexism, and no rewording of the question would be suitable. The majority of questions in the “Intimacy factor” are similarly unusable for sexism, as intimacy is a major factor of benevolent sexism. To compensate for this problem, questions were substituted out of the Ambivalent Sexism Inventory, taken from the benevolent sexism subset. These questions address the same issue of intimacy, and do so in a previously defined and widely used manner.

Bogus Pipeline: The bogus pipeline procedure was also administered to each participant. During this procedure each participant was hooked up to a Biopak MP30 polygraph machine. To make the machine look technical, accurate, complicated and modern, additional wires were attached to the machine and placed on the participant’s arms and neck. A total of five electrodes were attached to each participant. Electrodes were placed on the elbow joints, wrists, and neck. This allowed very little movement on the part of the participant, keeping the fact that they were attached to a polygraph machine salient at all times. While attached to the polygraph machine each participant

was convinced the equipment is capable of discerning lies, by having each participant answer “YES” to a series of five questions, three of which were lies. Each participant was then informed that the polygraph machine is very sensitive to the particular type of physiological differences elicited when they lie, and that the experiment may continue now that it has been established that the machine is working very effectively. The participant was then verbally administered either the Modern Racism Scale or the Subtle Prejudice Scale. Random assignment determined which scale was administered during this procedure, and the alternative scale was administered without this procedure. The Old Fashioned Racism Scale was given with the Modern Racism Scale during their Bogus Pipeline measure. The Blatant Prejudice Scale was in turn given to participants along with the Subtle Racism Scale for those participants who were administered that test during the Bogus Pipeline measure.

Social Desirability: The Marlowe-Crowne social desirability scale is a 33 question scale that is often used as a subscale in other measures. The scale has been unchanged since 1960, and is still the most widely used social desirability scale.

Implicit Association Test: The Implicit Association Test consists of a computer program, very similar to many cognitive psychology experiments, in which the participant presses one key when they see a word that is ‘pleasant’ and another key when they see an ‘unpleasant’ word. They also press varying keys when they see other kinds of words, such as ‘names typical of a black girl’ or ‘names typical of a white girl’. The keys are then switched for proper controls and response latencies are recorded. See figure 1 for an example of sample trials. The IAT has been graciously made free and public, and can be found at the website

http://faculty.washington.edu/agg/iat_materials.htm.

Modification of the IAT is inherent in its design, and can be done by switching the target words. For example, instead of ‘names typical of a black girl’ being compared to ‘names typical of a white girl’ to measure prejudice towards blacks, ‘female names’ compared to ‘male names’ work for sexism, and ‘Irish names’ compared to ‘American names’ work for Irish.

Procedure

Each participant was randomly assigned to one of three different groups, with three different prejudice targets – blacks, females, or Irish. They were told that they will be going into a room where they will meet and speak with a black person (of indeterminate gender)/female/Irish (of indeterminate gender). They were then to a room, and there was a coat on a chair. They were told that the person they were to meet must have stepped out, but to have a seat and wait for the person to return. The experimenter then left to allow the participant to have a seat, and returned in a few seconds to record which seat they chose. This was the first prejudice measure. The 2nd-6th prejudice measures were completed in random order, randomness being determined ahead of time by the roll of a Casino Die, using counterbalancing measures to ensure that no order was overused. These measures included the Old Fashioned Racism Scale, the Blatant prejudice scale, the Modern Racism Scale, the Marlowe-Crowne Social Desirability Scale, and the Implicit Association Test. The sixth prejudice measure was the Bogus Pipeline measure, which was used either while the MRS and OFRS were administered, or while the BPS and SPS were administered. Each participant was randomly assigned to either be administered the MRS/OFRS or the Blatant/Subtle

prejudice scale during the Bogus Pipeline Procedure. The participant was then debriefed.

As a manipulation check for the bogus pipeline procedure, each subject was asked if they believed the polygraph machine was functional and operational, and if they had any experience with polygraph machines in the past. Of 63 subjects, 2 had prior experience with polygraphs, and none suspected that the polygraph machine may not be functional or accurate.

Chapter 3 - Results

An ANOVA was conducted on the various scales, comparing their scores when used with the bogus pipeline procedure to the scores of the test without the bogus pipeline procedure. Of the four scales administered using this procedure, (MRS, OFRS, SPS, and BPS) the only test that was significant was the MRS $f(1, 63) = 4.343, p = .041$. The other scales, the OFRS $f(1, 63) = 2.643, p = .109$, the BPS $f(1, 63) = .253, p = .617$, and the SPS $f(1, 63) = .189, p = .665$ all yielded non-significant results.

An ANOVA was conducted on each of the scales with sex as the predictor variable to ensure that males and females did not differ significantly in their responses. Of the seven tests conducted, the seat choice $f(1, 21) = 1.446, p = .244$, MRS $f(1, 23) = .151, p = .702$, BPS $f(1, 23) = 1.383, p = .253$, SPS $f(1, 23) = 1.131, p = .300$, IAT $f(1, 23) = .394, p = .537$, and Social Desirability $f(1, 23) = 1.203, p = .285$ all showed non significant results. The only scale with a significant difference between males' scores and females' scores is the Old Fashioned Sexism Scale $f(1, 23) = 11.624, p = .003$. While the differences between males and females was highly significant for the OFSS, the differences between males and females was negligible for the other scales, leading to the conclusion that for the purpose of this study, men and women may be analyzed as one.

One of the primary assumptions used in the Bogus Pipeline procedure was that the MRS was similar to the SPS, and the OFRS was similar to the BPS. Without these similarities, the two could not be adequately compared, as is needed in this analysis. A Pearson Correlation was performed, comparing each scale to each other. The relationships between the OFRS and MRS $r(63) = .504, p = .000$, OFRS and BPS $r(63) =$

.263, $p = .038$, OFRS and SPS $r(63) = .474$, $p = .000$, MRS and BPS $r(63) = .399$, $p = .001$, MRS and SPS $r(63) = .428$, $p = .000$, and BPS and SPS $r(63) = .511$, $p = .000$, were all significant. These strong relationships signify that in every case each scale has a strong predictive relationship with each other scale. This would indicate that in general, the SPS/BPS and MRS/OFRS are quite similar to each other for comparison purposes.

For the 32 participants in which the MRS and OFRS was administered during the Bogus Pipeline procedure this relationship was similarly strong. However, the participants who were administered the SPS and BPS during the Bogus Pipeline procedure evidenced much different relationships between the scales. Of those participants, the OFRS and the MRS had a strong relationship $r(32) = .358$, $p = .051$ and the BPS and SPS had an even stronger relationship $r(32) = .501$, $p = .004$. The OFRS and SPS $r(32) = .276$, $p = .126$, OFRS and BPS $r(32) = .165$, $p = .366$, MRS and SPS $r(32) = .165$, $p = .367$, and MRS and BPS $r(32) = .321$, $p = .073$ did not display a significantly strong relationship with each other.

Of the four explicit measures given, in addition to each being found to have a direct relationship to the other measures within subjects, no significant differences were found between subjects, based on the two experimental conditions. The racism and sexism scores were quite similar ($p \geq .257$), suggesting none of these scales worked differently based on whether the participant was being questioned regarding sexism or racism. The Irish scores were significantly different from the two experimental conditions however ($p < .030$), confirming that prejudice against people with an Irish last name was an effective control condition of no prejudice.

Table 1

Pearson Correlation relating all measures.

This Pearson Correlation displays that the only measures that were shown to be related to each other are the explicit prejudice measures.

	Old Fashioned	Modern	Blatant	Subtle	Social Desirability	IAT	Seat Choice
Old Fashioned <i>r</i> sig.	1 .	.504 .000	.263 .038	.474 .000	-.139 .278	-.084 .512	.100 .453
Modern <i>r</i> sig.	.504 .000	1 .	.399 .001	.428 .000	-.083 .516	-.141 .272	.010 .941
Blatant <i>r</i> sig.	.263 .038	.399 .001	1 .	.511 .000	-.090 .485	-.116 .363	.117 .376
Subtle <i>r</i> sig.	.474 .000	.428 .000	.511 .000	1 .	-.050 .697	-.133 .299	.068 .607
Social Desirability <i>r</i> sig.	-.139 .278	-.083 .516	-.090 .485	-.050 .697	1 .	.043 .741	.024 .855
IAT <i>r</i> sig.	-.084 .512	-.141 .272	-.116 .363	-.133 .299	.043 .741	1 .	.019 .877
Seat Choice <i>r</i> sig.	.100 .453	.010 .941	.117 .376	.068 .607	.024 .855	.019 .877	1 .

Table 2

ANOVA of explicit measures between conditions.

This table represents the results of ANOVA being run on each individual pairing of conditions for each of the explicit prejudice measures. The results indicate that none of the tests displayed a significant difference in sensitivity between the conditions of racism and sexism. In contrast, every test displayed the differences in sensitivity to irish-namism and the two other prejudice conditions of racism and sexism.

	Racism	Sexism	Control
Racism			
Old Fashioned		$f(1, 41) = 2.11, p = .154$	$f(1, 40) = 30.94, p = .000$
Modern		$f(1, 41) = .14, p = .711$	$f(1, 40) = 36.66, p = .000$
Blatant		$f(1, 41) = .18, p = .670$	$f(1, 40) = 6.88, p = .012$
Subtle		$f(1, 41) = .82, p = .370$	$f(1, 40) = 9.29, p = .004$
Sexism			
Old Fashioned	$f(1, 41) = 2.11, p = .154$		$f(1, 45) = 22.07, p = .000$
Modern	$f(1, 41) = .14, p = .711$		$f(1, 45) = 47.64, p = .000$
Blatant	$f(1, 41) = .18, p = .670$		$f(1, 45) = 10.11, p = .003$
Subtle	$f(1, 41) = .82, p = .370$		$f(1, 45) = 7.27, p = .010$
Control			
Old Fashioned	$f(1, 40) = 30.94, p = .000$	$f(1, 45) = 22.07, p = .000$	
Modern	$f(1, 40) = 36.66, p = .000$	$f(1, 45) = 47.64, p = .000$	
Blatant	$f(1, 40) = 6.88, p = .012$	$f(1, 45) = 10.11, p = .003$	
Subtle	$f(1, 40) = 9.29, p = .004$	$f(1, 45) = 7.27, p = .010$	

Analysis of the IAT had to be conducted differently than usual, because the format of data analysis for the IAT is not designed for direct comparison between various target groups. The IAT analysis included in the download is designed for analysis of the level of prejudice of each subject, and then it combines these subjects into prejudice levels for groups. It compares the scores of outgroup/good latencies to outgroup/bad latencies to determine how prejudiced the individual is. Comparison between conditions is not in the analysis design, which was precisely what needed to be done for this experiment. To compensate for this, a mean score of all the outgroup/bad ingroup/good latencies was computed for each participant throughout, and a mean score of all the outgroup/good ingroup/bad latencies was also computed for each participant. The differences between these numbers for each participant was then calculated, with a high positive number indicating high degrees of prejudice, zero indicating low prejudice, and a negative number indicating favoritism or preference for the outgroup. Once this was accomplished, each subject had a ‘grand level’ of prejudice as indicated by the IAT as displayed by one number, and analysis between groups could commence.

A Pearson’s correlation was performed comparing the IAT data to the other prejudice measures, and no significant relationship was found. An ANOVA was also conducted on the IAT data comparing across the three conditions of Racism, Sexism, and “Irish-nameism”. No significant differences were found in this analysis. The IAT showed no differences between the control and experimental conditions $f(2, 63) = 2.331$, $p = .106$. Racism and the control condition were significant with a LSD analysis ($p = .044$) but a Bonferroni showed no significance ($p = .131$).

To further test the effects of social desirability on implicit versus explicit tests, a

correlation between Social Desirability and MRS(Bogus Pipeline) was conducted, and this result was compared to a correlation between SD and MRS. No significant effects were found for this correlational analysis.

Chapter 4 - Discussion

As a brief caveat, it should be mentioned that many of the analyses run on the measures are exploratory in nature. Generally when testing for validity of a particular measure, it is compared to another measure whose validity has been previously established, but that cannot be the final word in this experiment because the nature of the experiment is to question the validity of ALL the prejudice measures.

In addition, if one measure shows more prejudice than a second measure, then that first measure is said to be more sensitive to prejudice. This is based on the assumption that there is a large amount of prejudice to be seen, and those measures that see this prejudice are therefore more sensitive to it. However, this “large amount of unseen prejudice” is itself an assumption that cannot be demonstrated. The purpose of this analysis is to provide a tentative guide with which to gauge the overall effectiveness of the prejudice measures for the various target groups, not to provide a decisive numerical analysis of each measure.

Two main effects were predicted in relation to the Social Desirability scale. Social desirability was predicted to have a strong correlation with the explicit scales, and a smaller effect on the implicit scales. In addition, the correlation was predicted to be higher in the racism group than the sexism group.

To test the effects of social desirability on implicit versus explicit tests, a correlation between Social Desirability and MRS(Bogus Pipeline) was conducted, and this result was compared to a correlation between SD and MRS. A higher degree of correlation should have been found between the SD and the MRS in those subjects who received the MRS without the use of the Bogus Pipeline procedure. If this was found, it

would provide evidence that the more explicit measure, the Bogus Pipeline procedure, is less affected by social desirability. This was not the case. The Social desirability score showed no predictive relationship with any of the scales, whether they were administered during the bogus pipeline procedure or not. In addition, no correlations between the Social Desirability Scale occurred between any of the conditions, be it sexism, racism, or control. Social desirability had no perceived effect on the implicit and explicit measures, although a strong effect was initially anticipated.

Altogether, none of the anticipated effects involving the Social Desirability scale were found. Rattazzi, Manganelli, and Chiara (2003) did find that those who scored higher on the subtle prejudice scale than the blatant prejudice scale were also more susceptible to social desirability, but I was unable to replicate these findings. One possible reason for this lack of replication is due to different target groups of prejudice. Rattazzi et al. used immigrants as the target group, and that target group may be quite different in regards to social desirability effects than blacks or females.

The bogus pipeline measure was anticipated to have varied effects depending on the types of questions asked. While both the MRS and the OFRS are explicit measures, they differ in levels of vulgarity – the OFRS has questions that are obviously determining prejudice such as “blacks are generally not as smart as whites”. This type of question is essentially a thinly veiled self-report measure of prejudice and therefore lying was predicted to be quite likely on this test. (the BPS is similar in design to the OFRS and was predicted to have similar results) The MRS and the SPS however, are more subtle in their questioning – asking questions relating to acceptance of prejudice in society, or how different blacks are from whites. These questions are designed to be more subtle and

nuanced, and therefore should not be as affected by the bogus pipeline measure.

The results of analysis showed that of the four explicit prejudice measures administered, the only scale that had a significant difference between the scores attained with the Bogus Pipeline procedure and the scores without the Bogus Pipeline procedure was the MRS. While this was not as predicted, it seems a meaningful finding, as the MRS is the most commonly used prejudice measure to test the validity of other prejudice measures. Because the MRS has been shown here to be significantly affected by the bogus pipeline procedure, which essentially tricks the participant into being truthful, this implies that participants are often not truthful during the MRS. This raises doubts about the validity of the MRS, and makes using it to validate other scales highly questionable.

Another factor that made the MRS questionable was the possibility that religious conservatism is highly correlated with the MRS. I was unable to test this possible confound however. Any further scrutiny towards the MRS should take this possible confound into consideration by not only having each participant fill out a questionnaire to discern their level of religious fundamentalism, but by also ensuring that the subject population consists of diverse religious affiliations.

The Bogus Pipeline procedure was predicted to have a greater effect on scales in which participants may be more prone to answer untruthfully, such as the Old Fashioned or Blatant Prejudice Scale. Scores on scales that are designed to circumvent participant deception, such as the Modern or Subtle Prejudice Scales were predicted to be not as easily altered by the Bogus Pipeline procedure. If they are easily altered by the Bogus Pipeline procedure, then they would be no more subtle than their blatant counterparts.

The one measure that did not appear problematic was the Subtle Prejudice Scale.

While it is clear that explicit measures are inherently flawed, this scale was not susceptible to either Social Desirability or the Bogus Pipeline procedure, suggesting that participants tell the truth when answering the questions therein.

When testing to ensure that the MRS could be adequately compared to the SPS and the OFRS could be adequately compared to the BPS, some surprising results ensued. Not only were the predicted relationships between MRS/SPS pairings and OFRS/BPS pairings found, but significant relationships were found between all prejudice measures. While all the explicit measures were generally found to have strong predictive relationships with each other, one exception did occur. When the SPS was being administered during the Bogus Pipeline procedure, OFRS and MRS stopped having a relationship with the BPS and SPS. For these participants, the BPS still maintained a strong relationship with the SPS, and the OFRS still maintained a strong relationship with the MRS. Thus the SPS has a strong similarity to the BPS, although the BPS is purported to be quite different from the SPS. Even the Bogus Pipeline procedure did not make the results of the SPS and the BPS significantly different. The MRS has a similar relationship with the OFRS. In all conditions each scale has a predictive relationship to the others, raising doubts that the MRS is tapping into prejudice that very blatant scales (such as in the OFRS), cannot get to. If this were the case, the relationship between the scores of the MRS and OFRS would not be so strong.

The results of the participants who were given the Bogus Pipeline procedure during the administering of the SPS/BPS also indicate that the MRS/OFRS has no relationship with any of the other measures unless the Bogus Pipeline procedure is used. This raises further doubts about the MRS.

No significant differences were found based on the two experimental conditions of racism and sexism. Because every explicit measure not only had a direct relationship to each other, but showed no significant differences between conditions, it can be concluded that not only are all of these explicit measures generally similar, they ascertain the same amount of prejudice regardless of the target group of this prejudice.

Although the two experimental conditions yielded similar results for each of the explicit measures, significant results were found when comparing the experimental conditions to the control condition. This finding not only confirms that “Irish-nameism” was an effective control condition, but suggests that the explicit measures are at least measuring something, although it is not clear whether they are measuring personal prejudice, social perceptions of prejudice, perceived societal prejudice, or something else.

The IAT is currently one of the most popular methods used for testing prejudice. Using easy-to-program implicit methods is appealing to researchers, making this measure common. Being an implicit measure, the IAT was predicted to show strong differences between the three conditions, particularly the control condition.

The results raise questions concerning the validity of the IAT in testing prejudice. Not only does the IAT not correlate with any of the other prejudice measures, but demonstrated weak differences between the three conditions of Racism, Sexism and “Irish-nameism”. While it is not remarkable that IAT scores regarding racism and sexism were similar, as both are forms of prejudice, the control condition of Irish names should have been significantly different from both groups, but was not. This is not the clear difference to expected between racism and neutral stimuli on a frequently used prejudice measure. Analysis of the sexism group showed no significant differences

between either the Irish or the racism group scores. The IAT is a measurement tool that may not be measuring prejudice at all, it clearly does not seem to be measuring it in this case.

One possibility is that the IAT merely gets results similar to prejudice scores because of simple familiarity, and familiarity is associated with goodness or preference. Zajonc (1968) demonstrated that a process called “mere exposure” allows an individual to prefer an item the more they are exposed to that item. If a subject is more familiar with the name ‘Rachel’ than ‘Ebony’, and familiarity is associated with goodness, then the name ‘Rachel’ will be more associated with goodness than ‘Ebony’ – regardless of which ethnicity is more associated with the names. This would explain why no significant differences were found between female names and Irish names – both are quite familiar. However, there was a marginal difference between Irish names and black names – as the black names may have been less familiar to white participants, and all of the participants in the racism group were white.

Although all the explicit measures had a strong relationship with each other, no correlational relationship was found with any of the implicit measures. The IAT was not significantly related to the other implicit measure, the seat choice task, and not with any of the explicit measures – either with or without the bogus pipeline procedure. It appears that the IAT, explicit measures, and seat choice task are not measuring the same thing.

In comparing within-subjects, it was predicted that those subjects in the ‘Racism’ group would have a high degree of discrepancy between the amount of prejudice shown in the explicit measures and the amount of prejudice shown in the implicit measures. Because the degree of implicit/explicitness is not clearly delineated,

we anticipated each measure producing somewhat different results. The most explicit scale is the Self-report measure (the OFRS and BPS), followed by the MRS. The seat choice task and IAT are implicit scales, but because these have never been compared to each other in experiments we cannot predict which is a more sensitive measure of prejudice. The Bogus Pipeline procedure is an explicit scale that is more likely to attain similar results to an implicit scale, and is merely a modification of an explicit scale. Unfortunately so few differences occurred between the various groups, and the correlations between the implicit and explicit groups were so weak, that no conclusions can be made on the effect of implicit scales as compared to explicit ones.

In summation, the validity of these scales and their susceptibility to deception may be discerned from the findings of this experiment. The MRS, although currently the most popular explicit measure of prejudice used, seems significantly malleable with regard to the Bogus Pipeline procedure, indicating that participants have a tendency to be less than truthful on that test. This confounds its validity, which is ironic, given that it is the most widely used validity measure for psychological prejudice research. In addition, the IAT shared little similarity with any of the other prejudice measures, suggesting that it was measuring something that they were not. The fact that there was not a significant difference between the control and experimental conditions would indicate that it is either not measuring prejudice, or that there is an equal level of prejudice against blacks, females, and people with Irish last names.

While blacks were not included in the racism group, females were included in the sexism group, because females are generally as sexist as their male counterparts (Glick et al 1996), especially in the realm of benevolent sexism. However, because it was

possible that in the sexism condition scores from male participants were significantly different from scores from female participants, analysis was conducted to ensure that male and female scores were comparable. During this analysis it was found that the only scale in which males' and females' responses differed was on the OFRS. The OFSS is the most vulgar of the scales, with four very direct questions – similar to a self report measure, and closer than the other scales to a measure of how much participants openly admit to prejudice. Assuming the other scales are truly measuring prejudice, women and men reacted similarly to those scales, but not to this scale. This raises a strong possibility that women are just as sexist as men, but generally do not admit to the same level of sexism. Whether this is Social Desirability (public) or Self-deception (private) cannot be ascertained from these findings, but merits further investigation.

Further investigation is also warranted in other areas due to this particular finding. While it can be concluded from these findings that females are just as sexist as males, but do not admit to the same level of sexism, it would be interesting to determine if the same could be said about blacks and racism. During the course of this experiment blacks were not included in the racism group due to the assumption that they would have significantly different answers than whites. These findings however raise the possibility that this may not be the case, and that the perceived racism of blacks may be far different than their actual levels of racism.

Allport (1954) spent a full chapter on the definition of prejudice, and still was not able to come up with a satisfactory definition. Since then, common definitions have changed. Modern definitions add preferential treatment to the definition of prejudice, instead of limiting the definition to negative treatment (Swim et al 1995), which is far

different than Allport's original concept of prejudice. Each of the modern measures of prejudice exhibit shortcomings when measured against the various definitions of prejudice, and while various measures may appear to be measuring prejudice, they are not always measuring the same thing. Perhaps the key to defining prejudice is to look within the prejudice measures themselves – perhaps an explicit measure of prejudice such as the Benevolent Sexism Inventory is a definition in and of itself, and no further definition is needed. If this is the case, then each prejudice measure is valid, but each measures its own brand of prejudice.

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Appendix A - The subtle/blatant prejudice scale

Threat and rejection factor items: the Blatant Scale

- 1) West Indians have jobs that the British should have. (strongly agree to strongly disagree)
- 2) Most West Indians living here who receive support from welfare could get along without it if they tried. (strongly agree to strongly disagree)
- 3) British people and West Indians can never be really comfortable with each other, even if they are close friends. (strongly agree to strongly disagree)
- 4) Most politicians in Britain care too much about West Indians and not enough about the average British person. (strongly agree to strongly disagree)
- 5) West Indians come from less able races and this explains why they are not as well off as most British people. (strongly agree to strongly disagree)
- 6) How different or similar do you think West Indians living here are to other British people like yourself – in how honest they are? (very different, someone different, someone similar or very similar)

Intimacy factor items: the Blatant Scale.

- 1) Suppose that a child of yours had children with a person of very different color and physical characteristics than your own. Do you think you would be very bothered, bothered, bothered a little, or not bothered at all, if your grandchildren did not physically resemble the people on your side of the family?
- 2) I would be willing to have sexual relations with a West Indian. (strongly agree to strongly disagree)
- 3) I would not mind at all if a suitably qualified West Indian person was appointed as my boss. (strongly agree to strongly disagree)
- 4) I would not mind if a West Indian person who had a similar economic background as mine joined my close family by marriage. (strongly agree to strongly disagree)

Traditional values factor items: Subtle Scale.

- 1) West Indians living here should not push themselves where they are not wanted. (strongly agree to strongly disagree)
- 2) Many other groups have come to Britain and overcome prejudice and worked their way up. West Indians should do the same without special favor. (strongly agree to strongly disagree)
- 3) It is just a matter of some people not trying hard enough. If West Indians would only try harder they could be as well off as British people. (strongly agree to strongly disagree)
- 4) West Indians living here teach their children values and skills different from those required to be successful in Britain. (strongly agree to strongly disagree)

Cultural differences factor items: Subtle Scale

How different or similar do you think West Indians living here are to other British people like yourself . . . (very different, somewhat different, somewhat similar, or very similar)

- 1) In the values that they teach their children?
- 2) In their religious beliefs and practices?
- 3) In their sexual values or sexual practices?
- 4) In the language that they speak?

Positive emotions factor items: Subtle Scale.

. . . Have you ever felt the following ways about West Indians and their families living here . . . (very often, fairly often, not too often, or never)

- 1) How often have you felt sympathy for West Indians living here?
- 2) How often have you felt admiration for West Indians living here?

**Appendix B - The subtle/blatant prejudice scale
as modified for Racism**

Threat and rejection factor items: the Blatant Scale

- 1) Blacks have jobs that the Whites should have. (strongly agree to strongly disagree)
- 2) Most Blacks living here who receive support from welfare could get along without it if they tried. (strongly agree to strongly disagree)
- 3) Whites and Blacks can never be really comfortable with each other, even if they are close friends. (strongly agree to strongly disagree)
- 4) Most politicians in the United States care too much about Blacks and not enough about the average White person. (strongly agree to strongly disagree)
- 5) Blacks come from a less able race and this explains why they are not as well off as most Whites. (strongly agree to strongly disagree)
- 6) How different or similar do you think Blacks are to other Whites – in how honest they are? (very different, someone different, someone similar or very similar)

Intimacy factor items: the Blatant Scale.

- 1) Suppose that a child of yours had children with a person of very different color and physical characteristics than your own. Do you think you would be very bothered, bothered, bothered a little, or not bothered at all, if your grandchildren did not physically resemble the people on your side of the family?
- 2) I would be willing to have sexual relations with a Black person. (strongly agree to strongly disagree)
- 3) I would not mind at all if a suitably qualified Black person was appointed as my boss. (strongly agree to strongly disagree)
- 4) I would not mind if a Black person who had a similar economic background as mine joined my close family by marriage. (strongly agree to strongly disagree)

Traditional values factor items: Subtle Scale.

- 1) Blacks living here should not push themselves where they are not wanted. (strongly agree to strongly disagree)
- 2) Many other groups have come to the United States and overcome prejudice and worked their way up. Blacks should do the same without special favor. (strongly agree to strongly disagree)
- 3) It is just a matter of some people not trying hard enough. If Blacks would only try harder they could be as well off as White people. (strongly agree to strongly disagree)
- 4) Blacks living here teach their children values and skills different from those required to be successful in the United States. (strongly agree to strongly disagree)

Cultural differences factor items: Subtle Scale

How different or similar do you think Blacks living here are to White people . . . (very different, somewhat different, somewhat similar, or very similar)

- 1) In the values that they teach their children?
- 2) In their religious beliefs and practices?
- 3) In their sexual values or sexual practices?
- 4) In the language that they speak?

Positive emotions factor items: Subtle Scale.

. . . Have you ever felt the following ways about Blacks and their families living here . . . (very often, fairly often, not too often, or never)

- 1) How often have you felt sympathy for Blacks living here?
- 2) How often have you felt admiration for Blacks living here?

Appendix C - The subtle/blatant prejudice scale

As modified for sexism

Threat and rejection factor items: the Blatant Scale

- 1) Women have jobs that Men should have.
- 2) Most Women living here who receive support from welfare could get along without it if they tried.
- 3) Men and Women can never be really comfortable with each other as friends.
- 4) Most politicians in the United States care too much about Women's Issues and not enough about the average man's issues.
- 5) Women come from a less able gender and this explains why they are not as successful as most Men.
- 6) How different or similar do you think Women are to other Men – in how capable they are?

Intimacy factor items: the Blatant Scale.

- 1) No matter how accomplished he is, a man is not truly complete as a person unless he has the love of a woman.
- 2) A good woman should be set on a pedestal by her man.
- 3) I would not mind at all if a suitably qualified Woman was appointed as my boss.
- 4) Men should be willing to sacrifice their own well being in order to provide financially for the women in their lives.

Traditional values factor items: Subtle Scale.

- 1) Women living in this country should not push themselves where they are not wanted.
- 2) Many other groups have come to the United States and overcome prejudice and worked their way up. Women should do the same without special favor.
- 3) It is just a matter of some people not trying hard enough. If Women would only try harder they could be as well off as men.
- 4) Women should teach their children different values and skills than men.

Cultural differences factor items: Subtle Scale

How different or similar do you think Women are to Men? . . .

- 1) In the values that they teach their children?
- 2) In their religious beliefs and practices?
- 3) In their sexual values or sexual practices?
- 4) In the language that they speak?

Positive emotions factor items: Subtle Scale.

Have you ever felt the following ways about Women and their families living here

- 1) How often have you felt sympathy for Women's plight in this country?
- 2) How often have you felt admiration for Women living in this country?

**Appendix D - The subtle/blatant prejudice scale
as modified for Irish**

During the course of this questionnaire the word “Irishmen” refers to those individuals with Irish last names.

Threat and rejection factor items: the Blatant Scale

- 1) Irishmen have jobs that others should have.
- 2) Irishmen and others can never be really comfortable with each other, even if they are close friends.
- 3) Irishmen are generally less able and this explains why they are not as well off as most others.
- 4) How different or similar do you think Irishmen are to others – in how honest they are?

Intimacy factor items: the Blatant Scale.

- 1) Suppose that a child of yours had children with a person who had an Irish last name. Do you think you would be very bothered, bothered, bothered a little, or not bothered at all, if your grandchildren had an Irish last name?
- 2) I would be willing to have sexual relations with a person with an Irish last name.
- 3) I would not mind at all if a suitably qualified Irishman was appointed as my boss.
- 4) I would not mind if an Irishman who had a similar economic background as mine joined my close family by marriage.

Traditional values factor items: Subtle Scale.

- 1) People with Irish last names should not push themselves where they are not wanted.
- 2) Many other groups have come to the United States and overcome prejudice and worked their way up. People with Irish last names should do the same without special favor, but currently are not.
- 3) It is just a matter of some people not trying hard enough. If Irishmen would only try harder they could be as well off as others, and currently they are not.
- 4) People with Irish last names teach their children values and skills different from those required to be successful in the United States.

Cultural differences factor items: Subtle Scale

How different or similar do you think people with Irish last names are to others . . .

- 1) In the values that they teach their children?
- 2) In their religious beliefs and practices?
- 3) In their sexual values or sexual practices?
- 4) In the language that they speak?

Positive emotions factor items: Subtle Scale.

Have you ever felt the following ways about people with Irish last names and their families living here

- 1) How often have you felt sympathy for Irishmen living here?
- 2) How often have you felt admiration for Irishmen living here?

Appendix E - The Marlowe-Crowne social desirability scale

- 1) Before voting I thoroughly investigate the qualifications of all the candidates.
- 2) I never hesitate to go out of my way to help someone in trouble.
- 3) It is sometimes hard for me to go on with my work if I am not encouraged.
- 4) I have never intensely disliked someone.
- 5) On occasion I have had doubts about my ability to succeed in life.
- 6) I sometimes feel resentful when I don't get my way.
- 7) I am always careful about my manner of dress.
- 8) My table manners at home are as good as when I eat out in a restaurant.
- 9) If I could get into a movie without paying and be sure I was not seen I would probably do it.
- 10) On a few occasions, I have given up doing something because I thought too little of my ability.
- 11) I like to gossip at times.
- 12) There have been times when I felt like rebelling against people in authority even though I knew they were right.
- 13) No matter who I'm talking to, I'm always a good listener.
- 14) I can remember "playing sick" to get out of something.
- 15) There have been occasions when I took advantage of someone.
- 16) I'm always willing to admit it when I make a mistake.
- 17) I always try to practice what I preach.
- 18) I don't find it particularly difficult to get along with loud mouthed, obnoxious people.
- 19) I sometimes try to get even rather than forgive and forget.
- 20) When I don't know something, I don't at all mind admitting it.
- 21) I am always courteous, even to people who are disagreeable.
- 22) At times I have really insisted on having things my own way.
- 23) There have been occasions when I felt like smashing things.
- 24) I would never think of letting someone else be punished for my wrongdoings.
- 25) I never resent being asked to return a favor.
- 26) I have never been irked when people expressed ideas very different from my own.
- 27) I never make a long trip without checking the safety of my car.
- 28) There have been times when I was quite jealous of the good fortune of others.
- 29) I have almost never felt the urge to tell someone off.
- 30) I am sometimes irritated by people who ask favors of me.
- 31) I have never felt that I was punished without cause.
- 32) I sometimes think when people have a misfortune they only got what they deserved.
- 33) I have never deliberately said sometimes that hurt someone's feelings.

Appendix F - The Old-Fashioned Racism Scale
(self-report measure)

Black people are generally not as smart as whites.

I favor laws that permit black persons to rent or purchase housing even when the person offering the property for sale or rent does not wish to rent or sell it to blacks.

Generally speaking, I favor full racial integration.

I am opposed to open or fair housing laws.

It is a bad idea for blacks and whites to marry one another.

If a black family with about the same income and education as I have moved next door, I would mind it a great deal.

It was wrong for the United States Supreme Court to outlaw segregation in it's 1954 decision.

Appendix G - The Modern Racism Scale

Discrimination against blacks is no longer a problem in the United States.

It is easy to understand the anger of black people in America.

Blacks have more influence upon school desegregation plans than they ought to have.

Blacks are getting too demanding in their push for equal rights.

Blacks should not push themselves where they are not wanted.

Over the past few years, blacks have gotten more economically than they deserve.

Over the past few years, the government and news media have shown more respect to blacks than they deserve.

Appendix H - The Old-Fashioned Irishmen Scale
(self-report measure)

Those with Irish last names are generally not as good as those without Irish last names.

It is completely acceptable to hire someone with an Irish last name, even if someone without an Irish last name is also applying for the job.

I would not mind at all if my child had a teacher with an Irish last name.

It is a bad idea for a woman to marry someone with an Irish last name if she does not already have an Irish last name.

If a family with an Irish last name and about the same income and education as I have moved next door, I would mind it a great deal.

I could be perfectly comfortable with having a boss who had an Irish last name.

Appendix I - The Modern Irishmen Scale

People with Irish last names are getting too pushy with their beliefs.

If someone has an Irish last name, it would just be easier and better for them if they associated with other people with Irish last names.

Individuals with Irish last names are having too much say in politics.

If someone with an Irish last name lost a job just because of his name, he would have a good reason to feel angry about it.

People with Irish last names have been getting too much attention in news media than is warranted.

People with Irish last names should not push themselves into parts of the country that do not currently have large populations of people with Irish last names.

Appendix J - The Old-fashioned Sexism Scale
(self-report measure)

Women are generally not as smart as men.

I would be equally comfortable having a woman as a boss as a man.

Women are just as capable of thinking logically as men.

When both parents are employed and their child gets sick at school, the school should call the mother rather than the father.

Appendix K - The Modern Sexism Scale

Discrimination against women is no longer a problem in the United States.

Women often miss out on good jobs due to sexual discrimination.

It is rare to see women treated in a sexist manner on television.

On average, people in our society treat husbands and wives equally.

Society has reached the point where women and men have equal opportunities for achievement.

It is easy to understand the anger of women's groups in America.

It is easy to understand why women's groups are still concerned about societal limitations of women's opportunities.

Over the past few years, the government and news media have been showing more concern about the treatment of women than is warranted by women's actual experiences.