

# **DEVELOPMENT OF AN EXPLICIT BIAS SCALE FOR LAW ENFORCEMENT**

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**TABLE OF CONTENTS**

	Page
List of Tables .....	v
Abstract .....	vii
Introduction.....	1
The Current Study.....	13
Method .....	13
Deductive Method.....	14
Left-Wing Authoritarianism .....	16
Artificial Intelligence .....	17
Participants.....	17
Measures .....	21
Demographics .....	21
Symbolic Racism .....	22
Social Dominance .....	23
Social Desirability.....	24
Personality.....	25
Dark Triad.....	25
Experimental Items .....	26
Analytic Procedure.....	33
Exploratory Analysis .....	35
Hypotheses .....	35
Exploratory Hypotheses.....	37
Results.....	37
Samples and Demographics .....	37
Distribution and Normality .....	38
Item Performance.....	39

EXPLICIT BIAS SCALE FOR LAW ENFORCEMENT

Measure Performance .....41

Mean Differences.....42

    Broad Sample.....43

    SONA Sample.....43

    CJ Sample .....43

Correlations.....44

    Explicit Bias Scale for Law Enforcement Items.....45

    Explicit Bias Scale for Law Enforcement.....46

    Symbolic Racism Scale.....48

    Social Dominance Scale .....49

    Social Desirability.....49

    Short Dark Triad Scale.....50

    Political Orientation .....51

Regression.....51

Exploratory Factor Analysis .....53

Discussion.....60

    Limitations .....68

    Conclusions and Future Directions.....75

References.....82

Appendix A-1: Demographics .....95

Appendix A-2: Explicit Bias Scale for Law Enforcement.....96

Appendix A-3: Symbolic Racism Scale .....102

Appendix A-4: Social Dominance Scale .....104

Appendix A-5: Social Desirability Scale.....105

Appendix A-6: M5-120 Scale.....106

Appendix A-7: Short Dark Triad 3 Scale .....111

Appendix B: Demographics.....112

Appendix C: Measure Performance.....120

EXPLICIT BIAS SCALE FOR LAW ENFORCEMENT

Appendix D: Explicit Bias Scale Performance .....122

Appendix E: Mean Differences .....126

Appendix F: Correlations.....129

Appendix G: Regression .....132

Appendix H: Exploratory Factor Analysis .....133

**LIST OF TABLES**

Table 1.1: Demographics Broad Sample .....112

Table 1.2: Demographics CJ Sample.....114

Table 1.3: Demographics SONA Sample .....117

Table 2.1: Measure Performance Combined Sample .....120

Table 2.2: Measure Performance Broad Sample .....120

Table 2.3: Measure Performance CJ Sample .....121

Table 2.4: Measure Performance SONA Sample .....121

Table 3.1: Explicit Bias Scale for Law Enforcement Performance Combined .....122

Table 3.2: Explicit Bias Scale for Law Enforcement Performance Broad .....123

Table 3.3: Explicit Bias Scale for Law Enforcement Performance CJ.....124

Table 3.4: Explicit Bias Scale for Law Enforcement Performance SONA .....125

Table 4.1: Mean Differences in Law Enforcement Status CJ.....126

Table 4.2: Mean Difference in Law Enforcement Status CJ M5.....126

Table 4.3: Mean Difference due to Gender Broad.....126

Table 4.4: Mean Difference due to Gender Broad M5 .....127

Table 4.5: Mean Difference due to Gender CJ M5.....127

Table 4.6: Mean Difference due to Gender CJ .....127

Table 4.7: Mean Difference due to Gender SONA.....128

Table 4.8: Mean Difference due Gender SONA M5 .....128

Table 5.1: Correlations Combined Sample.....129

Table 5.2: Correlations Broad Sample.....130

Table 5.3: Correlations CJ Sample .....130

Table 5.4: Correlations SONA Sample.....131

Table 6: Regression.....132

Table 7.1: Exploratory Factor Analysis Initial Loadings.....133

Table 7.2: Exploratory Factor Analysis Final Loadings.....134

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**Abstract**

This study investigated the development and utility of the Explicit Bias Scale for Law Enforcement Officers (EBLEO), designed to measure and quantify explicit racial bias in public safety members as part of a pre-employment battery. This measure was derived largely derived from the Symbolic Racism Scale (Henry and Sears, 2002) and featured new questions, restructured content based on research into the intersection of criminal justice and explicit racial bias, and expanded content drawn from other areas of racial prejudice or discriminatory attitudes such as Intercultural Sensitivity. In this study, the EBLEO was subjected to item level scrutiny and broad measures of internal consistency and performance based on data collected from three separate samples ( $N = 135$ ). The measure was then compared to the original Symbolic Racism Scale, along with secondary yet related measures and constructs such as Social Dominance, Dark Triad personality traits, Five Factor Model (FFM) personality traits, and Social Desirability. The EBLEO rendered an overall Cronbach's alpha of .942 and correlated highly with the Symbolic Racism scale. Hierarchical regression identified social dominance, conservative political orientation, the FFM trait of openness to experience, and social desirability as key predictors in the model. Exploratory factor analysis rendered a six-factor model that accounted for roughly 60% of the variance, with the first two factors being the largest. Results and relevance to the study of explicit racial bias and how this relates to law enforcement pre-employment screenings are discussed.

## **Introduction**

Racial bias, both implicit and explicit, is an issue that has come into greater focus within law enforcement circles. Special attention is now being paid to training and, more recently, pre-employment screening procedures. These changes come in the wake of the highly publicized deaths of George Floyd, Michael Brown, and others who have perished at the hands of law enforcement (Peloquin et al., 2022). In response, some states have mandated implicit bias training for law enforcement in an attempt to curtail the occurrence of these types of incidents (Villegas, 2020). However, the largest study to date of implicit racial bias training on the New York City Police Department revealed unclear, or negligible associations between the training content and policing practices (Kaste, 2020). Other states, such as California have taken more drastic measures and implemented policies detailing procedures at the state level for mandated testing and evaluation for officers for bias (Villegas, 2020).

To that end, in 2020, the State of California passed sweeping legislation to overhaul their law enforcement training and standards requirements for the inclusion of implicit and explicit racial bias pre-employment assessment (Villegas, 2020). Although not specific in the methodologies to be incorporated, the bill (AB 846) allows for the reviewing physician or psychologist to evaluate the applicant for bias against “race or ethnicity, gender, nationality, religion, disability, or sexual orientation” (Sec 3) (leginfo.gov). Several other states are beginning to consider such laws, but many states have begun to incorporate bias training into the annual training regimen as a stop gap measure.

The exact relationship of racial bias, or racism proper to specific incidents such as George Floyd, and other law enforcement involved incidents is unclear (Kahn and Martin, 2020; Toosi et al., 2021; Bailey et al., 2021). Much of the research has been conducted in theoretical

and qualitative ways, analyzing perceptions of law enforcement officers by individuals conducting broad analyses of aggregate data (Chaney and Robertson, 2013; Kahn and Martin, 2020; Bailey et al., 2021). Broadly speaking, Chaney and Robertson (2013) noted incidents of excessive force, in-custody deaths, and deaths at the hands of law enforcement tend to be higher for people of color than for the general population. Often, these are attributed to systemic factors or seen as de facto evidence of racial inequities in law enforcement and governmental systems. However, these statistics fail to account for individual levels of racial bias/racism in officers and sweeping generalizations of systems and inequalities do not provide substantial, direct evidence of prejudicial attitudes among specific law enforcement officers. As a result, racial bias must be measured directly.

The most oft cited and publicized measure of implicit racial bias is the Harvard Implicit Association Test (IAT), which assesses implicit bias via a battery of congruent/incongruent trials and associations between multiracial faces and words (Diamond et al., 2012). However, the connection between the IAT and overt racial discrimination, or explicit racial bias, is unclear (Ditonto et al., 2008; Gawronski, 2019). Indeed, the IAT itself has come under fire for its controversial methodology and similarity to the Stroop measure (Diamond et al., 2012; Oswald et al., 2013; Gawronski, 2019). Overall, implicit racial bias measures, specifically the Harvard IAT, have met with skepticism and are generally believed to have little predictive value, in that the scores do not provide unadulterated reflections of the concept, meaning they are likely not measuring implicit racial bias or are contaminated by other factors (Ditonto et al., 2008; Diamond et al., 2012; Oswald et al., 2013; Gawronski, 2019). Findings such as these leave the field of psychological science, and the individual practitioner, at a substantial disadvantage as legislation is enacted without adequate empirical support and approved methodologies.

Conversely, the explicit measures of racial bias, which evaluate strongly held and salient attitudes about races or ethnic groups, such as the Symbolic Racism Scale (SRS), have shown excellent validity and predictive abilities in a variety of contexts such as in attitudes about people of color holding political office, or occupying positions of power, and racial policies in general (Ditonto et al., 2013). Modern racism (McConahay, 1986), symbolic racism (Kinder and Sears, 1981), and racial resentment (Kinder and Sanders, 1996), all describe the broader concepts of contemporary prejudicial attitudes about races and some conservative values (Sears and Henry, 2003). Consequently, Axt (2018) noted that the best manner by which to measure implicit racial bias was to utilize extant measures of explicit racial bias, such as the SRS. The predictive value of explicit measures has been shown to be robust and applicable to many different situations and interactions between races (Dovidio et al., 2002). Huddy and Feldman (in press) recommended that explicit measures take precedence over the implicit measures for the study of racial bias and racism, with the goal of attaining greater uniformity of the constructs themselves.

Furthermore, Charlesworth and Banaji (2020), noted substantial changes with both explicit and implicit racial bias in their longitudinal meta-analysis. They found that explicit racial bias, during the roughly 17-year period of observations, had regressed some 37% towards neutrality whereas implicit racial bias had moved just 17% in the same direction (Charlesworth and Banaji, 2020). This notable regression outlines the relative malleability of explicit bias as pertains to changes in society, generational cohorts, and demographics while conversely demonstrating the rigid persistence of implicit bias. Charlesworth and Banaji (2020) also identified that explicit attitudes can vacillate independently of implicit attitudes such that a person holding strong implicit attitudes may not cling to strong explicit attitudes. When Charlesworth and Banaji's (2020) findings are coupled with broad applicability and predictive

aptitudes of explicit measures, outlined by Dovidio and colleagues (2002) and Huddy and Feldman (in press), the utility of explicit measures seems to far outweigh the capability of implicit association instruments.

Explicit measures are not, however, totally devoid of criticism. For example, several measures of racial bias fail to account for political ideology, specifically conservative values, as mentioned above by Sears and Henry (2003), or social dominance (Gomez and Wilson, 2006). Political views will be addressed later. Social dominance is an ideology that suggests certain groups are inherently weaker, or otherwise less deserving of resources and power compared to other groups and, therefore, must be subjugated. This oppression or subjugation is accomplished under the guise of both a paternalistic protection and the overt maintenance of a social hierarchy composed of a group-based inequality structure (Ho et al., 2015). This construct is, consequently, an important element of racial bias and the worldview that theoretically underlies it.

Social dominance, as a construct, has two important factors, or subdimensions that define it (Kugler et al., 2010; Ho et al., 2012). The first is the dominance factor, which specifically addresses the group-based hierarchy that is marked by the dominant group actively subjugated perceived subordinate groups (Ho et al., 2012). This construct, according to Ho and colleagues (2015) has important correlates with violent suppression of other groups and is associated with traditional, or old-fashioned racist ideology. The second category is that of egalitarianism, which, somewhat deceptively, refers to the opposition to policies that support egalitarian ideals and policies (Ho et al., 2015). This factor has correlates with less overt racial policies such as the meritocracy and other political and social policies that serve to enforce hierarchical nature of society, making this an important domain of the explicit racial bias framework (Ho et al., 2015).

Another area of criticism leveled against explicit racial bias/racism scales and symbolic racism as a concept, involves a uniquely dichotomous characterization of race. While much of the work on this issue has been devoted to traditionally marginalized or minority ethnic groups, emerging work shows that racism, racial bias, and prejudice transcend racial lines (Nelson et al., 2018). The formula of prejudice added to power, often likened to white people, equals racism is falling by the wayside. Nelson and colleagues (2018) noted that shifting power dynamics, upward and downward mobility, and population migrations have morphed the power and racial majority equations in favor of traditional minority groups. As an example, many metropolitan police departments may serve jurisdictions where white people are the minority, at least in population, and the departments themselves may be composed of racially diverse officer cadres. Ergo, the concept of symbolic racism and its assessment must be equally broad. Therefore, the preference for in-group dominance must be properly considered as the US is becoming progressively diverse subjecting various races and ethnicities to prejudice beyond the dichotomous and simplistic conceptualization noted, thus the measure itself must be broad enough to encompass this evolving view (Ho et al., 2015).

The explicit racial bias measures themselves are roughly universal, and item homogeneity poses another problem for these measures. For example, the SRS utilizes items from the original Modern Racism Scale, developed by McConahay and colleagues (1980). Many other measures also use similar or nearly identical items, such as the Prejudice Scale (Lepore and Brown, 1997), the New Racism Scale (Jacobson, 1985), the Negative Attitudes Towards Blacks Questionnaire (Kuppens and Spears, 2014), and several others. Commonly, these scales are modified to incorporate changes reflecting racial bias towards a specific population, such as the Modern Racism towards Māori Scale, developed by Satherley and Sibley (2018). Although these items

have performed admirably on the various iterations of the measures, item diversity and inclusion of more broadly relevant and contemporary items is necessary, especially when examining specific populations (e.g., law enforcement officers).

The concept of modern or symbolic racism has evolved since the 1980s and 1990s and the names are often used interchangeably (Henry and Sears, 2002). Symbolic racism itself is defined as a cogent set of political and ideological beliefs that span over four separate themes. According to Sears and Henry (2003) these themes include (note: the following language is taken directly from the measure, designed to measure attitudes of white people towards Black people) Black people no longer facing discrimination, the perceived failure of Black people to progress in society being supposed as due to inherent personal flaws such as unwillingness to work, Black people perceived as demanding too much from society too fast, and Black people being perceived as the recipients of undeserved economic, media, or social advantage. Overall, symbolic racism exists at the confluence of politico-ideological beliefs and negative affect towards people of color, or racially charged anxiety and belligerence (Sears and Henry, 2003). To this end, Tarman and Sears (2005) identified that symbolic racism itself exists as a distinct set of social and political beliefs and ideologies, with Henry and Sears (2002) noting that symbolic racism is the adhesive that binds repressive racial policies and conservative views together.

Overall, the measures for symbolic racism are roughly identical, as stated above, and evaluate a contemporary, and multifaceted view of racism, such as undeserved economic advantage and work ethic or lack thereof. Henry and Sears (2002) combined items from older measures, such as those from McConahay (1986) into a new symbolic racism scale and identified that symbolic racism fits thematically into the aforementioned unique categories (Morrison and Kiss, 2017). This measure has performed well and demonstrated good convergent,

discriminant, and predictive validity against other measures of racism and displayed relative generalizability across racial and ethnic groups (Sears and Henry, 2003). Criticism of this measure specifically involves conflation with or intercorrelation of variables within larger sociopolitical ideologies, specifically social dominance, and political ideology, thereby indicating political identity broadly may confound results (Gomez and Wilson, 2006).

Although explicit measures have shown greater predictive abilities overall, or ability to predict racist behavior, there are other, less overt measures of bias and racism that can be important as well. Subtle racism, a more passive form of racism, has evolved from more blatant varieties such as explicit racism and is receiving increased attention. This concept is marked by omissions, such as unwillingness to include other races, inactions, such as failure to combat open forms of racism, and a generalized reluctance to assist in situations involving racism (Yoo et al., 2010). This concept has correlates within the realm of microaggressions and other forms of bias, exemplified by the use of insensitive comparatives, such as telling someone they are a credit to their race, without the more blatant use of pejoratives or racially charged statements or actions (Yoo et al., 2010). This form of expressed prejudice is best understood, according to Yoo and colleagues (2010) as an implicit form of bias, with a more pronounced connection to explicit bias.

Subtle racism, and its measurement, involves more complexities than the name would suggest. This concept has important shared facets with personal attributions or assigning blame or qualities to a person or group, and it strongly relates to measures of prejudice, or preconceived and biased notions about people or groups (Reid and Foels, 2010). Subtle forms of racism are also strongly associated with the concepts of authoritarianism and social dominance (Van Heil and Mervielde, 2005). To this end, attributional complexity and social dominance orientation

play in important role in the manifestation of racist attitudes and their measurement is, by extension, less overt but equally crucial to the expression of more explicit forms (Reid and Foels, 2010).

The social dominance scale (SDS) was developed in 1994 by Pratto and colleagues and is designed to measure the ideas of social hierarchy and inequality views in individuals as it pertains to group membership (Pratto et al., 2012). Under the theory, individual orientation and associated bias falls into three basic groups: views about females and their role in society, views on age roles, and other categories such as race and religion (Pratto et al., 2012). Likewise, it has been found that the social dominance scale has two broad factors of social dominance orientation and social dominance egalitarianism, under which each item falls (Ho et al., 2015). This measure has excellent construct validity and both item level and whole measure performance characteristics, as noted by Ho and colleagues (2015). Criticisms regarding the SDS primarily involve the generalizability of the scale in cultures or nations that have adopted more egalitarian principles and how fewer items (i.e., shorter measures) tend to have better predictive abilities than longer ones (Pratto et al., 2012). This form serves as a control for explicit bias by accounting for elements of sociopolitical ideology and the broader constructs of social dominance and egalitarianism. This measure correlates moderately with Modern Racism Scale at about .65 (Backstrom and Bjorkland, 2005) and about .53 with the SRS measure (Van Hiel and Mervielde, 2005).

At present, much of the research on social dominance theory and explicit bias has only been applied to law enforcement officers in a very haphazard and theoretical manner. As a result, no measure adequately represents the challenges in explicit bias that are specific to law enforcement and the criminal justice system. However, the SRS does broadly capture the

perceptions of white people about underlying issues that may affect criminal justice system involvement and treatment of people of color, specifically Black people, albeit through more passive means (Matseuda and Drakulich, 2009). For example, according to Matseuda and Drakulich (2009) suggest that the underlying socio-political ideology and aversion to Black individualism forms the basis for perceptions about races in the criminal justice system. It should be noted that other factors, such as personality, are virtually inseparable from socio-political ideology and may account for substantial variance within the model.

Personality traits listed under the five-factor model of personality, including extraversion, agreeableness, conscientiousness, neuroticism, and openness to experience, have been found to relate to various areas of racism and white-dominant identity (Silvestri and Richardson, 2001; Grigg and Manderson, 2015). Silvestri and Richardson (2001) noted that low scores on openness to experience were correlated with white racial identity, while agreeableness was negatively correlated with white identity, and neuroticism was predictive of anxiety about racial issues for white individuals. While these findings do not point to a racist, or a prejudiced personality pattern per se, they do demonstrate the substantial overlap between personality traits and the presentation, or possible generation of, prejudicial belief patterns (Silvestri and Richardson, 2001). Importantly, these personality traits match with commonly administered pre-employment personality measures for law enforcement such as the Minnesota Multiphasic Personality Inventory (MMPI) and the Personality Assessment Instrument (PAI), which makes the relationship between personality and ideology crucial (Varela et al., 2004; Lowmaster and Morey, 2012).

Of note in the personality realm is the proposed dark triad of personality characteristics that have been theorized to predict insidious behavior. This triad is composed of subclinical

levels of narcissism, psychopathy and Machiavellianism, each with their own identifiable characteristics (Jones, 2013; Furnham et al., 2014). Machiavellianism is a pattern of behavior whereby an individual engages in cynical and manipulative acts in service of their own, often amoral, self-interest (Furnham et al., 2014). Narcissism and psychopathy are both generally construed as personality disorders, or persistent patterns of maladaptive behavior seen in a clinical setting. For the purposes of the dark triad, these are typically noted in lower levels, albeit still problematic. Narcissism is defined by an inflated sense of self-worth, entitlement, dominance, and superiority whereas psychopathy manifests in higher levels of impulsivity, and thrill-seeking behavior marked with low levels of empathy (Furnham et al., 2014).

Jones (2013) demonstrated that Machiavellianism and right-wing authoritarianism both predicted prejudiced beliefs and behaviors that match with conceptualizations of modern racism. This elucidated a combination of personality characteristics and political orientation that trended towards the extreme. On the other hand, traditional prejudicial attitudes were predicted by psychopathy traits, thus denoting a distinct difference in predictive values in the dark triad (Jones, 2013). Of great importance were the differences, highlighted by Jones (2013) in the bend towards violent actions and rhetoric, which were most notable in the psychopathic group and markedly less so in the Machiavellian group. Narcissism, according to Paulhus and Williams (2002), is associated with in-group dominance and a sense of belongingness, indicating that narcissism can be present and factor in to either presentation (Jones, 2013).

The measurement of the dark triad is somewhat more complicated than the definition would suggest. Furnham and colleagues (2014) found that individuals presenting dark triad trait patterns seem to be low in agreeableness, low in conscientiousness, low in neuroticism and high in extraversion. Each of these traits is made up of six facets that underlie the construct, and the

results have been consistently mixed on which are better predictors. Generally speaking, individuals exhibiting dark triad traits tend to show connections with five out of six facets in agreeableness and three out of six in conscientiousness, which broadly mark characteristics of Machiavellianism and psychopathy, both at the subclinical level (Furnham et al., 2014). Overall, evidence indicates a diffuse pattern of personality traits and underlying facets that are associated with social dominance and political orientation which lead to prejudicial ideology and belief systems. All of which can be important markers in law enforcement candidates.

As mentioned above, political ideology has a longer and more robust connection with personality traits. Capara and associates (1999) noted that lower levels of agreeableness and openness to experience, coupled with higher levels of conscientiousness and extraversion were associated with right leaning voters. Cooper and colleagues (2013) found support for these findings and subsequently noted that these traits, at varying levels, predict the degree of partisanship, or prejudice in service of a cause, within the broader political parties. Political conservatism and a rejection of just world politics, or the idea of an egalitarian society via political means, have been linked to higher levels of prejudicial beliefs (Carney and Enos, 2017). As such, the measure of personality, and the close intermeshing of personality traits with law enforcement practice, political leaning, and potential prejudicial attitudes and actions must be considered.

Law enforcement officers, as a group, are primarily composed of white male officers who identify as Republican or conservative; a trend which tends to transcend departmental, regional, and jurisdictional boundaries (Ba et al., 2022). The skewness of the data, and representative statistics, tend to complicate the picture regarding racism and public safety. Morris and LeCount (2020) noted that political ideology, racial resentment, and the associated attribution of criminal

## EXPLICIT BIAS SCALE FOR LAW ENFORCEMENT

behavior to personal faults are important elements in determining punitive attitudes of officers and the public at large, which can have substantial ramifications on community needs (i.e., community policing versus traditional enforcement). However, this highlights the complexities involved in screening out or removing a large volume of officer candidates based on political ideology, as this would be deleterious to the profession and public safety broadly as well as being illegal. Therefore, a more nuanced approach to the investigation must be taken, that accounts for political ideology carefully but examines explicit bias via a refined lens, being intentional about separating problematic beliefs and behavior from those that are widely held and accepted.

With this in mind, another important facet of explicit bias, symbolic racism, social dominance, and their measurement and conceptualization involves intercultural sensitivity. This is a concept that evolves in a person from youth, and it quantifies the propensity to seek out, accept, and interact within culturally diverse contexts (Klenner-Loebel et al., 2021). It speaks to larger worldviews and the manner in which individuals view themselves and others within the broader contexts, thus being highly enmeshed with social dominance and other aspects of symbolic racism. This is notable in the previously identified respect for other cultures factor, and associated beliefs concerning reverence for cultural differences, which assesses the degree to which a person understands and respects opinions and differences that are culturally related (Klenner-Loebel et al., 2021). Importantly, this construct and measurement are highly associated with personality traits such as agreeableness, conscientiousness, and extraversion, reflecting a similar pattern of correlations as noted above (Balakrishnan, 2015).

### **The Current Study**

Carney and Enos (2017) showed that measures of modern, or symbolic racism, not only are applicable for more diverse ethnic groups than those of Black people or people of African American descent, but also seem to measure various elements of political ideology quite robustly, which must be curtailed to gather a purer measure of prejudicial beliefs. The current study will modify the existing symbolic racism scale to clarify ambiguous response items (such as those that require high degrees of interpretation), broaden its applicability, and incorporate items specific for law enforcement while placing less emphasis on political orientation (Henry and Sears, 2002). The item pool will also be expanded substantially incorporating the latest conceptualizations of explicit racial bias, coupled with less overt implicit, or perceived racial bias items.

The addition of new items, specifically geared for law enforcement officers or candidates is at the heart of the process. Utilizing research driven deductive approach outlined by Burisch (1984), the measure is not only being updated substantially, but being suitably modified for prospective use with the law enforcement population, in hopes of gathering important ideological and belief-oriented data that can drive future predictive analysis. The contemporizing of this measure will add crucial value to an already useful measure and expand upon the utility by gathering data on a current sample.

### **Method**

This study was administered entirely online utilizing an extant research repository (SONA) and included in criminal justice classes. The measures, demographic questionnaire, the EBLEO, the Symbolic Racism Scale, Social Dominance Scale, Social Desirability Scale, the

M5-120 personality measure, and the Short Dark Triad measure will all be converted to an online format in Qualtrics survey software. Upon completion of the data gathering, all reverse coded items will be reverted into normal coding rendering a coherent score from which an aggregate score can be obtained and analyzed. Elements of the M5-120 and Short Dark Triad measure will be further separated to render scores on each trait for comparison. The dependent variable in the analysis process (regression) will be the EBLEO, with other measures comprising the independent variables in the analyses.

### **Deductive Method**

After extensive research and utilization of the deductive method, a battery of experimental questions was developed for inclusion into the SRS measure (Burisch, 1984). Modification of all the existing questions was undertaken to account for criticisms of the form, such as failure to account for minority views against majority groups, and unclear or confounding terminology, hopefully making the questions more applicable to a variety of groups (Gomez and Wilson, 2006). Likewise, the wording of the SRS questions was heavily modified to add specificity and greater utility, designed to clarify the underlying constructs (Blanton et al., 2019). The new scale is titled Explicit Bias Scale for Law Enforcement Officer (EBLEO).

The novel items were designed based on the known factor structure identified by Henry and Sears (2002) and are meant to reflect the overarching themes and mesh with existing items following the deductive method (Burisch, 1984). Furthermore, the experimental items cover elements specific to public safety including court system items, criminal behavior and responsibility, and other important aspects. Overall, the number of included experimental items is roughly proportional to the number of items in the theme, with themes possessing more original items having more experimental items (i.e., four or five) and smaller themes fewer items

(i.e., two items). Factor structure of the SRS has generally revealed two overarching factors that encompass systemic/structural racism (i.e., inequitable distribution of resources) and individual attributions (i.e., people are responsible for their own outcomes) (Tarman and Sears, 2005).

These identified factors also acted as a guidepost for item construction.

Additional items were designed using content of the measures of subtle racism (Reid and Foels, 2010) and intercultural sensitivity (Klenner-Loebel et al., 2021). These items, although based on the aforementioned instruments, have been designed specifically for inclusion in this new measure and were written to reflect both the base constructs but also to match the structure and function of this new measure. The original measures utilized by Reid and Foels (2010) evaluated perceptions of racism by individuals, necessitating substantial revision to reflect the predilection for engagement in subtle racist practices rather than individual receipt and perception. Likewise, only one factor of intercultural sensitivity was selected in inclusion and these questions needed modifications as well (Klenner-Loebel et al., 2021). These have been included in different themes, that match the structure of the Henry and Sears (2002) themes and have been listed in separate themes denoting their content of either subtle racism or intercultural sensitivity. Additional law enforcement-specific items were designed based on subtle racism and intercultural sensitivity.

Given the substantial modification of existing items and the inclusion of experimental items, this study falls under the proof-of-concept design or a pilot study. Before this measure is ready for testing on a larger and a more representative sample (e.g., the law enforcement community or law enforcement candidates) the measure must be evaluated and perfected on a modern and representative sample. Predictive abilities of this novel instrument will not be analyzed in this study.

### **Left-Wing Authoritarianism**

Much of the work thus far has focused on right-wing, or conservative ideologies and their associated traits. However, recent work has suggested that Left-Wing Authoritarianism (LWA) is another ideology that closely mirrors and has substantial overlap with several measures utilized in this work. Early work dismissed LWA as a myth (Stone, 1980), while more contemporary researchers have made substantial gains and validated the existence of this construct (Manson, 2020; Costello et al., 2022). LWA possesses similar levels of dogmatism and punitive attitudes as right-wing authoritarianism, yet it deploys them in service of left-wing political goals (Manson, 2020; Costello et al., 2022). For instance, Costello and associates (2022) identified that LWA individuals can possess traits that closely reflect the definitional core of social dominance orientation and their propensity for antihierarchical violence, or violence against an existing hierarchy, resembles that of the nomological network of social dominance orientation. Conway and associates (2018) noted that LWA individuals can have higher levels of prejudice when religious minorities are the target, compared to their right-wing counterparts, which could translate into explicit bias. Furthermore, these researchers identified identical personality constructs such as low conscientiousness, low agreeableness, and dark triad traits such as high psychopathy as being endemic to LWA population (Costello et al., 2022).

Based on the work of Conway and associates (2018), Manson (2020), and Costello and colleagues (2022), it is theoretically possible to capture some elements of LWA in this study and, based on known associations within the literature, cause elevated scores on certain measures, such as social dominance, personality, and dark triad traits. Although not within the main

hypotheses or scope of this analysis, this further underscores the need to measure and account for political ideology within the broader context of this investigation.

### **Artificial Intelligence**

The use of an artificial intelligence program, specifically one based on the GPT-3.5 structure, was utilized in an experimental fashion to further validate the overall design of this pilot study (OpenAI, 2021). This was conducted early in the data collection process, and it did not alter the course of the investigation. Specifically, the AI software was asked to compare the utility of implicit racial bias measures against the use of explicit ones. The program, overall, agreed with the current experimental design and, particularly, underscored the predictive validity of explicit measures relating to patterns of behavior and noted the ability of explicit instruments to predict attitudes, and thus, behavior, across broad settings (OpenAI, 2021). While the program supported the use of implicit tasks, such as the IAT, it agreed with this author that explicit is generally a stronger predictor of action more robustly (OpenAI, 2021). Although AI did not provide novel information that was not already covered in this work, it did support the framework and goals of the study. One important caveat being the program was published in 2021 and, therefore, does not have access to the most current literature as it does not learn continually apropos of nothing save for human intervention (OpenAI, 2021).

### **Participants**

The data collection process utilized the SONA research repository, whereby undergraduate students at a medium-size state school in the Southeast United States received class credit for participation with an overall sample size of 84. Gamblin and colleagues (2017) noted that this form of online data collection reduces social desirability and method variance bias

in prejudice in similar studies. A separate sample of upper-level Criminal Justice undergraduate students at the same university received extra credit for participation in this study. These students were drawn from both traditional and on-line student populations, the latter of which historically includes members of active law enforcement officers. This sample had an overall participation of 31 individuals. A final sample was drawn from broad online collection procedures to round out the numbers. Participants were recruited via social media using the same measures and similar recruitment statements which yielded a sample of 20. See the Sample and Demographics section below for specifics on these samples. A priori power analysis estimates conducted by G\*Power (Erdfelder et al., 1996), suggested a necessary sample size of 82 to perform the calculations and the overall sample was 84 (Faul et al., 2007). The noted effect size for this sample is small-medium with a  $\beta = 0.8$  (Cohen, 1992).

The demographics for each sample are reported in Appendix B. No mean imputation was utilized in the demographic sections of the analysis. As a result, non-completion led to some lower demographic numbers that do not match the overall  $n$  of the sample. For instance, the  $n$  of the Broad sample was 20, while the demographics  $n$  is only about 16. The demographic measures also changed somewhat depending on the sample utilized and what is reported differs slightly. As an example, SONA participants were not asked about current law enforcement status. However, main demographic measures such as age, political orientation, gender assigned at birth, and other things were consistent across samples. The  $n$  reported in this section reflects the number of complete demographic questionnaires and differs, in some cases, from the  $n$  used in analysis.

The Broad ( $n = 16$ ) sample was overwhelmingly female, with some 73.3% of the sample identifying as female and all gender identities matching gender assigned at birth. This sample

## EXPLICIT BIAS SCALE FOR LAW ENFORCEMENT

had a mean age of 49.1 years ( $SD = 13.9$ ), showing the trend towards older and with a large difference in ages. This sample was entirely composed of White (non-Hispanic) respondents and 85.7% reported being Protestant. This sample tended to skew conservative with 40% identifying as conservative, 46.7% in the moderate range, and only about 14% identifying as liberal. Political party affiliation followed this trend with 37.5% noting allegiance to Republican, 37.5% independent, 18.8% identifying as Democrat, and one Libertarian. This sample also included several military veterans and one former (retired) law enforcement officer.

The criminal justice (CJ) sample ( $n = 29$ ) was largely male, with only 31% noted as female and all gender assigned at birth were congruent with current gender identity. Sexual orientation also reflected 85.7% identifying as heterosexual, 10.7% noting bisexuality, and one respondent as asexual. The age of this sample fell in the middle of the three samples with a mean age of 33.1 years ( $SD = 8.5$ ). This sample was also overwhelmingly white, with 75.9% identified as White (non-Hispanic), 17.2% as Hispanic, and 6.9% as African American. Religiosity noted a substantial Catholic contingent at 37.9%, 51.7% reported as Protestant, 3.4% Jewish, and 6.9% not identifying with any religion.

Political orientation in the CJ sample also skewed more conservative with nearly 55% identifying on the conservative end of the spectrum, about 13% liberal, and 31% moderate. Along this same vein, 41.4% reported affiliation with the Republican party, 31% independent, 24.1% Democrat, and 3.4% unaffiliated. LEO status was noted as 62.1% in active law enforcement service, all of which were local officers (police or sheriff), and 27.3% of the sample noting they wished to enter into law enforcement service at some time in the future. Some 84% of this sample noted CJ as their major, with 7.1% majoring in CJ administration, and 7.1%

majoring in CJ and another course of study (double major). This sample also contained four military veterans.

The SONA sample ( $n = 84$ ) trended much younger, with the mean age of about 19 years ( $SD = 4.4$ ). This sample was also mostly female assigned at birth, with 65.4% identifying as female and 33.3% male. Only four individuals noted a gender identity that did not match gender assigned at birth. Sexual orientation was more diverse than other samples, with 53.6% identifying as heterosexual, 2.4% identifying as gay, 20.1% as bisexual, and 3.6% pansexual, and a couple other identities. Race was slightly more diverse as well, with 71.4% identifying as White (non-Hispanic), 6.0% African American, 8.3% Hispanic, 2.4% Asian American, and 3.6% mixed race. A great many individuals (33.3%) did not identify with any religion, 14.3% identified as Protestant, Catholics were 36.9%, 8% as “other,” and 2.4% identified as Jewish.

Political orientation in this sample skewed liberal, with 36.9% placing themselves on liberal end of the spectrum, 40.5% identifying as moderate, and 16.7% as conservative. Independents accounted for 51.2% of the sample, Democrats as 21.4%, 17.9% Republican, and 3.6% in the “other” category. This sample included a wide range of college majors including engineering, CJ, psychology, and other forms of humanities. 13.1% of the sample expressed a desire to become an LEO in the future and none identified with veteran status.

All three samples produced significant differences in all measures, meaning all samples were significantly different from each other in all measured areas. Generally speaking, the CJ sample scored at, or near the top of all three samples in all measures with the SONA sample being at the bottom. A notable exception to this includes the Broad sample having the highest score on the SDS  $t(19) = 13.783, p < .001$ , Cohen's  $d = .662$ . These differences, overall, tend to demonstrate that the CJ sample had higher base levels on all measures with the Broad sample

in the middle, and SONA occupying the bottom third. Given the numerical superiority of other samples over the Broad and the general trend, this may have the effect of disguising floor effects. The following paragraphs outline sample characteristics include additional independent  $t$  tests that evidence mean differences between gender and other categories within the samples themselves.

In the Combined sample, no statistically significant differences were noted between either gender or LEO status using independent  $t$  tests when evaluating group differences in EBLEO scores. It should be noted, however, that only one individual in each of the Broad and SONA samples identified as LEO so meaningful comparison in those groups was not possible. Overall, gender was not a significant determinant of mean difference on EBLEO scores in this Combined sample. Generally speaking, however, males in the Combined sample tended to produce higher scores, although not significant, than females. See below in the Mean Difference section in Results for in-group differences.

## **Measures**

### ***Demographics***

Basic information from all participants was collected. Such demographic information collected involved age, gender assigned at birth, gender identity, race, college major, location of origin, and political orientation (see Participants section above for further details). Political orientation is a key determinant in this investigation and must be measured in a refined manner (Ba et al., 2022). Political orientation was measured with a single question with a Likert scale that asked the respondent to rate their political orientation from 1 = *Very Liberal*, to 5 = *Very Conservative*. This allowed for more in-depth analysis of this important element, while other

measures capture different elements of political ideology. The demographic questions can be found in Appendix A-1.

### *Symbolic Racism*

The primary measure against which the EBLEO measure was compared is the original SRS. The original SRS was developed in 2000 based on the amalgamation of and noted differences in conceptualization of modern racism (Henry and Sears, 2002). The scale is meant to reflect symbolic racism as a unidimensional construct that encompasses the four themes of work ethic, responsibility for outcomes, excessive demands, and undeserved advantage. It is an 8-item measure with the questions encompassing each of the four themes and a bifurcated factorially derived structure (Henry and Sears, 2002). The original measure can be found in Appendix A-3, and the updated measure (EBLEO) can be found in Appendix A-2.

The measure was originally 16-items and was whittled down to the resulting 8-item based on individual item-level performance characteristics that yielded an overall  $\alpha = .79$  (Henry and Sears, 2002). Additionally, the absorption of some modern racism scale items (McConahay, 1986), as cited by Henry and Sears (2002) are included in the new measure. These items performed roughly as well as the traditional SRS items and their inclusion into the EBLEO adds depth to the item pool. See Appendix D, Table 1 and Results section for details regarding specific performance of these items.

The original SRS asks a variety of questions written in different ways, with different answer possibilities. It was based on a 5-point Likert scale with responses being 1 = *strongly disagree*, to 5 = *strongly agree*. A sample item from the original scale reads: “Over the past few years, Blacks have gotten more economically than they deserve.” The updated version, EBLEO,

being evaluated in this examination features new streamlined answer options that are consistent throughout, based on the aforementioned 5-point Likert scale, and question prompts that are broader, to encompass many racial or ethnic groups. An updated sample item from above example reads: “Over the past few years, some racial or ethnic groups have gotten more economically than they deserve.” Additionally, specific questions for law enforcement have been added under the overarching themes. A sample question reads: “Higher economic advantage for some racial or ethnic groups would lead to reduced crime,” a reverse coded item. Higher scores on this measure indicate higher levels of symbolic racism ideology, including some reverse coded items.

The use of reverse coded items was implemented to streamline question content. The judicious use of reverse coded items was expected to have minimal impact on scale internal consistency and reliability scores (Hughes, 2009). The use of reverse coded and negated items, or those that are stated negatively, can result in lower validity of the measure (Holden et al., 1985). However, more contemporary research has noted that many of these effects are often due to respondent inattention along with wording problems and response category inconsistencies (Weijters and Bumgarner, 2013). As a result, an additional sentence was added to the instruction block asking respondents to be aware of possible reverse coding and the language was changed to add congruence, increase salience, and prevent unintended errors (Weijters and Bumgarner, 2013).

### ***Social Dominance***

Given the robust literature linking social dominance orientation to symbolic racism, the SDS was also used. The instrument is a 16-item measure with a reported  $\alpha = .89$  (Andrighetto et al., 2008). The SDS has existed in many iterations that normally boast a two factor structure

encompassing elements of dominance orientation and egalitarianism (Ho et al., 2015).

Furthermore, this measure captures elements of political conservatism commonly associated with social dominance and explicit racism. This measure correlates moderately with SRS at  $r = .53$  (Van Hiel and Mervielde, 2005). It is scored on 7-point Likert scale asking the respondent to rate their level of positive or negative feeling with 1 = *extremely negative* to 7 = *extremely positive*. A sample item reads: “Inferior groups should stay in their place.” Higher scores on this measure generally indicate less social dominance orientation. This measure includes some reverse coded items. This measure can be found in Appendix A-4.

### ***Social Desirability***

Social desirability, or the tendency to answer questions in a manner perceived to be socially appropriate, or faking good, is a well-documented phenomenon (Loo and Thorpe, 2000). As a control for this, and to ensure validity, the Marlowe-Crowne (1960) Social Desirability Scale (SD) was developed to evaluate biased responding practices in self-report measures (Reynolds, 1982). The original scale was 33 items, but Reynolds (1982) developed several short form versions, of which he found the 13-item Form C to be the best performing. Although the versions have remained relatively unchanged in the preceding years, Form C boasts an overall  $\alpha = .62$  and it encompasses two underlying factors of denial of socially unacceptable traits and a tendency to attribute socially approved, yet improbable, traits to oneself (Loo and Thorpe, 2000). Higher scores on this form mean more biased, or faking good, response patterns. This measure uses True/False response options, and a sample question reads: “I sometimes feel resentful when I don’t get my way.” This measure can be found in Appendix A.

Importantly, social desirability has been the subject of much discussion due to its impact on measure validity and reliability. With the acquiescence of respondents to the gist of the

measure, accuracy of measurement is invariably compromised (Karimi and Meyer, 2019). The impact of social desirability on the measure itself is varied and depends heavily on the constructs measured. However, Karimi and Meyer (2019) estimated that, according to their model, inflation of results up to 18% due to this latent variable are possible. This means that social desirability must be accounted for accurately to stave off method variance bias effects (Karimi and Meyer, 2019).

### ***Personality***

Personality measurement, specifically regarding the traits of openness to experience, conscientiousness, and agreeableness, as identified by Silvestri and Richardson (2001), was measured utilizing the M5-120 personality questionnaire. This measure, developed by McCord (2002), has a high degree of internal reliability and external validity, with a reported  $\alpha = .76$  (Malesky et al., 2021). This measure has been validated for online usage and it captures six underlying facets of each five-factor personality construct (Holder et al., 2013). Moreover, this instrument has accepted uses within the forensic psychology domain, making it an ideal device for which to use for this purpose (Proctor and McCord, 2009). Higher or lower scores in each personality facet are associated with variable levels of the overarching trait. This instrument utilizes a 5-point Likert scale with response options ranging from 1 = *inaccurate* to 5 = *accurate*. A sample question reads: “Make friends easily.” This measure can be found in Appendix A.

### ***Dark Triad***

The dark triad of personality, Machiavellianism, Psychopathy, and Narcissism, identified by Paulhus and Williams (2002) and Jones (2013) was assessed using the Short Dark Triad (SD3) scale, developed by Jones and Paulhus (2014). This instrument is a 27-item measure that

utilizes a 5-point Likert scale with response options ranging from 1 = *strongly disagree* to 5 = *strongly agree*. Higher scores on this measure indicate higher trait-level associations with either Machiavellianism, Narcissism, or psychopathy, respectively. The Cronbach's Alpha scores for this measure include  $\alpha = .71$  for Narcissism,  $\alpha = .77$  for Machiavellianism, and  $\alpha = .80$  for Psychopathy (Jones and Paulhus, 2017). This measure shows excellent convergent and discriminant validity with other known measures of similar, and dissimilar constructs (Jones and Paulhus, 2014). A sample item reads: "I like to get revenge on authorities," from the psychopathy subscale. This measure can be found in Appendix A.

### ***Experimental Items***

As noted above, the experimental items for this measure were created to align with the themes addressed in the SRS proper. These themes involve work ethic and responsibility for outcomes, excessive demands, denial of continuing discrimination, and undeserved advantage (Henry and Sears, 2002). As part of the deductive approach outlined by Burisch (1984), experimental items utilized both structure of existing items and relevant research as marker by which to construct new, and law enforcement geared questions. Each of these subjects is covered below arranged under themes with empirical basis for inclusion of items.

**Work Ethic and Responsibility for Outcomes.** The original questions in this theme cover individual and group-related work ethics and suggest that individuals and, by extension, groups are responsible for their own outcomes in life (Henry and Sears, 2002). The purpose of this block of questioning is to uncover and understand the amount of prejudice possessed by the respondent regarding views of other classes, or ethnic groups as lazy or otherwise personally deficient (Sears and Henry, 2003).

The additional bank of questions under this theme investigates the perception of responsibility for outcomes within the legal system. Woolard and colleagues (2008) noted that perception of the justice system, and likelihood of abiding by rulings and related laws, is highly contingent upon the experience of individuals and groups within that broader context. Historically, individuals of color have received harsher sentences for similar crimes, been afforded less leniency, and generally distrust the judicial system in comparison with white counterparts (Woolard et al., 2008). Overall, individuals, especially those in power, tend to quickly assign responsibility, or judgement, to individuals who deviate from expected norms and increased levels of responsibility attribution can be expected when the judging party is working within the greater system context (Brees and Martinko, 2015). This means individuals charged with enforcing the law may be quick to assign blame, or attribute causality irrespective of the circumstances, to those that violate laws which they are charged with enforcing.

To capture the perceived attributional nature of criminal offense without the understanding of differential treatment and perception of the criminal justice system, two additional questions were created, based on the language and theme, of the four questions already contained within. These questions are: “Racial or ethnic groups in this country are responsible for the legal consequences of their actions,” and “If some racial or ethnic groups would stop committing crimes, they would not have problems with law enforcement.” As can be seen, these questions are also likely to capture some attribution of criminality to certain ethnic groups or races, which may increase its utility in the measure.

**Excessive Demands.** This theme, the largest of the measure, is designed to address the forward progress of certain racial or ethnic groups in their push for Civil Rights (Sears and Henry, 2003). Although there is ongoing discussion about the utility of analyzing Civil Rights

movement data given the different position of the movement presently versus the 1960s, the generalized feelings of equity/inequity, and belief in equal treatment under the law are still relevant (Sears and Henry, 2003). Indeed, these movements have come back into focus as a result of the high profile and racially charged incidents listed in the opening paragraphs of this work. Importantly, these questions also hint at responsibility attribution of these groups, and racial or ethnic group members being at fault for stoking racial tension in the US (Sears and Henry, 2003).

Although the experimental questions listed under this theme do not fit snugly within the context of the theme, the structure and language of the questions were drawn from this theme. These experimental items address the widely held perception, supported by empirical data, of the racial profiling and disproportionate targeting of people of color by law enforcement officers and agencies (Nadal et al., 2017). Likewise, the perception of preferential treatment by law enforcement or the court system, resulting from policy changes spurred by advocates, can be an important element to assess. Cynical views of preferential, or unfair and targeted treatment by law enforcement and the court system based on race would likely indicate problematic underlying beliefs about racial relations that may manifest in behavioral ways (Nadal et al., 2017).

In accordance with the findings above, these questions are designed to evaluate the beliefs about unequal treatment and racial profiling. These questions include: “Some racial or ethnic groups are unfairly targeted by law enforcement,” “Some racial or ethnic groups are given preferential treatment by the legal system,” (reverse coded item), “Some racial or ethnic groups have their criminal activity ignored by law enforcement,” and “The court system treats all racial and ethnic groups the same.” As is evident by the wording, these questions also have reverse

coded items as a measure of internal consistency. The question about racial or ethnic groups being treated poorly by the court system should be answered in the opposite direction of the question about groups receiving preferential treatment.

**Denial of Continuing Discrimination.** The denial of continuing discrimination theme performs just as it says and forms the crux of what has been termed modern racism. This modern form of racism is more subtle and often encompasses the denial of continued racial or ethnic discriminations under the guise of these being erstwhile problems no longer a matter of public concern (Yu and Hyun, 2021). These items and the associated larger theme tend to tap into egalitarian views, or lack thereof, and capture some political ideology (Sears and Henry, 2003).

Much like the questions in the excessive demand theme, these experimental questions address areas of law enforcement and judicial inequalities. One specific area covered is the inherent white favoritism in the criminal justice system which can be seen in disparate charging and sentencing statistics (Smith et al., 2014). Although charging decisions can be multilevel phenomena, it has been demonstrated that explicit bias can impact those decisions and, thus, should be analyzed accordingly (Chohlas-Wood et al., 2021). These questions read: “Some racial or ethnic groups are excessively prosecuted for minor offenses” (reverse coded), and “Some racial or ethnic groups are not prosecuted harshly enough.”

**Undeserved Advantage.** This is the final theme of the SRS and is also the shortest. This theme involves the perception of economic advantage, or other types of advantage conveyed upon members of racial or ethnic groups by virtue of their membership within that group (Sears and Henry, 2003). This theme contains two questions, so only a single question was added under this umbrella. This experimental question addresses the unequal distribution of resources, such as financial, and the association of lesser crime where greater financial resources are found (Lynch,

2016). This bank of questions broadly captures structural or systemic inequities and associated perceptions (Sears and Henry, 2003). The experimental question for this section reads: “Higher economic advantage for some racial or ethnic groups would lead to reduced crime.” This is a reverse coded item.

**Unknown Theme Questions.** There are two questions on the SRS that do not fit into the overarching themes. These questions evaluate the racial perceptions of minorities and people of color by the media and government entities, and the overarching attention paid by these groups to racial or ethnic minorities (Sears and Henry, 2003). These questions were modified to reflect only the media portrayals of racial or ethnic groups. This modification was undertaken due to sustained media coverage and theorized priming effects regarding racial framing of incidents highlighted by Wright and Unah (2017). Under this idea, the racial framing of incidents serves to portray people of color or minorities (and others) as frequently engaging in criminal actions, which has the effect of inflaming racial tensions and creating additional barriers for people of color (Wright and Unah, 2017).

Consequently, the experimental question added to this bank regards the racialized framing of incidents by the media, or the perception of certain racial or ethnic groups as criminal in nature by exacerbating perceptions of injustice via enhanced media coverage (Wright and Unah, 2017). The experimental question reads “Media coverage of racial and ethnic issues increases racial tension.”

**Subtle Racism and Intercultural Sensitivity Themes.** These themes have been added to the measure based on the work in subtle racism and intercultural sensitivity outlined in the above paragraphs. Specifically, these themes encompass two sub-categories of the broader measures, where the questions were based on structures and concepts outlined in either the subtle racism

category (Reid and Foels, 2010) or the intercultural sensitivity category (Klenner-Loebel et al., 2021). Within these sub-categories, only one factor, as identified by previously discussed factor analysis, is being assessed by the items. For the intercultural sensitivity sub-category, it is the respect for other cultures factor (Klenner-Loebel et al., 2021). In the subtle racism sub-category, it is the subtle factor, as opposed to the more explicit factor (Reid and Foels, 2010). These themes contain all experimental questions based on the structure and content of the original measures, but do not contain the specific items of those measures.

The subtle racism theme contains a total of ten questions that assess a variety of subtle or attributional racism traits. Some of these items are geared specifically towards law enforcement. A sample item of the subtle racism variety reads “Certain members of racial or ethnic groups are a credit to their race or ethnicity.” A sample law enforcement question of this same variety reads “Some races or ethnicities are viewed with suspicion by law enforcement when a crime is committed.” These questions, as with the intercultural sensitivity questions, share the same Likert scale answer options and are designed such that higher scores equate to greater subtle or intercultural bias.

The intercultural sensitivity theme contains six questions that assess the degree to which the respondent values difference of opinion and cultural identity of self and others. Again, some of these questions are specifically written to address law enforcement related issues in this regard. A sample item reads “The values of people from different races or ethnicities should be respected.” This is a reverse coded item. A sample of the law enforcement specific variety reads “Law enforcement should consider cultural factors during investigations.” This also is a reverse coded item.

**Expert Review.** The EBLEO, specifically the experimental items, was sent to a content expert for review before deployment in the research repository. This was undertaken to ensure that the items are subjected to rigorous review by individuals with domain specific expertise and knowledge, as a measure of construct validity (Keh and Sun, 2018). Feedback from the expert was incorporated as necessary into the measure.

Experts in this case were chosen based on construct expertise in the areas of explicit racial bias, law enforcement interactions amongst various racial and ethnic groups, and publications (more than one) in peer-reviewed journals reflecting this proficiency. Given the dearth of research in this particular area of research, other specialties may need to be included such as explicit racial bias research specifically, implicit bias and its effects on law enforcement procedures, as well as systemic bias.

This measure, and the overall study and methodologies employed, were reviewed by Jill Swencionis, Ph.D., a post-doctoral researcher fellow at the Center for Policing Equity at Yale University. Dr. Swencionis has published numerous papers, as either primary or secondary author, on the subject of racial bias in policing, including at least one with the director of the Center for Policing Equity, Philip Atiba Goff, Ph.D. (Swencionis and Goff, 2017). This meeting occurred on December 21<sup>st</sup>, 2022, after Dr. Swencionis had been given a chance to review the material. Suggestions were made and incorporated into the measure and research.

Although not strictly within the realm of expert review, in collaboration with the Criminal Justice Department at the medium sized university where participants were gathered, this measure received additional scrutiny and input from experts within the Criminal Justice education field. Much of this input was in regard to methodology for data collection, however, the intersection of this research with practicalities of criminal justice practice, such as

aforementioned SB 300, collaboration and discussions were ongoing about the utility of this measure and timeliness.

### **Analytic Procedure**

Step one was item level performance as measured by Cronbach's alpha, corrected item total correlation (CITC), and total score if item removed statistics (Zijlmans et al., 2019). This frequently necessitates eliminating poorer performing items while retaining better items. Importantly, individual item performance will be weighed carefully against the face validity, or congruence with the construct from which the item was drawn to determine inclusion/exclusion criteria (Burisch, 1984). Conventions for standards of item inclusion/exclusion are highly varied and often depend upon overall measure performance, among other listed factors, so setting minimum at this time is likely premature (Zijlmans et al., 2019). However, overall measure performance should produce a Cronbach's alpha of .7 or greater to be considered acceptable (Hughes, 2009).

A high degree of similarity between experimental items and both the modified items and standard items of the original was expected. Correlations between all measures was undertaken as a second step which, according to Schober and colleagues (2018), should render an  $r = .8$  or higher between EBLEO and SRS. This correlation was to serve as a measure of convergent validity. Normalness of data would determine use of either Pearson or Spearman correlation coefficient, with more normal data being analyzed via Pearson and more skewed data analyzed by Spearman (Schober et al., 2018). Skewness and kurtosis analysis were undertaken as part of this step, see results for details.

Given the noted association between the SRS and political ideology (Gomez and Wilson, 2006) and accounting for the undesirability of potentially screening out law enforcement candidates based on political ideology (Ba et al., 2022), item association with political orientation must be taken into consideration. Not only should political orientation be controlled for, but it should also be evaluated in light of the items themselves. Items that correlate very highly (i.e.,  $r = .9$  or higher) with political orientation should given greater scrutiny to determine the utility of the item, and whether it should be removed or retained (Schober et al., 2018).

The second step was to be hierarchical linear regression. The control variables of the SDS, SD, and political orientation were placed in the first level of the regression. The second step of the regression involved the inclusion of M5 measured personality traits of agreeableness, openness to experience, conscientiousness, and extraversion. Consistent with the findings of Furnham and colleagues (2014) and Jones (2013), agreeableness and conscientiousness should show a significant negative association with higher EBLEO scores and extraversion and openness to experience should correspond positively and significantly. The third and final step will be the inclusion of Dark Triad traits, with the expectation that Narcissism and psychopathy will be positively and significantly associated with the EBLEO (Jones, 2013; Furnham et al., 2014). Between the steps, the  $\Delta R^2$  coefficient should be significant, indicating significant additions of variance (Nimon and Oswald, 2013).

Although a priori power analysis indicated a sample size of 104 to accommodate for the number of predictors with the effect size small-medium with a  $\beta = 0.8$  (Cohen, 1992), exploratory factor analysis is necessary. Should this measure perform adequately, later factor analysis to determine factor structure and congruence with original factor structure found by Henry and Sears (2002) will be conducted. To that end, a desired minimum sample size of 150-

180 would be acceptable with 200 being the ideal (Mundfrom et al., 2005). Effect size itself will be evaluated by Pearson's semi-partial (part) correlation coefficient (Kim, 2015).

### **Exploratory Analysis**

Based on substantial modification of the measure and inclusion of experimental items, an exploratory factor analysis (EFA) will be conducted to determine underlying factor structure and assumed item dispersion to within each factor. Tarman and Sears (2005) examined a series of proposed factor structures for the SRS and supported a bifurcated two-factor model. In this model, known as the attributional model, most questions load onto one factor that reflect structural attributions, or denial of continuing discrimination, or a second and individual attribution factor that denotes other races fail to work as hard, or are inherently inferior (Tarman and Sears, 2005). Of these, the structural factor seems to have the best overall fit and relationship with the concept of symbolic racism.

EFA was to be conducted with IBM SPSS version 28 statistical software. The extraction method will be specified as maximum likelihood based on both the abilities of SPSS to provide a chi-square goodness of fit test, and the underlying principles and definitions of maximum likelihood (Watkins, 2018). The chi-square goodness of fit test should be significant, as that would indicate a significant difference from the computer-generated comparison model which confirms patterned relationships among variables (Williams et al., 2010; Yong and Pearce, 2013). Additionally, the Kaiser-Meyer-Olkin test of sampling adequacy (KMO) and Bartlett's test of sphericity must be within designated parameters. KMO values of .70 or greater are desired and Bartlett's test should produce a statistically significant chi-square result to be adequate for

inclusion (Watkins, 2018). Failure to meet these criteria would result in exclusion of this data set from the EFA.

## Hypotheses

1. The EBLEO will correlate strongly and positively with the SRS measure,  $p = .05$ .
  - (a) Correlation between EBLEO and the original will be high,  $r = .80$  or better,  $p = .05$ .
  - (b) Correlation between EBLEO items and political orientation will be positive and significant,  $p = .05$ .
2. New items on EBLEO will perform as well as conventional SRS items.
  - (a) Total measure performance will be at or above the conventional Cronbach's alpha of  $.70$ .
3. Hierarchical regression between EBLEO, M5-120 personality traits, and SD3 traits, controlling for SDS, political orientation, and SD will be statistically significant,  $p = .05$ .
  - (a) The  $\Delta R^2$  coefficient will be significant ( $p = .05$ ), accounting for significant levels of variance between the steps of the regression.
4. M5-120 measured personality traits of openness to experience, conscientiousness, extraversion and agreeableness will all be associated with EBLEO total score,  $p = .05$ .
  - (a) Openness to experience and extraversion will correlate positively and significantly with the EBLEO.
  - (b) Agreeableness and conscientiousness will correlate negatively and significantly with EBLEO.

5. SD3 measured personality traits of Narcissism and Machiavellianism will be positively and significantly associated with EBLEO total score,  $p = .05$ .

### **Exploratory Hypothesis**

1. EFA will be conducted and a factor loading matrix produced by SPSS, showing two to four factor solutions could be produced, based on aforementioned work of Henry and Sears (2003) and thematic structure of EBLEO.
2. Passive items patterned from the subtle racism measure will load onto a separate factor from more overt types.
3. Items inspired by intercultural sensitivity will load onto a separate factor.

## **Results**

### **Samples and Demographics**

Three separate samples were used to achieve adequate power for the regression analysis, although the samples did not meet a priori threshold levels for factor analysis, which was targeted at 200. A final sample, utilizing a common social media platform, was used to supplement the two planned samples. A total of 135 participants were gathered from the three samples. Broad online data collection yielded a sample of 20, traditional undergraduates rendered a sample of 84, and criminal justice undergraduates 31. After initial analyses and data normality evaluations (see below for details), the three samples were pooled, for an overall

sample size of 135. See Appendix H for demographic and descriptive information on each sample.

Measure non-completion was problematic in this study for all three samples. Broad online collection resulted in between eight and nine individuals failing to complete measures in part or in whole. Non-completers were removed from the Broad sample leaving a total sample size of 12. CJ and undergraduate participants (SONA) had fewer, between two and six non-completers, depending on the sample and measure, with more non-completion in the latter measures. Mean imputation was utilized to fill in missing values with the mean of the field, which neither adds nor detracts from the overall variance and allows for the maximization of existing data, including those with missing values. Shrive and colleagues (2006), noted that mean imputation produces acceptable results when up to 10% of answers are missing. This study fell within that convention.

### **Distribution and Normality**

Each sample was independently evaluated for distribution and normality via skewness and kurtosis statistics. West and colleagues (1996) set hard, albeit liberal limits for skewness and kurtosis statistics (Kim, 2013). As discussed by Kim (2013) these limits are greater than 7 for kurtosis and greater than 2 for skewness. It should be noted, skew and kurtosis scores closer to 0 represent more normal distribution and the concept of excess kurtosis, which subtracts 3 from any given kurtosis score, allows for more liberal interpretation of kurtosis scores than skew (Kim, 2013). Following this convention, hard limits were set for each sample and item, noting a score of over 7 as unacceptable for kurtosis and above 2 as unacceptable for skewness.

Question TI: 5, or the 5<sup>th</sup> question in the Intercultural Sensitivity Theme of the EBLEO, displayed unacceptable skewness and kurtosis statistics across all three samples and was removed from the measure based on this. An example of these statistics comes from the CJ sample which rendered a skewness score of -2.987 and kurtosis at 9.468, or a corrected skewness score of 6.468, above the convention established by West and associates (1996) (Kim, 2013). After combination of all data sets into a pooled one, only one item, SDS:13, or the 13<sup>th</sup> and final question on the Social Dominance Scale, rendered a skewness score of 2.008, while having a kurtosis grade well within the marker. This item was retained as modification of existing measures was not within the scope of this investigation.

All other measures yielded skewness and kurtosis metrics within the conventions. Visual inspection using these metrics, as supported by Kim (2013), coupled with histograms, indicated no notable outliers (e.g., resulting from content inconsistent answering or random answering or extreme endorsements) or less impact thereof. As a result, no efforts to manage, such as Winsorizing, were taken.

### **Item Performance**

Individual item-level performance on the EBLEO was undertaken in two stages. The first stage involved evaluating each sample for EBLEO performance and item-level statistics such as Cronbach's alpha, corrected item total correlation (CITC), and alpha if item removed scores. Although there are no hard limits for any of these metrics, the ultimate goal is to render a measure that has a Cronbach's alpha of greater than .70, indicating adequate internal consistency

and performance (Hughes, 2009). Once this first step was accomplished, the combined samples were subjected to the same process.

Cronbach's alpha scores for the EBLEO in each of the three samples indicated excellent overall performance or internal consistency of the measure, with the highest being in the Broad sample at .956, next highest in the SONA sample at .932, and the CJ sample at .821. Item removal was done in several steps, starting with the Broad sample. The lowest, and negative CITC scores were selected for removal first, after confirming removal of the item would not substantially affect the content of the measure. In the case of all removed items, redundancy either through additional questions or reverse coded items of a similar content was built into the measure thus ensuring content security. The first items removed were T1:8 and 9, indicating the 8<sup>th</sup> and 9<sup>th</sup> questions in the first theme. Examples of CITCs and alpha if item removed for these items were -.614, .958, and -.728, .959, respectively from the Broad sample. Next, item T2:5 and TA:2, meaning the 5<sup>th</sup> question from the 2<sup>nd</sup> theme and the 2<sup>nd</sup> question from the Attribution theme were removed. Finally, item T4:2, or the 2<sup>nd</sup> question from the 4<sup>th</sup> theme was removed, rendering an overall alpha of .968 for the Broad sample. See Appendix D, for a list of the final Cronbach's alphas of each measure.

Other items had even poorer performance and even rendered negative CITC statistics on certain samples but not others. Examples of these include item T1:7, or the 7<sup>th</sup> question on the 1<sup>st</sup> theme in the CJ sample, which rendered a CITC of -.706 and T3:6 in the same sample at -.685. Not only were these negatively associated with other items in the measure, the absolute value of the CITC statistics were large. Conversely, on the Broad sample, these items performed quite well, with a CITC of .742 and .732, respectively. Another item that performed poorly was T4:3, or the 3<sup>rd</sup> item from the 4<sup>th</sup> theme in the SONA sample, with a CITC of -.088, while this was not

replicated across other samples with the item performing marginally well in other samples. Generally speaking, these items performed moderately in the Combined sample, and they were ultimately retained. Problematic items such as these with highly differential performances likely need modifications as their content is important yet their contribution is negligible. Additional information would be gained from the factor analysis that would aid in the investigation of these questions.

Once all of the data had been combined, items recoded, and means imputed, the same process was undertaken for the overall sample. All five of the aforementioned questions performed roughly as poorly on all three samples and were subsequently removed from the overall sample as well after equally meager performance. Subsequent to removal, the combined EBLEO boasted a Cronbach's alpha of .938, indicating excellent performance and internal consistency. Items T4:3 and TU:2, or the 3<sup>rd</sup> item from the 4<sup>th</sup> theme, and the 2<sup>nd</sup> question from the Unknown theme, had marginal performances of CITC = .069, and .014, respectively, and would have increased the alpha to .940. These items were retained, despite relatively poor performance, given their lack of redundancy and importance of concept to the measure.

### **Measure Performance**

Performance statistics, including Cronbach's alpha and CITC were gathered for all other instruments in the battery. These were done for exploratory and documentation purposes only, since each measure is validated in its own right by independent analysis. Summaries of measure performance can be found in Appendix C.

Importantly, the decision was taken to separate the items of the SD3 Dark Triad measure. Initial analysis showed this measure did not perform well as a combined measure, likely owing to the difference in concepts measured. So, instead of a total score with separate facets, like the domains of the M5-120, the SD3 was broken down into total scores of Machiavellianism, Narcissism, and Psychopathy. Of these, the best performing subscale was Machiavellianism with Cronbach's alpha of .754, in the acceptable range, while the remaining scales of Narcissism and Psychopathy produced Cronbach's alphas of .639 and .661, both suboptimal (Hughes, 2009).

Other measures performed adequately as judged by Cronbach's alpha statistics. The SRS rendered Cronbach's alpha in the combined data set of .865, the SDS of .904, and the SD scale at .672. Generally speaking, all of these measures performed roughly the same across all three samples. The SD scale performed better in individual samples in the Broad and SONA categories with alphas of .752 and .707, while in the CJ data set the alpha was problematic at .572, which likely pulled the overall alpha down significantly after being merged with other samples. No measures or items were removed from the analysis due to poor performance.

### **Mean Differences**

Although not listed in original hypotheses, visual examination of means of all measures seemed to indicate substantial differences across samples. The decision was taken to conduct simple *t* tests and independent *t* tests to evaluate the mean differences for statistical significance and provide important insights into the dynamics of the combined sample. This analysis was conducted on all primary measures within the battery. Results of mean difference tests can be found in Appendix E.

***Broad Sample***

The Broad sample produced no significant differences in gender on any of the measures. This is likely attributable to the low number of participants ( $n = 20$ ) and significant number of incomplete measures that required purging. Only one individual identified as an LEO in this sample and no comparisons were made based on this identity.

***SONA Sample***

The SONA sample produced gender differences between several measures. This should, however, be viewed with caution since the females ( $n = 53$ ) in this sample were nearly double the number of males ( $n = 28$ ). On the EBLEO males tended to score higher than females  $t(79) = 2.729, p = .008$ , Cohen's  $d = .542$  and on the SRS  $t(79) = 2.000, p = .0049$ , Cohen's  $d = .706$ , but not on the SDS. Males also scored significantly higher on social desirability  $t(79) = 2.400, p = .019$ , Cohen's  $d = .195$  and Narcissism  $t(79) = 2.061, p = .043$ , Cohen's  $d = .523$ .

Females, on the other hand, scored higher on agreeableness  $t(79) = -2.661, p = .009$ , Cohen's  $d = .481$ , and neuroticism  $t(79) = -3.448, p < .001$ , Cohen's  $d = .539$ . Overall, in this sample, males tended to score higher on the EBLEO, SRS (symbolic racism), social desirability, and Narcissism, while females tended to rate more levels of agreeableness and neuroticism.

***CJ Sample***

The CJ sample produced both significant gender differences and differences in LEO and non-LEO respondents on several measures. Those who endorsed current LEO status ( $n = 18$ ) scored significantly higher on the EBLEO than did their non-LEO ( $n = 11$ ) counterparts  $t(27) = -3.334, p = .002$ , Cohen's  $d = .425$ . The same was true on the SRS, with LEO's endorsing higher levels than non-LEO's  $t(27) = -3.742, p < .001$ , Cohen's  $d = .661$ . In the personality domain,

LEOs endorsed significantly less agreeableness than did non-LEOs  $t(27) = 2.616, p = .031$ , Cohen's  $d = .330$ , and less openness to experience  $t(27) = 2.070, p = .048$ , Cohen's  $d = .475$ . All other measures did not produce significant mean differences.

Mean comparison in terms of gender also produced several significant and important differences. The males in this sample ( $n = 20$ ), scored significantly higher on the EBLEO, compared to females ( $n = 9$ ),  $t(27) = 3.473, p = .002$ , Cohen's  $d = .420$ , SRS  $t(27) = 2.254, p = .033$ , Cohen's  $d = .747$ , SDS  $t(27) = 2.729, p = .011$ , Cohen's  $d = .878$ , and SD  $t(27) = 2.146, p = .041$ , Cohen's  $d = .170$ . In the personality domain, males endorsed significantly higher levels of extraversion  $t(27) = 2.282, p = .031$ , Cohen's  $d = .355$ , whereas females endorsed significantly higher levels of neuroticism  $t(27) = -3.389, p = .002$ , Cohen's  $d = .442$ . Due to the very small sample of female LEOs, they were not compared with the males on the basis of gender and LEO status.

Overall, in this sample, males and LEOs scored higher on measures of explicit bias, and males scored higher on levels of social dominance and social desirability. Personality results indicated LEOs had higher levels of agreeableness and lower levels of openness to experience, while males had higher levels of extraversion and lower levels of neuroticism compared to their female counterparts. Taken together, the categorical belongings of male and LEO tended to produce higher endorsements of explicit (symbolic) racial bias.

## **Correlations**

All primary measures and EBLEO items were correlated with each other, during the course of item level analysis and during regression analysis. These correlations are reported in

Appendix F with specific examples chosen for discussion in this section along with those supporting specific hypotheses.

### *EBLEO Items*

The items of the EBLEO were correlated with each other during the course of item-level analysis. As can be expected from a relatively homogenous measure, many items were correlated significantly and positively, although some negatively, with other items contained within the measure. The correlations tended to be more robust within the first two themes of the measure, Work Ethic/Responsibility for Outcomes, and Excessive Demands, with these items generally correlating highly and positively with each other. Broadly, the correlations became less prominent, and even negative, moving further towards the end of the measure, such as in themes of Attribution and Intercultural Sensitivity. This did not hold entirely true, for example, item TA:2, or the 2<sup>nd</sup> item in the Attribution theme, correlated positively and significantly with nearly every other item on the scale. The strength of the correlations, overall, tended to hover in the small to moderate range, with only a few strong correlations.

Negative correlations tended to be between items of certain themes. For instance, theme 1 Work Ethic and Responsibility for Outcomes items tended to correlate negatively, and often significantly, with items from theme 4, Undeserved Advantage, and some Unknown Theme questions. These items, with modifications, were contained on the original SRS. Although some patterns were identified through visual inspection, more nuanced understanding was needed and, indeed, gained via exploratory factor analysis.

***EBLEO***

The correlations in this section are mostly reported for the Combined sample, but similarly reflect the approximate performance across different samples, especially the larger SONA sample. Please reference individual sample correlations in Appendix F. Certain statistics from other samples will be reported for reference as needed. The following correlations are listed in ascending order with each measure having fewer listed correlations and personality traits not being listed until later, as all significant correlations were listed earlier.

The EBLEO correlated positively and significantly with the SRS  $r = .842, p < .001$ , indicating excellent convergent validity for this measure and satisfying Hypothesis 1. The weakest correlation was reported in the SONA sample at  $r = .768, p < .001$ , still noting a strong, positive, and statistically significant correlation. This also supports Hypothesis 1 (a) as this measure tended to correlate moderately, and positively with the SDS,  $r = .610, p < .001$  on the Combined measure, with the lowest being a non-significant correlation in the Broad sample of  $r = .406, p = .076$ . This generally represents a form of discriminant validity for the EBLEO, since these are measuring distinct constructs, and as Van Hiel and Mervielde (2005) reported, a moderate positive correlation between the SRS and SDS was expected based on prior research.

Correlation between the EBLEO and the SD varied across samples. In the Combined sample, the EBLEO correlated significantly, albeit weakly, with the SD  $r = .203, p < .05$ . However, in the CJ sample the correlation was non-significant and negative at  $r = -.047, p = .800$ . These results highlight the diversity in social desirability scores between these sampled populations.

The EBLEO and Machiavellianism had, overall, a weak and positive, yet significant correlation in the combined samples and SONA samples. The combined sample rendered a correlation coefficient of  $r = .244, p < .001$ . In the SONA sample the correlation was moderate and significant at  $r = .487, p < .001$ . Narcissism yielded a positive, significant, and weak correlation across all three samples, with the Combined sample at  $r = .206, p < .05$ , while it was stronger in the SONA sample at  $r = .330, p < .001$ . The same was true for psychopathy, which had a Combined correlation of  $r = .224, p < .001$  and slightly stronger for SONA at  $r = .317, p < .001$ . Again, this indicates a form of discriminant validity for this measure owing to the weak, yet significant correlations identified across samples. Additionally, these results tend to support Hypothesis 5.

Personality traits, in accordance with the findings of Silvestri and Richardson (2001) and Grigg and Manderson (2015), showed differential patterns of association with the EBLEO. In the Combined sample, agreeableness was negatively and significantly correlated with the EBLEO  $r = -.379, p < .001$  while extraversion and conscientiousness did not have a significant association. Although not identified in a hypothesis in this study, neuroticism had a significant negative association with the EBLEO  $r = -.304, p < .001$ , indicating a weak moderate relationship. Openness to experience produced the strongest association at  $r = -.615, p < .001$ , approximating a strong negative association with this trait. Overall, Hypotheses 4 (a) and (b) were only half supported by these results.

The EBLEO evidenced a strong and positive association with political ideology across all three samples, with roughly similar correlation coefficients, underscoring the robustness of this finding. The association noted in the combined sample  $r = .633, p < .001$ , was in the middle, with the strongest being found in the CJ sample at  $r = .662, p < .001$ , and the weakest being in

the SONA sample at  $r = .550, p < .001$ . In other words, individuals who rated themselves more conservative tended to have higher scores on the EBLEO, following the findings of Gomez and Wilson (2006). This finding supports Hypothesis 1 (b). It should be noted that no item in the EBLEO correlated extremely highly with political orientation (e.g.,  $r = .90$ ), as discussed by Schober and colleagues (2018), and consequently none were removed for that reason. These patterns were generally duplicated in the SRS across samples.

Individually, political orientation and EBLEO items showed various levels of correlation. Some items, such as T1:8, T1:9, and T2:5, in the SONA sample for example, actually had negative correlations with political ideology. A few items, such as item TA:4 in the CJ sample, had a strong positive correlation ( $r = .746, p < .001$ ) with political ideology but did not reach the  $r = .90$  threshold set out by Schober and associates (2018). TA:4 in the CJ sample rendered a significant and positive correlation with political ideology at  $r = .708, p < .001$ . This was the exception rather than the rule across the samples. Most items, if their correlations were significant at all, were generally in the moderate range, around  $r = .380$  to about  $r = .650$ , approximately. Patterns did not emerge as far as themes correlating strongly with political ideology. With that said, the first theme probably had the most correlations with political ideology, with experimental items being highly variable in their correlations.

### **SRS**

In the Combined sample, the SRS correlated positively and significantly with the SDS  $r = .481, p < .001$ , again noting the moderate level of association with the social dominance construct. Much like the EBLEO, this measure did not correlate significantly with either the SD or any of the Dark Triad measures, except for Machiavellianism at  $r = .231, p < .001$ , and the direction of correlations mirrored that of the EBLEO. This measure also correlated negatively

and significantly with neuroticism at  $r = -.342$ ,  $p < .001$ , and openness to experience at  $r = -.556$ ,  $p < .001$ . Correlations with conscientiousness, agreeableness, and extraversion were not significant but followed the direction of the EBLEO.

Correlations between the SRS and political orientation generally held across different samples and mirrored the association between the EBLEO mentioned above, which was in the strong range and positive in direction. In the combined sample, the SRS evidenced stronger correlations with political ideology than the EBLEO at  $r = .677$ ,  $p < .001$ . In the SONA sample, political ideology and the SRS had a stronger correlation than the EBLEO  $r = .591$ ,  $p < .001$ . Overall, both the SRS and EBLEO showed varying, albeit significant levels of positive association with political ideology, indicating more conservative respondents produced higher scores on both the SRS and EBLEO.

### ***SDS***

The SDS correlated positively and significantly with the psychoticism scale on the SD3 at  $r = .348$ ,  $p < .001$ , but rendered no significant correlations with any other primary measure. The SDS did correlate significantly and negatively with agreeableness  $r = -.465$ ,  $p < .001$ , and openness to experience  $r = -.385$ ,  $p < .001$ . Overall, individuals with higher levels of social dominance showed higher levels of psychoticism and lower levels of agreeableness and openness to experience.

### ***SD***

The SD measure correlated negatively and significantly with Machiavellianism  $r = -.3220$ ,  $p < .05$ , but positively and non-significantly with narcissism. The SD scale also correlated positively and significantly with agreeableness  $r = .182$ ,  $p < .05$ , and positively with

## EXPLICIT BIAS SCALE FOR LAW ENFORCEMENT

conscientiousness at  $r = .229, p < .001$ , while correlating negatively with neuroticism  $r = -.340, p < .001$ . In sum, individuals with higher levels of social desirability evidenced lower levels of Machiavellianism and psychoticism, agreeableness, and neuroticism, with higher levels of conscientiousness and agreeableness.

### **SD3**

As previously mentioned, the SD3 measure produced three distinct results, one for Machiavellianism, narcissism, and psychoticism, each with unique properties. Machiavellianism correlated negatively and significantly with agreeableness  $r = -.531, p < .001$ , and conscientiousness  $r = -.210, p < .05$ . Individuals with higher levels of Machiavellianism showed lower levels of agreeableness, and conscientiousness.

The Narcissism scale, on the other hand, only correlated strongly and positively with openness to experience  $r = .479, p < .001$ . It evidenced negative and significant correlations with agreeableness  $r = -.235, p < .001$ , and neuroticism  $r = -.187, p < .05$ . Overall, individuals who endorsed higher levels of Narcissism had higher levels of openness to experience and lower levels of agreeableness and neuroticism.

The psychoticism scale correlated significantly and negatively with agreeableness  $r = -.630, p < .001$ , conscientiousness  $r = -.463, p < .001$ , and openness to experience at  $r = -.3226, p < .001$ . This scale correlated positively and significantly with neuroticism  $r = .204, p < .05$ . Overall, individuals that endorsed higher levels of psychoticism had lower levels of agreeableness, conscientiousness, and openness to experience along with higher levels of neuroticism.

***Political Orientation***

Political orientation correlated significantly with various measures in the battery, demonstrating a broad application for this construct. Political ideology correlated negatively and significantly with agreeableness  $r = -.186, p < .05$ , neuroticism  $r = -.348, p < .001$ , and openness to experience (the strongest negative correlation) at  $r = -.543, p < .001$ . It correlated positively and significantly with conscientiousness  $r = .219, p < .05$ , the EBLEO  $r = .633, p < .001$ , the SRS  $r = .677, p < .001$ , and the SDS  $r = .317, p < .001$ . Overall, individuals who endorsed more right-leaning political ideology had lower levels of agreeableness, neuroticism, and openness to experience, with higher levels of conscientiousness, and scored higher on measures of symbolic racism and social dominance.

**Regression**

The hierarchical regression was performed regressing five factors of personality and Dark Triad traits onto the EBLEO, while controlling for social dominance, political ideology, and social desirability. An addition that was not included in the proposal was the inclusion of Cohen's  $f^2$  to evaluate the global effect size of each step (Selya et al., 2012). This was not calculated by SPSS and was performed by hand.

The first step of the model, which included SD, SDS, and political ideology, accounted for 60.7% of the variance  $R^2 = .607, F(3, 119) = 61.391, p < .001$ . Cohen's  $f^2$  for this step of the model is 1.544, indicating a very large effect size for this step. SDS was positively and significantly associated with EBLEO  $B = .321, \beta = .443, t(121) = 7.258, 95\% \text{ CI } [0.233, 0.408], p < .001, r_{sp} = .417$ . SD was positively and significantly associated with the EBLEO  $B = .407, \beta$

= .131,  $t(121) = 2.255$ , 95% CI [0.050, 0.765],  $p = .026$ ,  $r_{sp} = .129$ . Political ideology was also positively and significantly associated with the EBLEO  $B = .275$ ,  $\beta = .487$ ,  $t(121) = 8.041$ , 95% CI [0.208, 0.343],  $p < .001$ ,  $r_{sp} = .462$ . See Appendix G for results regarding these variables.

In the next step of the model, the personality traits of extraversion, conscientiousness, neuroticism, agreeableness, and openness to experience were added. These variables accounted for an additional 5.9% of variance,  $\Delta R^2 = .059$ ,  $F(5, 114) = 3.998$ ,  $p = .002$ . Cohen's  $f^2$  for this step is .177, also indicating a small effect size. In this step, SDS was significantly and positively associated with EBLEO  $B = .257$ ,  $\beta = .356$ ,  $t(119) = 5.349$ , 95% CI [0.162, 0.353],  $p < .001$ ,  $r_{sp} = .290$ , as was social desirability  $B = .447$ ,  $\beta = .143$ ,  $t(119) = 2.345$ , 95% CI [0.069, 0.824],  $p = .021$ ,  $r_{sp} = .127$ , and political ideology  $B = .199$ ,  $\beta = .351$ ,  $t(119) = 2.034$ , 95% CI [0.120, 0.277],  $p < .001$ ,  $r_{sp} = .272$ . Openness to experience was significantly and negatively associated  $B = -.343$ ,  $\beta = -.260$ ,  $t(119) = -3.481$ , 95% CI [-0.538, -0.148],  $p < .001$ ,  $r_{sp} = -.188$ .

In the final step, the Dark Triad traits were added to the model. The addition of these variables accounted for a non-significant 0.9% of the variance  $\Delta R^2 = .009$ ,  $F(3, 111) = 1.069$ ,  $p = .365$ . Cohen's  $f^2$  for this step was .027, indicating a very small effect size for this step. In this step, only the four previously identified variables were associated significantly with the EBLEO. SDS was positively and significantly associated with EBLEO  $B = .246$ ,  $\beta = .340$ ,  $t(114) = 5.044$ , 95% CI [0.149, 0.342],  $p < .001$ ,  $r_{sp} = .273$  as was social desirability  $B = .475$ ,  $\beta = .152$ ,  $t(114) = 2.482$ , 95% CI [0.096, 0.854],  $p = .015$ ,  $r_{sp} = .134$  and political ideology  $B = .203$ ,  $\beta = .359$ ,  $t(114) = 5.088$ , 95% CI [0.124, 0.282],  $p < .001$ ,  $r_{sp} = .275$ . Again, openness to experience was negatively and significantly associated with EBLEO  $B = -.352$ ,  $\beta = -.268$ ,  $t(114) = -3.566$ , 95% CI [-0.548, -0.156],  $p < .001$ ,  $r_{sp} = -.193$ . None of the Dark Triad traits were significantly associated with the EBLEO. In sum, people who endorse more social dominance, social

desirability, right-leaning political ideology, and lower levels of openness to experience are more likely to score highly, above and beyond the other four traits of personality and Dark Triad psychopathology, on the EBLEO. Effect sizes, both global (for the entire step) and individual, indicate that social dominance and political ideology are far and away the best predictors, combined with social desirability, which account for most of the variance in the model.

### **Exploratory Factor Analysis**

As an exploratory measure, an exploratory factor analysis (EFA) was conducted on the EBLEO to determine underlying factor structure and better understand the dynamics of the measure and elements that underscore symbolic racism that may follow the findings of Sears and Henry (2003). These researchers identified a four-factor structure in the original SRS measure, which was used as the base model for the EBLEO, which was theorized to still underlie the EBLEO (Henry and Sears, 2002). However, substantial modifications to the items, additional questions, and combinations from other measures could, theoretically, alter the factor structure of the measure. It was likely, for instance, based on Klenner-Loebel and associates (2021), intercultural sensitivity items would load onto a separate factor or factors. Only the retained items and none of the eliminated items were placed in the factor matrix and evaluated for this EFA. The factor loadings and final item loadings and retentions can be found in Appendix H.

It is important to note that the sample size ( $n = 135$ ) is below the recommended sample size for performing a suitable factor analysis. Mundfrom and colleagues (2005) recommended a minimum sample size of about 180, while Yong and Pearce (2013) suggested closer to 300 participants as prudent. Conversely, Williams and associates (2010) quoted Sapnas and Zeller

(2002) as having identified a sample size as small as 50 to obtain adequate factor loadings. These rules of thumb are highly variable and depend largely on the factor loadings and individual data elements. However, the majority of researchers suggest a sample in excess of what was acquired in this investigation so this EFA can likely be correctly gauged as slightly underpowered (Mundfrom et al., 2005; Williams et al., 2010; Yong and Pearce, 2013).

Due to the small sample size, some deviations from the desired procedures were taken to maximize the suitability of EFA results. One example involves the use of a scree plot and scree test to identify where to break off the factors for suitable variance inclusion. Yong and Pearce (2013) noted the use of a scree test is only worthwhile and accurate with a sample size of greater than 200. A much more beneficial approach is the use of Kaiser's Criterion, which is a rule of thumb that suggests the retention of all factors with an eigenvalue  $> 1$  and is less sensitive to sample size (Yong and Pearce, 2013). However, given the high degree of variability in factor loadings and percentage of variance accounted for, the observation of percentage of overall variance accounted for in the model must also be used. This, again, can be highly varied with some researchers, such as Hair and colleagues (1995) noting that factors should be stopped at 95% of variance accounted for, whereas commonly in the humanities studies the cutoff is between 50-60% of variance accounted for by the model (Williams et al., 2010). It is the latter that was chosen in this investigation to reduce factors, especially those with minimal or no item loadings.

Given the small sample size and roughly normal distribution of the data, a Maximum Likelihood (ML) method of extraction was selected. Mabel and Olayemi (2020) noted that ML can be a fairly robust analysis used in small samples, given lower numbers of variables. Likewise, it was found that ML can prove useful when the assumption of normality is breached,

as in a couple of items, allowing factor extraction to be run (Kassim et al., 2013). Although having greater utility in confirmatory factor analysis, ML attempts to estimate the factor loadings for a population which, in this case, allows for greater generalizability given the smaller sample (Yeong and Pearce, 2013). Additionally, Yeong and Pearce (2013) noted the factor loadings are roughly equivalent in all cases and extraction selection is largely based on researcher's choice governed by investigation questions.

The rotation method selected for this analysis was Promax rotation. According to Williams and colleagues (2010), Promax is an ideal rotation for research involving human behaviors and is less sensitive to violations of data normality. An additional reason for this selection is the oblique rotation. When there is assumed intercorrelation of closely related factors or items, Promax can provide useful information via a 90° rotation rather than orthogonal (Yeong and Pearce, 2013). Given the homogeneity of this measure and prior findings of Sears and Henry (2003), the intercorrelation of factors was assumed to be likely necessitating an oblique rotation as opposed to the more common orthogonal rotation.

The suitability of the data for inclusion in EFA was assessed via Kaiser-Meyer-Olkin measure of sampling adequacy (KMO) and Bartlett's test of sphericity. Bartlett's test of sphericity determines whether or not the items have a patterned relationship, assuming they do not (an extreme case), the test should be significant (Williams et al., 2010; Yeong and Pearce, 2013). This sample rendered a significant chi-square  $\chi^2(1128) = 4034.870, p < .001$ , indicating it was adequate for factor analysis. The KMO test of sampling adequacy determines suitability of the data for inclusion in factor analysis and should render a score greater than .50 (Williams et al., 2010; Yeong and Pearce, 2013). However, Watkins (2018) defined a cutoff score for the

KMO as .70, substantially higher than the former. In this case, the KMO statistic was .863 indicating good suitability under both criteria.

Utilizing the Kaiser's Criterion from Yeong and Pearce (2013), or all factors with eigenvalues greater than 1, the initial model would have rendered a solution of 22 factors that would have accounted for 90.134% of the overall variance. The first factor was the largest, accounting for 32.995% of the variance and with an eigenvalue of 13.858, followed by the second factor accounting for 9.048% of the variance with an eigenvalue of 3.800. The remaining factors shrunk considerably both in variance accounted for and listed eigenvalues. However, the goodness-of-fit test rendered was significant, indicating poor fit, or a substantial difference from the predicted model  $\chi^2(519) = 653.284, p < .001$ . The pattern matrix, a subtest of the overall analysis, also failed to converge after 25 iterations, likely indicating a generally poor fit and lack of model stability. Furthermore, the assumption that factors were intercorrelated, making Promax (oblique) rotation ideal, was unsupported by the data, showing only moderate correlations, at best, between 9 extracted factors (Yong and Pearce, 2013).

Given these results, and the exploratory nature of the investigation, a second factor analysis was conducted. This time, the generalized least squares extraction method was utilized, which balances out variables of high and low uniqueness, coupled with orthogonal Varimax rotation, which is the most commonly utilized (Williams et al., 2010; Yong and Pearce, 2013). These selections produced an identical result in KMO of .863 and Bartlett's test of adequacy  $\chi^2(1128) = 4034.870, p < .001$ , again indicating suitability for factor analysis. Again, Kaiser's criterion produced 22 factors with eigenvalues greater than 1 that accounted for 90.134% of the variance. Ultimately, however, the rotation matrix converged after seven iterations and produced a nine-factor solution (Yong and Pearce, 2013). Of these, judging by item factor loadings and

variance accounted for, only six were retained, which accounted for 60.736% of the variance. This setup did not produce a goodness-of-fit test.

Contrary to the oblique rotation, the orthogonal rotation produced stronger factor loadings, overall, and changed the distribution of items, although the delineation of factors and percentages of variance accounted for remained stable between the two methods. Interestingly, the number of negatively loaded items onto individual factors reduced substantially, likely indicating a better fit for the data. There was no a priori cutoff score for factor loading identified in this exploratory investigation. Although, generally having several variables with scores above .320, or ideally, over .400, is preferred with higher levels being even better (Yeong and Pearce, 2013). Only factor six did not meet this criterion, with two relatively weakly loaded items (items TA:10 = .338 and T4:3 = .360) retained on this factor. Again, the problematic TU:2 item, which produced poor CITC numbers, was the weakest of all variables, loading onto the fourth factor with a statistic of 0.54.

A parallel analysis utilizing the bootstrapping method, powered by R software, developed by Patil and colleagues (2017), was utilized to double check the number of factors to retain. The computer-generated model allows for comparison of rendered eigenvalues to predicted eigenvalues which aids in the retention of factors as when the predicted eigenvalue exceeds the actual, that demarcates the end of useful factors to retain (Patil et al., 2017). In this case, the number of factors to retain, as determined by the model, was far in excess of what were retained using Kaiser's Criterion (Yong and Pearce, 2013). Ultimately, this software confirmed the use of Kaiser's Criterion for this study as a more conservative approach, and one that fits the data better. Indeed, the likely number of factors to retain based on the Patil and colleagues (2017) software would have been more than what was generated by the SPSS model.

## EXPLICIT BIAS SCALE FOR LAW ENFORCEMENT

The first factor, the largest of the model, contained 19 of the 41 items and rendered loading statistics from .180 (item T4:4) to .890 (item TA:3). Most of these items came from the first and third themes of the measure, which were the Work Ethic and Responsibility for Outcomes and Denial of Continuing Discrimination themes. This factor was dubbed the “Denial” factor due to the incredibly strong loadings of items from this theme onto the factor. The second factor was named “Attribution” due to most of the attribution/subtle racism falling on this factor. The strongest loading was item TA:7, which rendered a loading statistic of .794, with the weakest being TA:5 at .350. These questions tend to ascribe certain traits to certain races or ethnicities and describe broad attributional components. Consequently, some intercultural sensitivity items (TI:1 and TI:4) were also loaded onto this factor, and a smattering of items from Theme 1 and Theme 2.

The third factor was labeled “Demands” due to its four inhabitants coming from the second theme, which addressed demands. The strongest loading was T2:4 at .896 with the weakest being T2:2 at .458. Interestingly, the two strongest loading questions, T2:4 and T2:3, deal with leaders of racial or ethnic groups pushing for change too fast, while the weaker loading items (T2:1 and T2:2) address policies of discrimination. The fourth factor was named “Violence” as two out of its three best loaders deal with racial or ethnic violence. The strongest loader was T3:4 at .944, followed by T3:5 at .878, with the weakest being the problematic TU:2 at .054.

The final two factors, five and six, only had two inhabitants on each factor. Factor five was named “Intercultural” since the two items were both from the intercultural sensitivity theme. The strongest loading was TI:3 at .904 and the weakest was TI:2 at .898. The sixth factor only had two items that had relatively weak factor loadings. These items, T4:3 and TA:10, were

representative of colorblindness in decision making processes, such as law enforcement investigations, and the loadings were weak at .360 and .338, respectively. This factor was named “Colorblindness.”

Overall, the factor analysis provided insight into the construction of the measure and the content of the questions, with a few exceptions. The denial theme was the largest and accounted for most of the variance within the model, with attribution coming in at a distant second. The denial theme in the original SRS and the EBLEO had the most items so this finding is unsurprising but the strong loadings of different items on differential factors paints a more complicated picture of symbolic racism and how things such as subtle racism/attribution, and intercultural sensitivity can be a part of the overall picture, especially given the robust correlations and findings of the hierarchical regression.

Importantly, the significantly better loadings and model statistics, although far from perfect, tended to disconfirm the a priori assumption that factors would be intercorrelated, necessitating a specific type of rotation for the factor analysis. This suggests that distinct and measurable factors underlie the EBLEO, and the heterogeneity of items incorporates more than simply symbolic racism. Furthermore, it tends to hint at a more complex solution to the original SRS, one that is likely more like four factors, with at least two of them being only one or two items and the second factor being relatively weak. It stands to reason, that these factors, whether on the traditional SRS or the EBLEO, could likely use greater item development and additional research to further purify the measures and consolidate differential findings, thus lending a higher degree of certainty to what is being measured.

What was clear from this exploratory analysis was, however, that much of what is contained within the EBLEO, like its parent the SRS, can be classified as “Denial” and

“Attribution,” broadly. Based on item content, and the construction of the SRS by Henry and Sears (2002), symbolic racism and elements of explicit bias, as measured here, include the two important concepts of the denial of continuing discrimination and the attribution of negative or problematic stereotypes or attributes to individuals from other races or ethnicities. When taken together with other results, such as the strong negative association of the EBLEO with the FFM trait of openness to experience and social dominance, the combination of beliefs and attitudes that may lead to explicit racial bias, tends to take shape. For example, denial of continuing discrimination and lower levels of openness to experience, or failure to account for new information, make logical sense.

### **Discussion**

In this study, a proof-of-concept design, a newly designed measure was subjected to rigorous analysis to determine its internal consistency and validity. Utilizing extant research and measures on the subject, the EBLEO was minted to capture modern or symbolic racism, or explicit racial bias and contemporary prejudicial attitudes (Sears and Henry, 2003). Borrowing heavily from the Symbolic Racism Scale (SRS), designed by Henry and Sears (2002), which borrowed well-validated themes from other scales such as the Modern Racism Scale of McConahay (1986), the EBLEO represented a leap forward in the conceptualization and measurement of modern forms of explicit racial bias.

In broad terms, the measure performed exceptionally well for a proof-of-concept measure. The measure rendered an overall Cronbach’s alpha of .942, exceeding other measures in the battery and landing far above the convention of .7 identified by Hughes (2009). Individual

samples still had items with CITC statistics in the negative range and the CJ sample had a Cronbach's alpha below the others, indicating variable performance across samples. Once all the samples and responses were combined, the CITC scores tended to level out and produced positive, albeit somewhat weak, statistics with no CITC scores in the negative range evidencing good overall performance with diverse samples.

Item removal decisions were minimal and based on substantial poor performance of the items. This decision was taken due to this being the first iteration of the measure, leaving room to reword and restructure items in the future so as not to lose the importance of the concept that they represent. Generally speaking, an item needed to perform poorly in all three independent samples to warrant removal at this early phase of the investigation. This criterion was not a priori and was based on the overall performance of the measure across these distinct samples. Even without item removal, the EBLEO performed quite well across samples, far exceeding the Hughes (2009) criteria. This ad hoc method bore fruit in the Combined sample, where the measure produced all positive CITC statistics and item removal would have resulted in only small gains to the overall Cronbach's alpha, which was already commendable.

The EBLEO performed as predicted when scrutinized for convergent and divergent validity. One caveat being research listed in the introduction section provided ample evidence for convergent validity but did little to identify discriminant validity aside from moderate correlations between measures. Overall, symbolic racism is related to multiple concepts making discriminant validity difficult to establish, especially in this investigation. These caveats notwithstanding, the EBLEO performed as expected, noting an extremely high and positive correlation with the SRS, moderate positive correlation with the SDS as described by Van Hiel and Mervielde (2005), and variable correlations with personality traits such as agreeableness and

openness to experience in the expected directions as identified by Silvestri and Richardson (2001) and Grigg and Manderson (2015). Variable associations, often weak and sometimes not significant, with Dark Triad and social desirability (SD) further evidenced discriminant validity for the EBLEO.

The experimental items of the EBLEO did quite well, overall, within the context of this study. Some, like T1:6, or the 6<sup>th</sup> item in the 1<sup>st</sup> theme, outperformed other items in the category, including those original items from the SRS. Others, such as its neighbor T1:7, far underperformed other items in the theme, although still rendering acceptable CITC statistics. This too is unsurprising given what the CITC statistic measures, which is how well the item correlates with other items on the measure which, in a diverse measure, is only part of the equation (Zijlmans et al., 2019). As Burisch (1984) noted, the face validity of the question and the perceived utility must be accounted for, and this is much more difficult in a novel measure which is an amalgamation of several distinct themes and concepts. In the case of a question like T1:7, the lack of an alternately worded yet similarly themed and constructed sibling question prevented the elimination of the lesser performing one, while still maintaining fidelity to the concept.

Interestingly, questions within the same theme that, ideally, measured a roughly similar concept, sometimes loaded onto different factors in the EFA, which adds yet another layer of complexity to the investigation. Keeping with the same example of items T1:1 and 2, it would appear that they are not as close, thematically, as they initially seem. Following the Burisch (1984) guidelines, this is nominally true. They both exist under the theme of Work Ethic and Responsibility for Outcomes, while the questions actually ask about the commission of crimes and the unfair targeting by law enforcement, respectively. Add to that, some separations of

closely related items could be attributable to one being a reverse coded item that, as Williams and colleagues (2010) noted, may commonly load onto different factors simply based on their construction.

An interesting finding in this measure was the CITC statistics rendered by the additional factors of Attribution/Subtle Racism and Intercultural Sensitivity. Overall, the Attribution/Subtle Racism Theme tended to render better, albeit still moderate CITC statistics, indicating a better fit with the majority of the measure, sed contra, the Intercultural items did not and rendered relatively weak CITC statistics (Zijlmans et al., 2019). Some of this can be explained by sheer numbers, with the Attribution theme retaining nearly all 10 items and the Intercultural theme only having some five, which undoubtedly affects the balance and CITC statistics (Zijlmans et al., 2019). Factor analysis provided additional insights into this quandary, however, with intercultural items being roughly evenly spread across four factors and attribution items nestled neatly on the second factor. This distinction can likely account for errant or seemingly suboptimal CITC statistics.

In the battery of original SRS questions that were subsequently modified for the EBLEO, only 1 item had to be removed. This item was T4:7, or the 7<sup>th</sup> item from the 4<sup>th</sup> theme. This item asked about certain racial or ethnic groups receiving more pay than other groups for the same work. Seemingly, the modifications made to the items to account for greater breadth of groups given the diversity of the US, did not have a discernible effect on the items themselves, although direct comparisons were not made in this investigation. It should also be noted that the EBLEO, in its current beta iteration, had 48 initial items, and 41 final items compared to the much more streamlined SRS with 8 items, which could partially account for the larger Cronbach's alpha of

the EBLEO compared to the SRS and repetition allowing for greater flexibility in selection of well-performing items compared to the original (Zijlmans et al., 2019).

The performance of the EBLEO versus the SRS was not directly measured other than via correlations and Cronbach's alpha measurements. In nearly all of these metrics, the EBLEO generally outperformed the SRS. This could be a result from a number of factors including, as mentioned above, differences in item numbers as longer measures generally perform better (Zijlmans et al., 2019). Likewise, the shifting power dynamics caused by population movements such as migration, and broad demographic changes tend to undermine the traditional black versus white dichotomy that the SRS was designed to measure (Nelson et al., 2018). Indeed, the SRS only mentions racial or ethnic groups other than Black as a form of comparison, rather than a contemporary potential target for explicit bias themselves (Henry and Sears, 2002). The EBLEO, on the other hand, allows the participant the flexibility to choose which racial or ethnic groups fit within the schema, or theme of the question. Consequently, a participant could conceivably identify several racial or ethnic groups that they believe are oppressed in different ways or otherwise the beneficiaries of preferential treatment.

Furthermore, the embedded Attribution/Subtle Racism theme questions tend to bridge the gap between explicit and more tacit, yet still problematic areas of racial bias (Yoo et al., 2010). An example of this being the microaggression, which according to Sue and colleagues (2007) constitutes a form of verbal, behavioral, or environmental denigration. Lilienfeld (2017) noted that such areas of subtle racism or attributional bias are difficult to define and, in some respects, lack sufficient evidence for viable implementation. However, in this investigation, it was found that questions in this category performed, in many cases, as well as other more traditional explicit racial bias questions yet loaded onto a separate factor. This would suggest that, although

Lilienfeld's (2017) critiques may be valid in some respects, there seem to be commonalities between individuals who endorse higher levels of traditional symbolic racism and those endorsing higher levels of subtle bias. This investigation has added weight to the research of Yoo and colleagues (2010) and suggests similarities between the two expressions. This was furthered by factor analysis, evidencing some of the items loading quite strongly onto the first factor and others loading strongly onto the fourth factor, indicating for the first factor items, that they are indeed measuring a similar construct to many EBLEO items, namely denial.

The Intercultural Sensitivity items of the EBLEO did not perform as well as any of the other items in the measure. The highest CITC recorded for these items was TI:1, or the first item of the scale, with a CITC of .435, generally indicating a poor fit with the rest of the items in the measure (Zijlmans et al., 2019). This was largely supported by factor analysis which showed two Intercultural items loading quite strongly onto the fifth factor but with the remaining items weakly spread about the other factors in no discernible order. This would seemingly indicate a sprawling breadth of underlying constructs being measured that is, basically, relatively poorly conceptualized and captured by the items, or the theme more broadly. Interestingly, Nadeem and colleagues (2019) identified several personality traits, including high levels of conscientiousness, that are associated with elevated levels of intercultural sensitivity so these questions may be highly variable based on personality characteristics, or at least more so than other items, leading to a diverse, and occasionally converse score on the EBLEO.

The largely high and significant positive correlations with political orientation, although predicted, add an interesting dynamic to the utility of this measure. Even within the regression, political ideology accounts for a substantial proportion of variance within the measure, as did the SDS, which had only moderate association with the EBLEO. As noted earlier, law enforcement

as a group tend to skew conservative and, indeed, significant differences in EBLEO scores and other measures were noted in this study between law enforcement and civilian populations (Morris and LeCount, 2020; Ba et al., 2022). Although left-wing authoritarianism is a subject of ongoing and burgeoning research efforts, such effects were not noted in this analysis as higher scores on EBLEO, SRS, and SDS measures were predominantly associated with more right-leaning respondents (Manson, 2020; Costello et al., 2022).

As described by Ba and associates (2022) conservatives tend to make up the bulk of law enforcement overall and, thus, sensitivity of this measure to political orientation must be monitored so as not to unduly burden or remove otherwise qualified applicants on a single variable. The relationship between political ideology and support for law enforcement has become a politically charged issue, specifically regarding use of force and similar enforcement practices, with conservatives and liberals differing starkly on some issues (Navarro and Hansen, 2023). However, a direct link between political ideology and malfeasance of officers has not been established as the distinction often involves wider disputes over policy, punitive actions or inactions, and future directions, reflecting a wider gulf in beliefs about the role of law enforcement in society (Navarro and Hansen, 2023). Consequently, political ideology, the strong link to explicit racial attitudes notwithstanding, should be understood within the context of broader policy as opposed to a predictor of problematic behavior.

The impact of social desirability, or a “faking good” style of answering which affects accuracy via method variance bias, significantly predicted scores on the EBLEO (Loo and Thorpe, 2000). Karimi and Meyer (2019), as noted above, found that method variance bias can account for up 18% of variance in a study such as this. Given the substantial amount of media attention and the likelihood of perceived pressure to render a socially desirable answer, even on

an anonymous survey, cannot be ruled out with any degree of certainty. Indeed, in this investigation, social desirability was more highly correlated with conservative values than with liberal, likely denoting a perceived pressure from conservative respondents to mask their true feelings and underreport the nature of their explicit bias endorsements. The ultimate result is to artificially deflate these results in certain populations and social desirability is a key determinant of both validity and accuracy of the results (Loo and Thorpe, 2000).

The influence of personality traits on the EBLEO was only partially supported by the gathered data. In the regression, only openness to experience possessed predictive abilities within the final two steps of the model. Openness to experience has received some, albeit limited attention in the research related to its association with right-wing authoritarianism and racial bias. Indeed, Onraet and colleagues (2011) noted that although openness was connected to racist attitudes and right-wing authoritarianism, it should be understood as a smaller part of a larger schema, importantly, noting a willingness to engage in these practices, or an explicit cognitive component. This cognitive component, or the desire to engage in behavior based on problematic beliefs, is not what the EBLEO was designed to measure. In this way, openness, or lack thereof specifically, can be understood as a precondition for explicit racial or symbolic racial bias, not a direct precursor (Onraet et al., 2011).

Additionally, the findings of Mekawi and associates (2017), add some degree of specificity to the connection between racial bias and openness to experience. They identified that lower levels of openness were associated with unawareness of racial privilege, less perspective taking, but higher degrees of empathy and concern. Within this bifurcated path, the opposite end of the spectrum included unawareness of blatant discrimination and institutional discrimination, which was more commonly found in those of lower agreeableness (Mekawi et al., 2017).

Although the EBLEO contains elements of both paths, it may be that openness is more associated with subtle/attributional racism or intercultural sensitivity as opposed to the more blatant forms found within the measure. However, EFA results would suggest this may also be evident in denial of continuing discrimination. Item level comparisons would be necessary to further investigate this connection.

The significant amount of shared variance between the EBLEO and the SDS was not predicted but it adds additional support to the measure itself. It should be noted that the SDS has been found to measure several distinct groups of social dominance such as those about the position of women in society, treatment of people of different ages, and additional categories of race and religion (Pratto et al., 2012). This likely accounts for the only moderate correlation between SRS and SDS, including the EBLEO, given social dominance, as a construct, is multifaceted and dependent upon broader social context (e.g., an influx of Catholics into a largely Protestant area) which can add a different dimension to the constructs being measured (Pratto et al., 2012). In this investigation it was truly the racial egalitarianism, or lack thereof, that was desired for comparison with the EBLEO, but that concept is virtually inseparable from other forms. This was seemingly borne out in the results as the SDS accounted for significant amounts of variance within the EBLEO regression matrix, but the correlation was only moderate, showing an imperfect linear relationship which was predicted (Pratto et al., 2012).

### **Limitations**

As noted in the above parts of the document, sample size for the factor analysis was suspect. Although the final sample size of 135 participants was well within guidelines for the

regression, the factor analysis remains, by most above listed reputable sources, underpowered. This could have ramifications in how factors are extracted and how items are loaded. Ergo, the exploratory factor analysis should be viewed with caution and, as the name implies, an exploratory measure only. This needs additional confirmatory factor analysis and structural equation modeling to identify further connections and support the assertions listed.

Inter-item correlations in this measure may have reduced overall variance and hindered the performance of some items and the measure itself, based on the construction of the measure and presentation of the items. Weijters and colleagues (2009) described the concepts of item proximity effect and reverse item bias which affects the answering of an item based on the conceptual framework of other items in close proximity and the cognition, via retrieval ability, of the respondent. The reverse item bias tends to result in lower internal consistencies for the items (Cronbach's alpha/possibly CITC) and differentially affects factor loadings (Weijters et al., 2009). In the case of the EBLEO, the measure was constructed on a theme basis, with each item measuring something closely related to its neighbor, and the use of reverse coded items was somewhat haphazard. In later investigations, the random presentation of items would likely increase the utility of each item statistic and allow for more parsimonious investigation and removal of problematic items (Weijters et al., 2009). This would also likely increase the variance and, thus, the utility of evaluations of the measure.

Likewise, the use of Cronbach's alpha in this study could potentially be problematic. Park and associates (2022) identified limitations of Cronbach's alpha when evaluating internal consistency of a relatively short measure with differential item correlations and factor loadings. These researchers suggested the use of the McDonald's Omega (McDonald, 1999), which is a distinct measure of internal consistency that is best utilized when items seem to load onto

differing constructs and with more variable correlations (Park et al., 2022). The variable association between items and the identified factors indicates that Cronbach's alpha may not provide the strongest evidence for internal consistency, coupled with the randomization of items in future research studies (Weijters et al., 2009).

Although much of the novel items were based on research and logical assumptions gathered from research, they were designed using the intuitive Burisch (1984) framework. The drawback to this type of deductive reasoning is that it tends to lack a strict empirical basis, relying heavily on human ingenuity and subject matter expertise, which can allow the pollution of the measure by poorly worded, ill constructed, or otherwise problematic items to enter into the measure itself. Although, as Weijters and colleagues (2009) noted, the length of this measure likely increases the internal consistency; should the measure be parsed down to something more akin to the SRS's eight items, a poorly performing item would have a substantial impact out of all proportion to its actual effect. In the event, this is rather unlikely given the broad range of experiences covered by the EBLEO, but the ongoing maintenance and replacement of items should be a consistent process throughout the measure's lifespan.

Along that same vein, a caveat is warranted regarding the experimental items used in the EBLEO. These items were designed using the Burisch (1984) guidelines of deductive reasoning and research. One of the guideposts for the deductive reasoning in this example is the salience of a topic. This could result in important topics being missed, new topics emerging every few years, or other topics being relegated to obsolescence as the situation changes. Charlesworth and Banaji (2020) identified drastic changes in explicit attitudes over the past two decades and it can be said without question that the salience of topics that seem to represent explicit racial bias have changed substantially since the original Sears and Henry (2002) investigation. The EBLEO,

consequently, represents a snapshot of explicit racial bias in the population at the present moment which should be assumed to be a fluid and dynamic entity as opposed to a more concrete and static subject.

The exploratory factor analysis conducted in this study generally supports this notion. The factor structure and underlying constructs were named according to best practice, but this is hardly a straightforward issue (Williams et al., 2010; Yong and Pearce, 2013). For instance, the first factor was called “Denial” due to the large number of items from that theme that loaded rather well onto the factor. However, they were far from the *only* items to load strongly onto that factor. In fact, item TA:3 or the third item from the Attribution theme, rendered the strongest factor loading onto this factor at .890. This item asked about differential treatment of racial or ethnic groups by law enforcement *and* was reverse coded. As noted by Williams and associates (2010) reverse coded items routinely load onto alternate factors than they were designed to. It is also possible this item, an experimental item, was incorrectly placed in the Attribution/Subtle Racism theme when it should have been included under Denial of Continuing Discrimination, in which case its factor loading is correct.

In this investigation, the choice to retain 6 factors that accounted for about 60% of the variance was taken based on conceptual fit and the liberal contemporary convention but was a stark departure from the more conservative Hair and colleagues (1995) recommendation of 95% of variance accounted for (Williams et al., 2010). This decision served as a middle road, based on the possibility of being even more liberal or conservative, with a more liberal approach reducing it to possibly 4 factors and the more conservative allowing for the retention of all 11. Conceptual fit aside, this model leaves much variance unaccounted for and could, potentially, oversimplify an already complex subject and measure. Importantly, the low power of this model

resulting from small sample size, may also obscure true results, leading to a significant caveat in front of any interpretation.

The choices made for extraction and rotation were also possibly a source of error. As noted, the Maximum Likelihood and Generalized Least Squares extraction method was utilized which has the effect of aiding in generalizing to a larger population, which, given the constricted sample size was deemed most apt (Mabel and Olayemi, 2020). However, such extraction methods as Principal Component Analysis (not truly factor analysis) or Principal Axis tend to be the tried-and-true methods of extraction for most exploratory factor analysis (Yeong and Pearce, 2013). Furthermore, the choice of an oblique rotation as opposed to the more conventional orthogonal rotation was taken based on the assumed intercorrelation of factors and was not supported leading a second factor analysis (Williams et al., 2010; Yong and Pearce, 2013). Overall, the use of orthogonal rotation was deemed more appropriate and led to a different, and more robust outcome. Without a goodness-of-fit test on the orthogonal rotation and confirmatory factor analysis combined structural equation modeling to identify the specific relationship between factors, these choices will remain somewhat controversial.

The use of mean imputation serves as an important limitation. Although nominally allowing for the necessary power to run the regression, the use of mean imputation nears the 10% mark set by Shrive and colleagues (2006). The reduction in variance attributable to human differences may be considerably shrouded by this method and this variance can lead to important changes. Furthermore, although mean imputation is acceptable and is often the default method of dealing with missing data, multiple imputation tends to have more robust effects and aids in preserving important potential data points with greater accuracy (Shrive et al., 2006). In this

study, noncompletion was likely a result of several factors in the overall length of the study itself, which took nearly an hour to complete.

The results of the Dark Triad measure were far below expectations in the realm of Cronbach's alpha. The reported Cronbach's scores by Jones and Paulhus (2017) ranged between .71 and .80 in their investigation of the measure. In this study, the Cronbach's scores were significantly lower, hovering in the .65 range, with only Machiavellianism breaking into the acceptable .70 range. This pattern was noted in all three samples leading to a problematic performance in the Combined sample. The correlations between these traits and other measures were highly variable and didn't always follow the pattern that was expected and noted by Jones and Paulhus (2017) and outlined in the hypotheses. However, use of mean imputation and poor measure performance may have artificially masked the impact of these measures and their associated constructs. A larger sample size may remedy this but, for the purposes of this investigation, these variably significantly associated with EBLEO scores, but they did not account for significant amounts of variance in the regression model.

Likewise, the SD scale underperformed in some samples of this study, rendering Cronbach's alpha of .672 in the Combined sample. This was actually higher than the reported Cronbach's alpha by Loo and Thorpe (2000) of .62. At first glance this appears suboptimal and, indeed, using standard conventions of Cronbach's alpha it is (Hughes, 2009). However, this measure is diverse and is designed to be a control variable as opposed to an encompassing measure relying on high internal consistency, thus partially negating the need or utility for a high Cronbach's alpha (Loo and Thorpe, 2000). For example, Van der Heijden and colleagues (2010) found highly variable Cronbach's alpha scores for the validity scales on the MMPI-2-RF, yet their utility has been broadly supported for use in detecting malingering in diverse set of

samples. So too should the SD scale results be viewed as highly individualized and face valid for the purpose of controlling for artificially inflated/deflated or deceptive response patterns (Van der Heijden et al., 2010).

The samples in this study were also relatively homogenous. All of the samples were overwhelmingly composed of people who identified as white, and college educated individuals. Different samples showed important differences in political orientation and age, which likely contributed to significant group differences in the Combined sample. For example, the CJ sample was mostly older and more conservative, and overwhelmingly male, while the SONA sample was younger, more liberal, and largely female. Although this created a relatively diverse sample in terms of these limited demographic markers, the fact remains these participants were all from the same university in the same geographical location, with relatively homogenous data points within samples. This did not allow the diversity necessary to measure the performance of the newly worded items to account for explicit racial attitudes towards other races or ethnicities and may only reflect the SRS-style white versus black dichotomy. Furthermore, samples of different races were too small to gather any meaningful information in terms of mean differences.

The law enforcement officers gathered in this study, likewise, suffered from a rather profound homogeneity. None of the officers endorsed federal or state law enforcement associations and their years of service were, though various, relatively high with an average of 11.083 years of service ranging from 6 to 24. Challacombe and colleagues (2019) noted significant group differences in law enforcement officers in personality traits associated with years of service, opining that stress and other factors that seem to underlie trait differences. It could be understood, then, that more junior officers may produce different results on personality, which is significantly associated with elements of EBLEO performance (Challacombe et al.,

2019). This important distinction could artificially alter the results of this preliminary EBLEO study and, importantly, should be considered moving forward as years of service may be an important predictor of EBLEO performance.

The final limitation in this study involves the choice to cut very few items. This was due, partially, to the findings of Weijters and colleagues (2009) that longer measures tend to perform better in terms of internal consistency, and also due to the need to expand the sample size before more extensive modifications can be made. Many of these items were experimental and others were gathered from other measures that were perceived to be important to the concept. Although many items were performing in a suboptimal fashion, changes to the item structure and randomization of the items combined with a larger and more inclusive sample may provide slightly different results. As such, these bad items will be reformatted or re-worded and included in the next iteration of the measure to evaluate their effectiveness.

### **Conclusion and Future Directions**

The implications for this measure cannot be understated. As Charlesworth and Banaji (2020) noted, the reduction in explicit racial bias attitudes in the past decade of some 37% towards neutrality, coupled with the relative stability of implicit bias, means the measurement of explicit bias is a much better thermometer for real-time data on racial predilections in individuals and can be measured over time, with regression toward neutrality expected as situations change. This makes the explicit racial bias concept a fruitful and important measure of public racial attitudes at any given time, especially within the law enforcement community.

As previously stated, the EBLEO represents a substantial leap forward in the conceptualization and study of symbolic explicit racial bias. This study, despite its noted shortcomings, provided important data points and opening questions for continued research and investigation into this measure and symbolic explicit racial bias as a concept. This investigation was merely a proof-of-concept design, purposefully constructed to add to the extant literature and open the possibility of quantitatively measuring an important concept that has drawn much attention and debate of late.

The EBLEO performed exceptionally well in this initial study, far in excess of the Hughes (2009) guidelines and generally outperforming its base measure the SRS. This is likely owing to several factors, discussed in prior paragraphs. With that said, this measure needs additional work. It is a goal, overall, to reduce this measure in length to increase the utility and accessibility for law enforcement pre-employment screenings. Although at its current length the EBLEO is not unduly burdensome, when taken in the context of entire pre-employment screening including the 335 item MMPI-3 or 338 item MMPI-2-RF and many others, brevity can equate to utility (Van der Heijden et al., 2010). This, however, cannot come at the expense of internal consistency and breadth of concepts measures. These can be competing and, occasionally, mutually exclusive goals so pruning of this measure must be done with care in the future.

The next logical step for the development of the EBLEO includes the comparison of this measure with other tools in standard law enforcement pre-employment arsenal. For instance, the MMPI-2-RF or the newer MMPI-3 is one of the most utilized tools in the selection of law enforcement candidates and has robust connections between scales and problem performance, with overall excellent predictive validity in this sample (Tarescavage et al., 2014). Given the

substantial connections between the EBLEO and personality, including social dominance, the comparison of the EBLEO to the MMPI-2-RF/3 scales would add significant value and applicability to the measure.

For instance, certain scales on the MMPI-2-RF such as family problems (FML), RC3 (cynicism), and others map onto personality types of aloof/introverted and cold-hearted using the interpersonal circumplex model of personality, which has robust associations with the five-factor model of personality, which was utilized in this study and found to be a predictor of higher scores on the EBLEO (Ayearst et al., 2013). Scales such as RC3, in turn, have empirically demonstrated generally poorer outcomes for LEOs in terms of job performance and longevity (Tarescavage et al., 2014). Consequently, the natural evolution of the EBLEO will involve comparison with measures such as this.

In terms of explicit bias as a construct, especially versus more implicit forms, involves the conscious awareness of and, in general, the ability to communicate the belief (Daumeyer et al., 2019). In the area of awareness and communicability, the EBLEO does an excellent job of capturing distinct elements of explicit racial bias, as evidenced by convergent validity and internal consistency measurements. However, the EBLEO does seek to capture more implicit forms of bias that are represented by the variably performing Attribution/Subtle Racism theme. From a factor standpoint, some of these items were associated with Denial factor but others were better represented on the Attribution factor. Likewise, CITC statistics tended to be variable, noting some items associated well with the rest of the scale while others much less so. This leaves open the question about what is being measured by this section of the scale and theme, more specifically.

The association between implicit and explicit measures in gauging these constructs and, more importantly, identifying their connection if one exists, remains unclear. Hofmann and colleagues (2005) noted that a connection did seem to exist in the form of a correlation between the two but was relatively small and appeared to be moderated by things like spontaneity. Nosek (2007) reported a range of correlations between the two from near zero to very strong, while his own prior research had noted an overall correlation between the two of  $r = .36$ , though significant still relatively weak (Nosek, 2007). More recent work by Santee and associates (2022) did not find a significant correlation between the pair. Again, this leaves the connection unclear, at best, which would need additional investigation to mollify the conundrum.

These contradictory and inconsistent findings notwithstanding, the potential connection and possible moderating effects of things like social dominance has not been investigated. Given the substantial amount of research dedicated to the effect of implicit bias on law enforcement behavior, the comparison of the EBLEO and measures of implicit bias must be assessed. This becomes more pressing with the inclusion of items meant to evaluate more subtle forms of discrimination that may have a stronger connection to implicit measures as conscious awareness becomes less of an issue as it seems more like preferences rather than explicit endorsements of racial attitudes (Daumeyer et al., 2019). Furthermore, it may serve as a form of convergent validity for that theme, even if the overall measure is not significantly correlated. The EBLEO is well placed to spearhead the investigation between explicit and implicit measures.

As mentioned before, another step that is necessary is to better understand the association between political ideology, personality, and scores on the EBLEO (or explicit racial bias). The connection between political ideology, personality, and prejudice is a well-documented phenomenon, that generally affects right-wing voters (Capara et al., 1999; Cooper et al., 2013;

Carney and Enos, 2017). However, the exact mechanism of action is still unclear at present. Carney and Enos (2017) noted the connection between prejudicial beliefs and politics included a rejection of just world politics, which approximates to a theme of social dominance, was an important facet of the connection. Given the research listed above, and the results of this investigation, specifically the utility of openness, a mediation analysis should likely be undertaken to look at the amount of openness that is associated with right-wing politics and EBLEO results to evaluate the specific effect and provide support for the mechanism of action. By mathematically adjusting levels of openness, with political orientation and EBLEO results to evaluate the effect.

Given the results of this preliminary investigation, the next logical step is to gather a larger law enforcement sample, and general population sample, resulting from the significant differences in group means. The law enforcement sample ( $n = 18$ ) evidenced higher scores on many primary measures compared to their non-law enforcement counterparts. This generally indicates a substantial difference between these populations and, noting the target population being law enforcement, requires a more comprehensive investigation. Additionally, a broader and more inclusive law enforcement sample is desired, as this sample was primarily male, white, conservative, and rural. The inclusion of a larger number of officers of color, urban, liberal, and female officers is needed to begin parsing out the specificities of what the measure captures and categorical identifiers that may meaningfully impact scores. Equally as important, measure and item performance across a diverse sample, including factor analysis, may result in differing understandings of the measure and the concepts underlying the measure.

Along that same vein, the increase in participants to an acceptable level for factor analysis is an ideal future direction. This is especially important as the measure is further

perfected and factors are solidified. In this proof-of-concept study, it was theorized that the factors were intercorrelated, which would indicate a heterogeneity of the measure and, by extension, the concept of explicit racial bias. The true evaluation of this would come in the form of confirmatory factor analysis and structural equation modeling. Although research on symbolic/modern/new explicit racial bias has occurred since the heady days of McConahay and colleagues (1980), the EBLEO is substantial advancement in the study of this concept as it blends additional concepts and significantly updates the questions for different races/ethnicities and more contemporary issues and conceptualizations of systemic racism. This evolution demands an entirely new series of investigations, undertaken with the same vigor and creativity as different iterations of common assessments such as the MMPI when they are updated.

Perhaps one of the more salient issues to emerge in this investigation was the need for greater assessment of method variance bias or socially desirable answering. Although alluded to in the paragraphs above as potentially accounting for significant amounts of variance and altering the results, the ultimate result is that social desirability was good predictor (Karimi and Meyer, 2019). Despite concerns for measure length, to increase the utility and applicability of the measure, it must have embedded validity items within it. Several of the items in the SD scale resemble, both in construction and content, the validity items on the MMPI-2-RF/3, specifically in the K and L scales, that could be easily added to the measure (Reynolds, 1982; Brown and Sellbom, 2020). These could even be duplicated and coded in opposite directions to allow for evaluation of answer consistency. The exact number and types should be evaluated further for inclusion in the measure which would likely not unduly lengthen it but add a degree of certainty to the results. As noted by Van der Heijden and colleagues (2010), the validity scales on the MMPI-2-RF are well validated and a necessary element of the interpretation of such a broad

measure. While many batteries provided to law enforcement officers include such measures as the MMPI-2-RF or the PAI, which have embedded validity scales, the inclusion of a separate measure of validity in the EBLEO would allow assessors another data point with which to determine cooperation in test-taking, deception, and content responsiveness on this measure, and for this unique and important issue (Van der Heijden et al., 2010; Tarescavage et al., 2014).

Although early and still categorized as a proof-of-concept design, this investigation provided excellent initial support for the continued development of the EBLEO, marking an important milestone in the application of explicit racial bias measures to law enforcement. Furthermore, this study represents the amalgamation of the sciences of psychology and criminal justice, building on important work and furthering the knowledge of interactions between personality, politics, and explicit racial bias. Far from a terminus, this study opens the possibility of further investigation and exciting new findings with the hope of providing for a more inclusive and equitable future for law enforcement and the general public which they serve. To protect and serve is not merely an aspirational assertion that rings hollow, but a firm declaration of values and strongly held ideals. Within this framework of honor, the EBLEO has an exciting future punctuated by possibilities of supporting our brave men and women on the front lines, silently serving in a crucial battle in the face of ever-changing situational dynamics.

## References

- Andrighetto, L., Trifiletti, E., Pasin, A., & Capozza, D. (2008). Predictive validity of the host community acculturation scale: The effects of social dominance orientation and the belief in biological determinism. *TPM-Testing, Psychometrics, Methodology in Applied Psychology, 15*(2), 91–107.
- Ayearst, L. E., Sellbom, M., Trobst, K. K., & Bagby, R. M. (2013). Evaluating the interpersonal content of the MMPI–2–RF interpersonal scales. *Journal of personality assessment, 95*(2), 187-196. <http://dx.doi.org/10.1080/00223891.2012.730085>
- Ba, B., Kaplan, J., Knox, D., Komisarchik, M., Mariman, R., Mummolo, J., Rivera, R., & Torres, M. (2022). Who are the Police? Descriptive Representation in the Coercive Arm of Government. Retrieved from:  
[https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwjf1Mm0quD6AhX9FlkFHVkLBRAQFnoECBUQAQ&url=https%3A%2F%2Fscholar.princeton.edu%2Fsites%2Fdefault%2Ffiles%2Fpolicing\\_rep.pdf&usq=AOvVaw3ZcKVApWq7NmJXYtLSoLUT](https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwjf1Mm0quD6AhX9FlkFHVkLBRAQFnoECBUQAQ&url=https%3A%2F%2Fscholar.princeton.edu%2Fsites%2Fdefault%2Ffiles%2Fpolicing_rep.pdf&usq=AOvVaw3ZcKVApWq7NmJXYtLSoLUT)
- Bäckström, M., & Björklund, F. (2007). Structural modeling of generalized prejudice: The role of social dominance, authoritarianism, and empathy. *Journal of Individual Differences, 28*(1), 10. <https://psycnet.apa.org/doi/10.1027/1614-0001.28.1.10>
- Bailey, R. K., Barker, C. H., & Grover, A. (2022). Confluence of law enforcement, mental health, and race. *Behavioral Sciences & the Law*. <https://doi.org/10.1002/bsl.2567>
- Balakrishnan, Anjana, "Asking the Right Questions: Insights into Assessing Intercultural Sensitivity" (2015). Electronic Thesis and Dissertation Repository. 2863.

- Blanton, H., LaCroix, J. M., & Webster, G. D. (Eds.). (2019). *Measurement in social psychology*. Routledge, Taylor & Francis Group.
- Brees, J., & Martinko, M. J. (2015). Judgments of responsibility versus accountability. *Journal of Leadership & Organizational Studies*, 22(4), 443-453.  
<https://doi.org/10.1177/1548051815603127>
- Brown, T.A., & Sellbom, M. (2020) The Utility of the MMPI–2–RF Validity Scales in Detecting Underreporting, *Journal of Personality Assessment*, 102:1, 66-74, DOI: 10.1080/00223891.2018.1539003
- Burisch, M. (1984). Approaches to personality inventory construction: a comparison of merits. *American Psychologist*, 39(3), 214. <https://doi.org/10.1037/0003-066X.39.3.214>
- California Assembly Bill 846. (2020). [Openstates.org](https://openstates.org).  
<https://openstates.org/ca/bills/20192020/AB846/>. Retrieved on 09/28/2022.
- California Legislative Information. (10/02/2020). AB 846 Public employment: public officers or employees declared by law to be peace officers. Retrieved from:  
[https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill\\_id=201920200AB846](https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201920200AB846).  
Retrieved on: 09/15/2022.
- Capara, G. V., Barbaranelli, C., & Zimbardo, P. G. (1999). Personality profiles and political parties. *Political Psychology*, 20(1), 175-197. <https://doi.org/10.1111/0162-895X.00141>
- Carney, R. K., & Enos, R. D. (2017). Conservatism and fairness in contemporary politics: Unpacking the psychological underpinnings of modern racism. In NYU CESS Experiments Conference.

- Challacombe, D. J., Ackerman, M., & Stones, A. (2019). Personality trait differences in law enforcement officers: The impact of career-related stress and lengths of service. *Policing: An International Journal*, 42(6), 1081-1096. DOI 10.1108/PIJPSM-01-2019-0004
- Chaney, C., & Robertson, R. V. (2013). Racism and police brutality in America. *Journal of African American Studies*, 17(4), 480-505. <http://doi.org/10.1007/s12111-013-9246-5>
- Charlesworth, T. E., & Banaji, M. R. (2019). Patterns of implicit and explicit attitudes: I. Long-term change and stability from 2007 to 2016. *Psychological science*, 30(2), 174-192. <https://doi.org/10.1177/0956797618813087>
- Chohlas-Wood, A., Nudell, J., Yao, K., Lin, Z., Nyarko, J., & Goel, S. (2021, July). Blind justice: Algorithmically masking race in charging decisions. In Proceedings of the 2021 AAAI/ACM Conference on AI, Ethics, and Society (pp. 35-45). <https://doi.org/10.1145/3461702.3462524>
- Cohen, J. (1992). Quantitative methods in psychology: A power primer. *Psychological bulletin*, 112(1), 155-159.
- Conway III, L. G., Houck, S. C., Gornick, L. J., & Repke, M. A. (2018). Finding the Loch Ness monster: Left-wing authoritarianism in the United States. *Political Psychology*, 39(5), 1049-1067.
- Cooper, C. A., Golden, L., & Socha, A. (2013). The big five personality factors and mass politics. *Journal of Applied Social Psychology*, 43(1), 68-82. <https://doi.org/10.1111/j.1559-1816.2012.00982.x>

Costello, T. H., Bowes, S. M., Stevens, S. T., Waldman, I. D., Tasimi, A., & Lilienfeld, S. O.

(2022). Clarifying the structure and nature of left-wing authoritarianism. *Journal of personality and social psychology*, *122*(1), 135.

Daumeyer, N. M., Onyeador, I. N., Brown, X., & Richeson, J. A. (2019). Consequences of

attributing discrimination to implicit vs. explicit bias. *Journal of Experimental Social Psychology*, *84*, 103812. <https://doi.org/10.1016/j.jesp.2019.04.010>

Ditonto, T. M., Lau, R. R., & Sears, D. O. (2013). AMPing racial attitudes: Comparing the

power of explicit and implicit racism measures in 2008. *Political Psychology*, *34*(4), 487-510. <http://doi.org/10.1111/pops.12013>

Faul, F., Erdfelder, E., Lang, A.-G., & Buchner, A. (2007). G\*Power 3: A flexible statistical

power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods*, *39*(2), 175–191. <https://doi.org/10.3758/BF03193146>

Furnham, A. (2017). The dark side of conscientiousness. *Psychology*, *8*(11), 1879-1893.

<https://doi.org/10.4236/psych.2017.811122>

Furnham, A., Richards, S., Rangel, L., & Jones, D. N. (2014). Measuring malevolence:

Quantitative issues surrounding the Dark Triad of personality. *Personality and individual differences*, *67*, 114-121. <https://doi.org/10.1016/j.paid.2014.02.001>

Gamblin, B. W., Winslow, M. P., Lindsay, B., Newsom, A. W., & Kehn, A. (2017). Comparing

in-person, Sona, and Mechanical Turk measurements of three prejudice-relevant constructs. *Current Psychology: A Journal for Diverse Perspectives on Diverse Psychological Issues*, *36*(2), 217–224. <https://doi.org/10.1007/s12144-015-9403-1>

- Grigg, K., & Manderson, L. (2015). Is there a relationship between psychopathic traits and racism? *Current Psychology: A Journal for Diverse Perspectives on Diverse Psychological Issues*, 34(4), 702–712. <https://doi.org/10.1007/s12144-014-9283-9>
- Ho, A. K., Sidanius, J., Pratto, F., Levin, S., Thomsen, L., Kteily, N., & Sheehy-Skeffington, J. (2012). Social dominance orientation: Revisiting the structure and function of a variable predicting social and political attitudes. *Personality and Social Psychology Bulletin*, 38(5), 583-606. doi:10.1177/0146167211432765
- Hofmann, W., Gawronski, B., Gschwendner, T., Le, H., & Schmitt, M. (2005). A meta-analysis on the correlation between the Implicit Association Test and explicit self-report measures. *Personality and social psychology bulletin*, 31(10), 1369-1385.
- Holden, C. J., Dennie, T., & Hicks, A. D. (2013). Assessing the reliability of the M5-120 on Amazon's Mechanical Turk. *Computers in Human Behavior*, 29(4), 1749-1754. <https://doi.org/10.1016/j.chb.2013.02.020>
- Holden, R. R., Fekken, G. C., & Jackson, D. N. (1985). Structured personality test item characteristics and validity. *Journal of Research in Personality*, 19(4), 386-394. [https://doi.org/10.1016/0092-6566\(85\)90007-8](https://doi.org/10.1016/0092-6566(85)90007-8)
- Huddy, L., Feldman, S., & Sen, P. (in press) Complexities in the measurement of explicit racial attitudes. In press. Krosnick, J.A., Stark, T. H & Scott, A.L. (Eds.). (forthcoming). *The Cambridge Handbook of Implicit Bias and Racism*. Cambridge, England: Cambridge University Press.
- Hughes, G. D. (2009). The Impact of Incorrect Responses to Reverse-Coded Survey Items. *Research in the Schools*, 16(2), 76.

- <http://proxy195.nclive.org/login?url=https://www.proquest.com/scholarly-journals/impact-incorrect-responses-reverse-coded-survey/docview/501861489/se-2>
- Jacobson, C. K. (1985). New Racism Scale. PsycTESTS. <https://doi.org/10.1037/t03870-000>
- Jones, D. N. (2013). Psychopathy and Machiavellianism predict differences in racially motivated attitudes and their affiliations. *Journal of Applied Social Psychology, 43*(Suppl 2), E367–E378. <https://doi.org/10.1111/jasp.12035>
- Jones, D. N., & Paulhus, D. L. (2014). Introducing the short dark triad (SD3) a brief measure of dark personality traits. *Assessment, 21*(1), 28-41. <http://doi.org/10.1177/1073191113514105>
- Jones, D. N., & Paulhus, D. L. (2014). Short Dark Triad [Database record]. Retrieved from PsycTESTS. doi: <https://dx.doi.org/10.1037/t34134-000>
- Kahn, K. B., & Martin, K. D. (2020). The social psychology of racially biased policing: Evidence-based policy responses. *Policy Insights from the Behavioral and Brain Sciences, 7*(2), 107–114. <https://doi.org/10.1177/2372732220943639>
- Karimi, L., & Meyer, D. (2019). An evaluation of common method variance-bias in psychology. *International Journal of Psychological Studies, 11*(3), 83-94. <https://doi.org/10.5539/ijps.v11n3p83>
- Kassim, S., Hasan, H., Mohd Ismon, A., & Muhammad Asri, F. (2013, April). Parameter estimation in factor analysis: Maximum likelihood versus principal component. In *AIP Conference Proceedings* (Vol. 1522, No. 1, pp. 1293-1299). American Institute of Physics. <https://doi.org/10.1063/1.4801279>

- Kaste, M. (2020, September 10). NYPD study: Implicit bias changes minds, not necessarily behavior. NPR. <https://www.npr.org/2020/09/10/909380525/nypd-study-implicit-bias-training-changes-minds-not-necessarily-behavior>
- Keh, H. T., & Sun, J. (2018). The differential effects of online peer review and expert review on service evaluations: The roles of confidence and information convergence. *Journal of Service Research, 21*(4), 474–489. <https://doi.org/10.1177/1094670518779456>
- Kim, H. Y. (2013). Statistical notes for clinical researchers: assessing normal distribution (2) using skewness and kurtosis. *Restorative dentistry & endodontics, 38*(1), 52-54. doi: <https://doi.org/10.5395%2Frde.2013.38.1.52>
- Kim, S. (2015). ppcor: an R package for a fast calculation to semi-partial correlation coefficients. *Communications for statistical applications and methods, 22*(6), 665. <http://doi.org/10.5351/CSAM.2015.22.6.665>
- Kugler, M. B., Cooper, J., & Nosek, B. A. (2010). Group-based dominance and opposition to equality correspond to different psychological motives. *Social Justice Research, 23*, 117–155. doi:10.1007/s11211-010-0112-5
- Kuppens T, Spears R. Negative Attitudes Towards Blacks Questionnaire. PsycTESTS. January 2014. doi:10.1037/t63146-000
- Lepore, L., & Brown, R. (1997). Prejudice Scale. PsycTESTS. <https://doi.org/10.1037/t01040-000>
- Lilienfeld, S. O. (2017). Microaggressions: Strong claims, inadequate evidence. *Perspectives on psychological science, 12*(1), 138-169. DOI: 10.1177/1745691616659391

- Lowmaster, S. E., & Morey, L. C. (2012). Predicting law enforcement officer job performance with the Personality Assessment Inventory. *Journal of personality assessment*, 94(3), 254-261. <https://doi.org/10.1080/00223891.2011.648295>
- Mabel, O. A., & Olayemi, O. S. (2020). A comparison of principal component analysis, maximum likelihood and the principal axis in factor analysis. *American Journal of Mathematics and Statistics*, 10(2), 44-54. DOI: 10.5923/j.ajms.20201002.03
- Malesky, A., Isenberg, A. N., & McCord, D. (2021). Personality characteristics of the successful liar. *Journal of Investigative Psychology and Offender Profiling*, 18(2), 142-154. <https://doi.org/10.1002/jip.1572>
- Manson J. H. (2020). Right-wing Authoritarianism, Left-wing Authoritarianism, and pandemic-mitigation authoritarianism. *Pers Individ Differences*, 167 (1) <http://doi.org/10.1016/j.paid.2020.110251>.
- Matsueda, R. L., & Drakulich, K. (2009). Perceptions of criminal injustice, symbolic racism, and racial politics. *The Annals of the American Academy of Political and Social Science*, 623(1), 163-178. <https://doi.org/10.1177/0002716208330500>
- McConahay, J. B., Hardee, B. B., & Batts, V. (1980). Modern Racism Scale. PsycTESTS. <https://doi.org/10.1037/t03873-000>
- Mekawi, Y., Bresin, K., & Hunter, C. D. (2017). Who is more likely to “not see race”? Individual differences in racial colorblindness. *Race and Social Problems*, 9, 207-217. <http://doi.org/10.1007/s12552-017-9211-3>

- Morris, R. C., & LeCount, R. J. (2020). The value of social control: Racial resentment, punitiveness, and white support for spending on law enforcement. *Sociological Perspectives*, 63(5), 697–718. <https://doi.org/10.1177/0731121419899387>
- Nadeem, P., & Haroon, Z. (2019). Personality traits, altruism and intercultural sensitivity among undergraduate students of individualistic and collectivistic cultures. *Journal of Research & Reviews in Social Sciences Pakistan*, 2(2), 389-413.
- Navarro, J. C., & Hansen, M. A. (2023). “Please don't be too nice”: the role of political ideology in the approval of police use of force. *Policing: An International Journal*, 46(5/6), 724-738. <http://dx.doi.org/10.1108/PIJPSM-03-2023-0035>
- Nelson, J. K., Hynes, M., Sharpe, S., Paradies, Y., & Dunn, K. (2018). Witnessing anti-white ‘racism’: White victimhood and ‘reverse racism’ in Australia. *Journal of Intercultural Studies*, 39(3), 339-358.
- Nimon, K. F., & Oswald, F. L. (2013). Understanding the results of multiple linear regression: Beyond standardized regression coefficients. *Organizational Research Methods*, 16(4), 650-674. <https://doi.org/10.1177/1094428113493929>
- Nosek, B. A. (2005). Moderators of the relationship between implicit and explicit evaluation. *Journal of Experimental Psychology: General*, 134(4), 565.
- Nosek, B. A. (2007). Implicit–explicit relations. *Current directions in psychological science*, 16(2), 65-69.
- Onraet, E., Van Hiel, A., Roets, A., & Cornelis, I. (2011). The closed mind: ‘Experience’ and ‘cognition’ aspects of openness to experience and need for closure as psychological bases

for right-wing attitudes. *European Journal of Personality*, 25(3), 184-197.

<http://doi.org/10.1002/per.775>

OpenAI. (2021). GPT-3.5 (Version 3.5) [Mobile application software]. Retrieved June 25, 2023, from <https://openai.com/>

Oswald, F. L., Mitchell, G., Blanton, H., Jaccard, J., & Tetlock, P. E. (2013). Predicting ethnic and racial discrimination: A meta-analysis of IAT criterion studies. *Journal of Personality and Social Psychology*, 105(2), 171–192.

<https://doi.org/10.1037/a0032734.supp> (Supplemental)

Patil Vivek H, Surendra N. Singh, Sanjay Mishra, and D. Todd Donovan (2017). Parallel Analysis Engine to Aid in Determining Number of Factors to Retain using R [Computer software], available from <https://analytics.gonzaga.edu/parallelengine/>.

Péloquin, O., Fortin, F., & Paquette, S. (2022). Examining negative online social reaction to police use of force: The George Floyd and Jacob Blake events. *Canadian Journal of Criminology and Criminal Justice*, 64(1), 53–81. <https://doi.org/10.3138/cjccj.2021-0030>

Proctor, S. L., & McCord, D. M. (2009). Assessment of multidimensional personality traits: A review of the psychopathic correlates of the M5 questionnaire. *American Journal of Psychological Research*, 5(1), 65–72.

Santee, J., Barnes, K., Borja-Hart, N., Cheng, A. L., Draime, J., Edwards, A., ... & Sawkin, M. (2022). Correlation between pharmacy students' implicit bias scores, explicit bias scores, and responses to clinical cases. *American Journal of Pharmaceutical Education*, 86(1), 8587. <https://doi.org/10.5688%2Fajpe8587>

Satherley, N., & Sibley, C. G. (2018). Modern Racism toward Māori Scale. PsycTESTS.

<https://doi.org/10.1037/t74859-000>

Schober, P., Boer, C., & Schwarte, L. A. (2018). Correlation coefficients: appropriate use and interpretation. *Anesthesia & Analgesia*, *126*(5), 1763-1768.

<https://doi.org/10.1213/ANE.0000000000002864>

Sears, D. O., & Henry, P. J. (2003). The origins of symbolic racism. *Journal of personality and Social Psychology*, *85*(2), 259. <https://doi.org/10.1037/0022-3514.85.2.259>

Shrive, F. M., Stuart, H., Quan, H., & Ghali, W. A. (2006). Dealing with missing data in a multi-question depression scale: a comparison of imputation methods. *BMC medical research methodology*, *6*, 1-10. <https://doi.org/10.1186/1471-2288-6-57>

Silvestri, T. J., & Richardson, T. Q. (2001). White racial identity statuses and NEO personality constructs: An exploratory analysis. *Journal of Counseling & Development*, *79*(1), 68-76.

Smith, R. J., Levinson, J. D., & Robinson, Z. (2014). Implicit white favoritism in the criminal justice system. *Alabama Law Review*, *66*(871).

Swencionis, J. K., & Goff, P. A. (2017). The psychological science of racial bias and policing. *Psychology, Public Policy, and Law*, *23*(4), 398–409.

<https://doi.org/10.1037/law0000130>

Tarescavage, A. M., Corey, D. M., & Ben-Porath, Y. S. (2015). Minnesota Multiphasic Personality Inventory–2–Restructured Form (MMPI-2-RF) predictors of police officer problem behavior. *Assessment*, *22*(1), 116-132. DOI: 10.1177/1073191114534885

- Tarman, C., & Sears, D. O. (2005). The conceptualization and measurement of symbolic racism. *The Journal of Politics*, 67(3), 731-761. <https://doi.org/10.1111/j.1468-2508.2005.00337.x>
- Toosi, N. R., Layous, K., & Reevy, G. M. (2021). Recognizing racism in George Floyd's death. *Analyses of Social Issues and Public Policy (ASAP)*. <https://doi.org/10.1111/asap.12282>
- Van der Heijden, P. T., Egger, J. I. M., & Derksen, J. J. L. (2010). Comparability of scores on the MMPI-2-RF scales generated with the MMPI-2 and MMPI-2-RF booklets. *Journal of Personality Assessment*, 92(3), 254-259. DOI: 10.1080/00223891003670208
- Van Hiel, A., & Mervielde, I. (2005). Authoritarianism and social dominance orientation: Relationships with various forms of racism. *Journal of Applied Social Psychology*, 35(11), 2323-2344. <https://doi.org/10.1111/j.1559-1816.2005.tb02105.x>
- Varela, J. G., Boccaccini, M. T., Scogin, F., Stump, J., & Caputo, A. (2004). Personality testing in law enforcement employment settings: A meta-analytic review. *Criminal Justice and Behavior*, 31(6), 649-675. <http://doi.org/10.1177/0093854804268746>
- Villegas, P. (2020, October 27). How much bias is too much to become a police officer? Experts new law might backfire. Washington Post. <https://www.washingtonpost.com/nation/2020/10/27/how-much-bias-is-too-much-become-police-officer-experts-fear-policing-law-might-backfire/>
- Watkins, M. W. (2018). Exploratory factor analysis: A guide to best practice. *The Journal of Black Psychology*, 44(3), 219-246. <https://10.1177/0095798418771807>

Weijters, B., & Baumgartner, H. (2012). Misresponse to reversed and negated items in surveys:

A review. *Journal of Marketing Research*, 49(5), 737-747.

<http://doi.org/10.1037/a003212>

Woolard, J. L., Harvell, MPP, S., & Graham, Ph. D, S. (2008). Anticipatory injustice among

adolescents: Age and racial/ethnic differences in perceived unfairness of the justice

system. *Behavioral Sciences & the Law*, 26(2), 207-226. <https://doi.org/10.1002/bsl.805>

Yu, M., Hyun, S.S. (2021). Development of Modern Racism Scale in Global Airlines: A Study

of Asian Female Flight Attendants. *Int. J. Environ. Res. Public Health*, 18(2688).

<https://doi.org/10.3390/ijerph18052688>

Zijlmans, E. A. O., Tijmstra, J., van der Ark, L. A., & Sijtsma, K. (2019). Item-score reliability

as a selection tool in test construction. *Frontiers in Psychology*, 9.

<https://doi.org/10.3389/fpsyg.2018.02298>

**Appendix A-1**

**Demographics**

1. Gender assigned at birth: Male, Female, Intersex
2. Gender identity: (open option)
3. Sexual Orientation: (open option)
4. Age: (open option)
5. Marital Status: Married, Single, Divorced, Separated
6. Please estimate household annual income: (open option)
7. Race: African American, Asian American, White (non-Hispanic), White (Hispanic), Middle Eastern, Pacific Islander, Native American/Alaskan Native, Other (open option)
8. Religious Affiliation: Christian/Catholic, Christian/Non-Catholic, Jewish, Muslim, Not Religious, Other (open option)
9. Political Orientation: 1 = Very Liberal, 2 = Somewhat Liberal, 3 = Moderate, 4 = Somewhat Conservative, 5 = Very Conservative
10. Political Party Affiliation: Democrat, Republican, Independent, Other (open option)

## Appendix A-2

### Explicit Bias Scale for Law Enforcement Officers

**Instructions: Please answer the questions below. There are no right or wrong answers to these questions; simply respond with the choice that describes your opinion best. Please pay close attention to the wording of the questions.**

#### **Theme 1: Work ethic and responsibility for outcomes.**

1. If some racial or ethnic groups would only try harder, they could be just as well off financially as other racial or ethnic groups.

1 = Strongly disagree, 2= Moderately disagree, 3 = Neither agree nor disagree, 4 = Moderately agree, 5 = Strongly agree.

2. Many racial or ethnic groups overcame adversity and worked their way out of poverty. Other racial or ethnic groups should do the same.

1 = Strongly disagree, 2= Moderately disagree, 3 = Neither agree nor disagree, 4 = Moderately agree, 5 = Strongly agree.

3. Some racial or ethnic groups just don't work as hard as most other Americans.

1 = Strongly disagree, 2= Moderately disagree, 3 = Neither agree nor disagree, 4 = Moderately agree, 5 = Strongly agree.

4. Racial or ethnic groups are responsible for their own financial outcomes in the United States.

1 = Strongly disagree, 2= Moderately disagree, 3 = Neither agree nor disagree, 4 = Moderately agree, 5 = Strongly agree.

#### **Responsibility for legal outcomes and unfair treatment by law enforcement/court systems**

5. Racial or ethnic groups in this country are responsible for the legal consequences of their actions.

1 = Strongly disagree, 2= Moderately disagree, 3 = Neither agree nor disagree, 4 = Moderately agree, 5 = Strongly agree.

6. If some racial or ethnic groups would stop committing crimes, they would not have problems with law enforcement.

1 = Strongly disagree, 2= Moderately disagree, 3 = Neither agree nor disagree, 4 = Moderately agree, 5 = Strongly agree.

15. Some racial or ethnic groups are unfairly targeted by law enforcement.(R)

## EXPLICIT BIAS SCALE FOR LAW ENFORCEMENT

1 = Strongly disagree, 2= Moderately disagree, 3 = Neither agree nor disagree, 4 = Moderately agree, 5 = Strongly agree.

16. Some racial or ethnic groups are given preferential treatment by the legal system.

1 = Strongly disagree, 2= Moderately disagree, 3 = Neither agree nor disagree, 4 = Moderately agree, 5 = Strongly agree.

17. Some racial or ethnic groups have their criminal activity ignored by law enforcement.

1 = Strongly disagree, 2= Moderately disagree, 3 = Neither agree nor disagree, 4 = Moderately agree, 5 = Strongly agree.

18. The court system treats all racial and ethnic groups the same.

1 = Strongly disagree, 2= Moderately disagree, 3 = Neither agree nor disagree, 4 = Moderately agree, 5 = Strongly agree.

### **Theme 2: Excessive demands**

7. Some racial or ethnic groups are getting too demanding in their push for equal rights.

1 = Strongly disagree, 2= Moderately disagree, 3 = Neither agree nor disagree, 4 = Moderately agree, 5 = Strongly agree.

8. Some racial or ethnic groups are demanding too much from the rest of society.

1 = Strongly disagree, 2= Moderately disagree, 3 = Neither agree nor disagree, 4 = Moderately agree, 5 = Strongly agree.

9. Leaders of racial or ethnic groups have been trying to push for change too fast.

1 = Strongly disagree, 2= Moderately disagree, 3 = Neither agree nor disagree, 4 = Moderately agree, 5 = Strongly agree.

10. Civil rights leaders and advocates have been trying to push for change too fast.

1 = Strongly disagree, 2= Moderately disagree, 3 = Neither agree nor disagree, 4 = Moderately agree, 5 = Strongly agree.

11. The change mentioned in the two previous question is in a positive direction. If no change was indicated, please mark option 3. (R)

1 = Strongly disagree, 2= Moderately disagree, 3 = Neither agree nor disagree, 4 = Moderately agree, 5 = Strongly agree.

12. Most of the racial tension that exists in the United States today is caused by racial or ethnic groups protesting problems that don't exist .

1 = Strongly disagree, 2= Moderately disagree, 3 = Neither agree nor disagree, 4 = Moderately agree, 5 = Strongly agree.

13. Some racial or ethnic groups complain too much about their situation in society.

1 = Strongly disagree, 2= Moderately disagree, 3 = Neither agree nor disagree, 4 = Moderately agree, 5 = Strongly agree.

14. Some racial or ethnic groups have more rights than they should.

1 = Strongly disagree, 2= Moderately disagree, 3 = Neither agree nor disagree, 4 = Moderately agree, 5 = Strongly agree.

**Theme 3: Denial of continuing discrimination**

19. There are no policies that discriminate against racial or ethnic groups in the United States today that limits their chances to get out of poverty.

1 = Strongly disagree, 2= Moderately disagree, 3 = Neither agree nor disagree, 4 = Moderately agree, 5 = Strongly agree.

20. A long history of discrimination and unequal treatment have created systems that make it difficult for some racial or ethnic groups to work their way out of poverty.(R)

1 = Strongly disagree, 2= Moderately disagree, 3 = Neither agree nor disagree, 4 = Moderately agree, 5 = Strongly agree.

21. Discrimination against racial or ethnic groups is no longer a problem in the United States.

1 = Strongly disagree, 2= Moderately disagree, 3 = Neither agree nor disagree, 4 = Moderately agree, 5 = Strongly agree.

22. Members of racial or ethnic groups do not face threats of violence because of their race or ethnicity.

1 = Strongly disagree, 2= Moderately disagree, 3 = Neither agree nor disagree, 4 = Moderately agree, 5 = Strongly agree.

23. Members of racial or ethnic groups do not face violence because of their race or ethnicity.

1 = Strongly disagree, 2= Moderately disagree, 3 = Neither agree nor disagree, 4 = Moderately agree, 5 = Strongly agree.

**Overcharging or excessive prosecution of minorities**

24. Some racial or ethnic groups are excessively prosecuted for minor offenses.(R)

1 = Strongly disagree, 2= Moderately disagree, 3 = Neither agree nor disagree, 4 = Moderately agree, 5 = Strongly agree.

25. Some racial or ethnic groups are not prosecuted harshly enough.

1 = Strongly disagree, 2= Moderately disagree, 3 = Neither agree nor disagree, 4 = Moderately agree, 5 = Strongly agree.

**Theme 4: Undeserved advantage**

26. Over the past few years, some racial or ethnic groups have gotten less pay compared to other racial or ethnic groups for the same work.(R)

1 = Strongly disagree, 2= Moderately disagree, 3 = Neither agree nor disagree, 4 = Moderately agree, 5 = Strongly agree.

27. Over the past few years, some racial or ethnic groups have gotten more pay than other racial or ethnic groups for the same work.

1 = Strongly disagree, 2= Moderately disagree, 3 = Neither agree nor disagree, 4 = Moderately agree, 5 = Strongly agree.

28. Over the past few years, some racial or ethnic groups have gotten more government assistance than other racial or ethnic groups.

1 = Strongly disagree, 2= Moderately disagree, 3 = Neither agree nor disagree, 4 = Moderately agree, 5 = Strongly agree.

**Economic advantage leading to greater or reduced crime**

29. Reduced poverty for some racial or ethnic groups would lead to reduced crime.(R)

1 = Strongly disagree, 2= Moderately disagree, 3 = Neither agree nor disagree, 4 = Moderately agree, 5 = Strongly agree.

**Unknown Theme Questions**

30. It's difficult to understand the anger of some racial or ethnic groups in the United States today.

1 = Strongly disagree, 2= Moderately disagree, 3 = Neither agree nor disagree, 4 = Moderately agree, 5 = Strongly agree.

31. Over the past few years, the media have shown more respect to some racial or ethnic groups than other racial or ethnic groups.

1 = Strongly disagree, 2= Moderately disagree, 3 = Neither agree nor disagree, 4 = Moderately agree, 5 = Strongly agree.

32. Media coverage of racial and ethnic issues increases racial tensions.

1 = Strongly disagree, 2= Moderately disagree, 3 = Neither agree nor disagree, 4 = Moderately agree, 5 = Strongly agree.

**Attribution/Subtle Racism Theme**

33. Some races or ethnicities commit more crimes than most other races or ethnicities.

## EXPLICIT BIAS SCALE FOR LAW ENFORCEMENT

1 = Strongly disagree, 2= Moderately disagree, 3 = Neither agree nor disagree, 4 = Moderately agree, 5 = Strongly agree.

34. Some races or ethnicities are viewed with suspicion by law enforcement when a crime is committed.

1 = Strongly disagree, 2= Moderately disagree, 3 = Neither agree nor disagree, 4 = Moderately agree, 5 = Strongly agree.

35. Some racial or ethnic groups are treated differently by law enforcement. (R)

1 = Strongly disagree, 2= Moderately disagree, 3 = Neither agree nor disagree, 4 = Moderately agree, 5 = Strongly agree.

36. Law enforcement treats all racial or ethnic groups the same.

1 = Strongly disagree, 2= Moderately disagree, 3 = Neither agree nor disagree, 4 = Moderately agree, 5 = Strongly agree.

37. Successful members of certain races or ethnicities are a credit to their race or ethnicity.

1 = Strongly disagree, 2= Moderately disagree, 3 = Neither agree nor disagree, 4 = Moderately agree, 5 = Strongly agree.

38. Certain races or ethnicities are models for how other races or ethnicities should behave.

1 = Strongly disagree, 2= Moderately disagree, 3 = Neither agree nor disagree, 4 = Moderately agree, 5 = Strongly agree.

39. Certain races or ethnicities need to integrate better into American society.

1 = Strongly disagree, 2= Moderately disagree, 3 = Neither agree nor disagree, 4 = Moderately agree, 5 = Strongly agree.

40. Races or ethnicities should associate exclusively with their own races or ethnic groups.

1 = Strongly disagree, 2= Moderately disagree, 3 = Neither agree nor disagree, 4 = Moderately agree, 5 = Strongly agree.

41. Certain races or ethnicities cannot be trusted.

1 = Strongly disagree, 2= Moderately disagree, 3 = Neither agree nor disagree, 4 = Moderately agree, 5 = Strongly agree.

42. When I look at people, I don't see color.

1 = Strongly disagree, 2= Moderately disagree, 3 = Neither agree nor disagree, 4 = Moderately agree, 5 = Strongly agree.

### **Intercultural Sensitivity Theme**

43. My race or ethnicity is better than other races or ethnicities.

EXPLICIT BIAS SCALE FOR LAW ENFORCEMENT

1 = Strongly disagree, 2= Moderately disagree, 3 = Neither agree nor disagree, 4 = Moderately agree, 5 = Strongly agree.

44. The opinions of people from different races or ethnicities should be accepted. (R)

1 = Strongly disagree, 2= Moderately disagree, 3 = Neither agree nor disagree, 4 = Moderately agree, 5 = Strongly agree.

45. The values of people from different races or ethnicities should be respected.(R)

1 = Strongly disagree, 2= Moderately disagree, 3 = Neither agree nor disagree, 4 = Moderately agree, 5 = Strongly agree.

46. People from other races or ethnicities are narrow minded.

1 = Strongly disagree, 2= Moderately disagree, 3 = Neither agree nor disagree, 4 = Moderately agree, 5 = Strongly agree.

47. Law enforcement should treat all cultures equally.

1 = Strongly disagree, 2= Moderately disagree, 3 = Neither agree nor disagree, 4 = Moderately agree, 5 = Strongly agree.

48. Law enforcement should consider cultural factors during investigations. (R)

1 = Strongly disagree, 2= Moderately disagree, 3 = Neither agree nor disagree, 4 = Moderately agree, 5 = Strongly agree.

**Appendix A-3**

**Symbolic Racism Scale**

1. It's really just a matter of some people not trying hard enough; if Blacks would try harder, they could be just as well off as Whites.  
  
1 = Strongly disagree, 2= Moderately disagree, 3 = Neither agree nor disagree, 4 = Moderately agree, 5 = Strongly agree.
2. Irish, Italian, Jewish and many other minorities overcame prejudice and worked their way up. Blacks should do the same.  
  
1 = Strongly disagree, 2= Moderately disagree, 3 = Neither agree nor disagree, 4 = Moderately agree, 5 = Strongly agree.
3. Some say Black leaders have been trying to push too fast. Others say they haven't pushed fast enough. What do you think?  
  
1 = Strongly disagree, 2= Moderately disagree, 3 = Neither agree nor disagree, 4 = Moderately agree, 5 = Strongly agree.
4. How much of the racial tension that exists in the United States today do you think Blacks are responsible for creating?  
  
1 = Very Little, 2= Some, 3 = Neither agree nor disagree, 4 = Most, 5 = Very Much.
5. How much racial discrimination against Blacks do you feel there is today, limiting their chances to get ahead? (R)  
  
1 = Very Little, 2= Some, 3 = Neither agree nor disagree, 4 = Most, 5 = Very Much.
6. Generations of slavery and discrimination have created conditions that make it difficult for Blacks to work their way out of the lower class. (R)  
  
1 = Strongly disagree, 2= Moderately disagree, 3 = Neither agree nor disagree, 4 = Moderately agree, 5 = Strongly agree.

EXPLICIT BIAS SCALE FOR LAW ENFORCEMENT

7. Over the past few years, Blacks have gotten less than they deserve. (R)

1 = Strongly disagree, 2= Moderately disagree, 3 = Neither agree nor disagree, 4 = Moderately agree, 5 = Strongly agree.

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

1 = Strongly disagree, 2= Moderately disagree, 3 = Neither agree nor disagree, 4 = Moderately agree, 5 = Strongly agree.

### Appendix A-4

#### Social Dominance Scale

**Which of the following statements or objects do you have positive or negative feelings towards? Beside each object or statement place a number from “1” to “7” which represents the degree of your positive or negative feeling. 1 = Extremely negative, 2 = Somewhat negative, 3 = Slightly negative, 4 = Neutral, 5 = Slightly positive, 6 = Somewhat positive, 7 = Extremely positive.**

1. We should strive to make incomes as equal as possible. (R)
2. Group equality should be our ideal. (R)
3. It's OK for some groups to have more of a chance in life than others.
4. To get ahead in life, it's sometimes necessary to step on other groups.
5. We should do what we can to equalize conditions for other groups. (R)
6. It's probably a good thing that some groups are at the top and others are at the bottom.
7. Inferior groups should stay in their place.
8. We would have fewer problems if groups were treated more equally. (R)
9. It would be good if groups could be equal. (R)
10. In getting what you want, it's sometimes necessary to use force against other groups.
11. All groups should be given an equal chance in life. (R)
12. If certain groups stayed in their place, we would have fewer problems.
13. We should strive for increased social equality. (R)
14. Sometimes other groups must be kept in their place.
15. Some groups of people are simply inferior to other groups.
16. No one group should dominate in society. (R)

**Appendix A-5**  
**Social Desirability: Form C (Reynolds)**  
True/False

1. It is sometimes hard for me to go on with my work if I am not encouraged.
2. I sometimes feel resentful when I don't get my way.
3. On a few occasions, I have given up doing something because I thought too little of my ability.
4. There have been times when I felt like rebelling against people in authority even though I knew they were right.
5. No matter who I'm talking to, I'm always a good listener. (R)
6. There have been occasions where I took advantage of someone.
7. I'm always willing to admit when I make a mistake. (R)
8. I sometimes try and get even rather than forgive and forget.
9. I am always courteous, even to people who are disagreeable. (R)
10. I have never been irked when people expressed ideas very different from my own. (R)
11. There have been times when I was quite jealous of the good fortune of others.
12. I am sometimes irritated by people who ask favors of me.
13. I have never deliberately said something that hurt someone's feelings. (R)

Appendix A-6

M5-120

# M5-120 Questionnaire

David M. McCord, Ph.D., Western Carolina University

Name: \_\_\_\_\_ Age: \_\_\_\_\_ M F Date: \_\_\_\_\_  
\_\_\_\_\_

This is a personality questionnaire, which should take about 15 minutes. There are no right or wrong answers to these questions; you simply respond with the choice that describes you best.

If you feel that you cannot see the questions appropriately because of sight difficulties, cannot use a pencil well because of hand-motor problems, or know of any other physical, emotional, or environmental issues which would affect your performance on this test, please notify the testing administrator now.

If you feel extremely nervous about this testing process and feel that your nervousness will affect your performance, please

The *M5 Questionnaire* is used primarily for research purposes, though in certain cases individual results may be shared with the test-taker through a professional consultation. In general, results are treated anonymously and are combined with other data in order to develop norms, establish psychometric properties of these scales and items, and to study various theoretical and practical issues within the field of personality psychology.

By proceeding with the process and responding to these questionnaire items, you are expressing your understanding of these terms and your consent for your data to be used for research purposes. You are also agreeing to release and forever discharge

- Without spending too much time dwelling on any one item, just give the first reaction that comes to mind.
- In order to score this test accurately, it is very important that you answer *every* item, without skipping any. You may change an answer if you wish.
- It is ultimately in your best interest to respond as honestly as possible. Mark the response that best shows how you really feel or see yourself, not responses that you think might be desirable or ideal.

EXPLICIT BIAS SCALE FOR LAW ENFORCEMENT

EXPLICIT BIAS SCALE FOR LAW ENFORCEMENT

M5-120 Questionnaire						Page 2
		Innacurate	Moderately Innacurate	Neither	Moderately Accurate	Accurate
1	Worry about things.	0	0	0	0	0
2	Make friends easily.	0	0	0	0	0
3	Have a vivid imagination.	0	0	0	0	0
4	Trust others.	0	0	0	0	0
5	Complete tasks successfully.	0	0	0	0	0
6	Get angry easily.	0	0	0	0	0
7	Love large parties.	0	0	0	0	0
8	Believe in the importance of art.	0	0	0	0	0
9	Use others for my own ends.	0	0	0	0	0
10	Like to tidy up.	0	0	0	0	0
11	Often feel blue.	0	0	0	0	0
12	Take charge.	0	0	0	0	0
13	Experience my emotions intensely.	0	0	0	0	0
14	Love to help others.	0	0	0	0	0
15	Keep my promises.	0	0	0	0	0
16	Find it difficult to approach others.	0	0	0	0	0
17	Am always busy.	0	0	0	0	0
18	Prefer variety to routine.	0	0	0	0	0
19	Love a good fight.	0	0	0	0	0
20	Work hard.	0	0	0	0	0
21	Go on binges.	0	0	0	0	0
22	Love excitement.	0	0	0	0	0
23	Love to read challenging material.	0	0	0	0	0
24	Believe that I am better than others.	0	0	0	0	0
25	Am always prepared.	0	0	0	0	0
26	Panic easily.	0	0	0	0	0
27	Radiate joy.	0	0	0	0	0
28	Tend to vote for liberal political candidates.	0	0	0	0	0
29	Sympathize with the homeless.	0	0	0	0	0
30	Jump into things without thinking.	0	0	0	0	0
31	Fear for the worst.	0	0	0	0	0
32	Feel comfortable around other people.	0	0	0	0	0
33	Enjoy wild flights of fantasy.	0	0	0	0	0
34	Believe that others have good intentions.	0	0	0	0	0
35	Excel in what I do.	0	0	0	0	0
36	Get irritated easily.	0	0	0	0	0
37	Talk to a lot of different people at parties.	0	0	0	0	0
38	See beauty in things that others might not notice.	0	0	0	0	0
39	Cheat to get ahead.	0	0	0	0	0
40	Often forget to put things back in their proper place.	0	0	0	0	0
		Innacurate	Moderately Innacurate	Neither	Moderately Accurate	Accurate

EXPLICIT BIAS SCALE FOR LAW ENFORCEMENT

M5-120 Questionnaire						Page 3
		Innaccurate	Moderately Innaccurate	Neither	Moderately Accurate	Accurate
41	Dislike myself.	0	0	0	0	0
42	Try to lead others.	0	0	0	0	0
43	Feel others' emotions.	0	0	0	0	0
44	Am concerned about others.	0	0	0	0	0
45	Tell the truth.	0	0	0	0	0
46	Am afraid to draw attention to myself.	0	0	0	0	0
47	Am always on the go.	0	0	0	0	0
48	Prefer to stick with things that I know.	0	0	0	0	0
49	Yell at people.	0	0	0	0	0
50	Do more than what's expected of me.	0	0	0	0	0
51	Rarely overindulge.	0	0	0	0	0
52	Seek adventure.	0	0	0	0	0
53	Avoid philosophical discussions.	0	0	0	0	0
54	Think highly of myself.	0	0	0	0	0
55	Carry out my plans.	0	0	0	0	0
56	Become overwhelmed by events.	0	0	0	0	0
57	Have a lot of fun.	0	0	0	0	0
58	Believe that there is no absolute right or wrong.	0	0	0	0	0
59	Feel sympathy for those who are worse off than myself.	0	0	0	0	0
60	Make rash decisions.	0	0	0	0	0
61	Am afraid of many things.	0	0	0	0	0
62	Avoid contacts with others.	0	0	0	0	0
63	Love to daydream.	0	0	0	0	0
64	Trust what people say.	0	0	0	0	0
65	Handle tasks smoothly.	0	0	0	0	0
66	Lose my temper.	0	0	0	0	0
67	Prefer to be alone.	0	0	0	0	0
68	Do not like poetry.	0	0	0	0	0
69	Take advantage of others.	0	0	0	0	0
70	Leave a mess in my room.	0	0	0	0	0
71	Am often down in the dumps.	0	0	0	0	0
72	Take control of things.	0	0	0	0	0
73	Rarely notice my emotional reactions.	0	0	0	0	0
74	Am indifferent to the feelings of others.	0	0	0	0	0
75	Break rules.	0	0	0	0	0
76	Only feel comfortable with friends.	0	0	0	0	0
77	Do a lot in my spare time.	0	0	0	0	0
78	Dislike changes.	0	0	0	0	0
79	Insult people.	0	0	0	0	0
80	Do just enough work to get by.	0	0	0	0	0
		Innaccurate	Moderately Innaccurate	Neither	Moderately Accurate	Accurate

EXPLICIT BIAS SCALE FOR LAW ENFORCEMENT

M5-120 Questionnaire						Page 4
		Innaccurate	Moderately Innaccurate	Neither	Moderately Accurate	Accurate
81	Easily resist temptations.	0	0	0	0	0
82	Enjoy being reckless.	0	0	0	0	0
83	Have difficulty understanding abstract ideas.	0	0	0	0	0
84	Have a high opinion of myself.	0	0	0	0	0
85	Waste my time.	0	0	0	0	0
86	Feel that I'm unable to deal with things.	0	0	0	0	0
87	Love life.	0	0	0	0	0
88	Tend to vote for conservative political candidates.	0	0	0	0	0
89	Am not interested in other people's problems.	0	0	0	0	0
90	Rush into things.	0	0	0	0	0
91	Get stressed out easily.	0	0	0	0	0
92	Keep others at a distance.	0	0	0	0	0
93	Like to get lost in thought.	0	0	0	0	0
94	Distrust people.	0	0	0	0	0
95	Know how to get things done.	0	0	0	0	0
96	Am not easily annoyed.	0	0	0	0	0
97	Avoid crowds.	0	0	0	0	0
98	Do not enjoy going to art museums.	0	0	0	0	0
99	Obstruct others' plans.	0	0	0	0	0
100	Leave my belongings around.	0	0	0	0	0
101	Feel comfortable with myself.	0	0	0	0	0
102	Wait for others to lead the way.	0	0	0	0	0
103	Don't understand people who get emotional.	0	0	0	0	0
104	Take no time for others.	0	0	0	0	0
105	Break my promises.	0	0	0	0	0
106	Am not bothered by difficult social situations.	0	0	0	0	0
107	Like to take it easy.	0	0	0	0	0
108	Am attached to conventional ways.	0	0	0	0	0
109	Get back at others.	0	0	0	0	0
110	Put little time and effort into my work.	0	0	0	0	0
111	Am able to control my cravings.	0	0	0	0	0
112	Act wild and crazy.	0	0	0	0	0
113	Am not interested in theoretical discussions.	0	0	0	0	0
114	Boast about my virtues.	0	0	0	0	0
115	Have difficulty starting tasks.	0	0	0	0	0
116	Remain calm under pressure.	0	0	0	0	0
117	Look at the bright side of life.	0	0	0	0	0
118	Believe that we should be tough on crime.	0	0	0	0	0
119	Try not to think about the needy.	0	0	0	0	0
120	Act without thinking.	0	0	0	0	0
		Innaccurate	Moderately Innaccurate	Neither	Moderately Accurate	Accurate

**Appendix A-7**  
**Short Dark Triad (SD3)**

Items

Instructions: *Please indicate how much you agree with each of the following statements*

<b>Disagree</b>	<b>Neither agree</b>			<b>Agree</b>
<b>strongly</b>	<b>Disagree</b>	<b>nor disagree</b>	<b>Agree</b>	<b>strongly</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>

*Machiavellianism*

1. It's not wise to tell your secrets.
2. I like to use clever manipulation to get my way.
3. Whatever it takes, you must get the important people on your side.
4. Avoid direct conflict with others because they may be useful in the future.
5. It's wise to keep track of information that you can use against people later.
6. You should wait for the right time to get back at people.
7. There are things you should hide from other people to preserve your reputation.
8. Make sure your plans benefit yourself, not others.
9. Most people can be manipulated.

*Narcissism*

1. People see me as a natural leader.
2. I hate being the center of attention. (R)
3. Many group activities tend to be dull without me.
4. I know that I am special because everyone keeps telling me so.
5. I like to get acquainted with important people.
6. I feel embarrassed if someone compliments me. (R)
7. I have been compared to famous people.
8. I am an average person. (R)
9. I insist on getting the respect I deserve.

*Psychopathy*

1. I like to get revenge on authorities.
2. I avoid dangerous situations. (R)
3. Payback needs to be quick and nasty.
4. People often say I'm out of control.
5. It's true that I can be mean to others.
6. People who mess with me always regret it.
7. I have never gotten into trouble with the law. (R)

**Appendix B**  
**Demographics**

Table 1.1

*Demographics for Broad Sample*

Characteristic	<i>n</i>	%	<i>M</i>	<i>SD</i>
<b>Birth Gender</b>				
Male	4	20		
Female	16	80		
<b>Gender Identity</b>				
Female	11	73.3		
Male	4	26.7		
<b>Age</b>				
	16		49.1	13.9
<b>Race</b>				
White (non-his)	16	100		
<b>Religion</b>				
Catholic	2	14.3		
Protestant	12	85.7		
<b>Political Orientation</b>				
Very Liberal	1	6.7		
Somewhat Lib	1	6.7		
Moderate	7	46.7		

## EXPLICIT BIAS SCALE FOR LAW ENFORCEMENT

Somewhat Con	3	20
Very Con	3	20
Political Party		
Dem	3	18.8
Repub	6	37.5
Ind	6	37.5
Libertarian	1	6.3
Veteran Status		
Army	1	33.3
Air Force	1	33.3
Marine Corps	1	33.3
Military Status		
Retired	1	25
Veteran	3	75

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*Note:* One Law enforcement officer was in this sample.

EXPLICIT BIAS SCALE FOR LAW ENFORCEMENT

Table 1.2

*Demographics for CJ Sample*

Characteristic				
	<i>n</i>	%	<i>M</i>	<i>SD</i>
<b>Birth Gender</b>				
Male	20	69		
Female	9	31		
<b>Gender Identity</b>				
Male	19	67.9		
Female	9	32.1		
<b>Sexual Orientation</b>				
Asexual	1	3.6		
Bisexual	3	10.7		
Heterosexual	24	85.7		
<b>Age</b>				
	29		33.1	8.5
<b>Race</b>				
White (non-His)	22	75.9		
African Amer	2	6.9		
White (His)	5	17.2		
<b>Religion</b>				
Catholic	11	37.9		
Protestant	15	51.7		

EXPLICIT BIAS SCALE FOR LAW ENFORCEMENT

Jewish	1	3.4
Not Relig	2	6.9
Political Orientation		
Very Liberal	2	6.9
Somewhat Lib	2	6.9
Moderate	9	31
Somewhat Con	13	44.8
Very Con	3	10.3
Political Party		
Dem	7	24.1
Repub	12	41.4
Ind	9	31
Unaffil	1	3.4
Major		
CJ	21	84
CJ Admin	2	7.1
CJ and other	2	7.1
LEO Status		
Yes	18	62.1
No	11	37.9
LEO Organization		
Local	18	
Become LEO		

## EXPLICIT BIAS SCALE FOR LAW ENFORCEMENT

Yes	3	27.3
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No	8	72.7
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### Veteran Status

Yes	4	13.8
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No	25	86.2
----	----	------

### Branch

Army	2	66.7
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Navy	1	33.3
------	---	------

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*Note:* LEO is law enforcement and Become LEO is asking

whether they wish to become an LEO at some point.

EXPLICIT BIAS SCALE FOR LAW ENFORCEMENT

Table 1.3

*Demographics for SONA Sample*

Characteristic				
	<i>n</i>	%	<i>M</i>	<i>SD</i>
<b>Birth Gender</b>				
Male	28	33.3		
Female	53	65.4		
<b>Gender Identity</b>				
Male	25	29.8		
Female	46	54.8		
Fluid	1	1.2		
Trans	3	3.6		
<b>Sexual Orientation</b>				
Pansexual	3	3.6		
Bisexual	18	21.5		
Gay/Lesbian	4	6		
Queer	1	1.2		
Heterosexual	44	52.4		
<b>Age</b>				
	84		18.9	4.4
<b>Race</b>				
White (non-His)	60	71.4		
African Amer	5	6.0		

EXPLICIT BIAS SCALE FOR LAW ENFORCEMENT

White (His)	7	8.3
Asian	2	2.4
Mixed Race	3	3.6
Native Am.	1	1.2
Religion		
Catholic	31	36.9
Protestant	12	14.3
Jewish	2	2.4
Not Relig	28	33.3
Other	7	8.3
Political Orientation		
Very Liberal	12	14.3
Somewhat Lib	19	22.6
Moderate	34	40.5
Somewhat Con	10	11.9
Very Con	4	4.8
Political Party		
Dem	18	21.4
Repub	15	17.9
Ind	43	51.2
Other	3	3.6
Become LEO		
Yes	11	13.1

EXPLICIT BIAS SCALE FOR LAW ENFORCEMENT

No                      66            78.6

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*Note:* LEO is law enforcement and Become LEO is asking whether they wish to become an LEO at some point.

## Appendix C

## Measure Performance

Table 2.1

*Measure Performance Combined Sample*

	Scale Mean	SD	Item Mean	Cronbach's $\alpha$
SRS	19.87	6.643	2.484	.864
SDS	31.18	14.149	1.949	.897
SD	19.03	2.667	1.464	.647
SDM	25.38	5.657	2.820	.778
SDN	23.55	4.887	2.617	.641
SDP	19.00	5.022	2.111	.679
M5-120	365.99	39.921	3.050	.918

*Note:* SRS is symbolic racism scale, SDS is social dominance scale, SD is social desirability, SDM is Machiavellianism, SDN is narcissism, SDP is psychoticism, and M5-120 is personality.

Table 2.2

*Measure Performance Broad Sample*

	Scale Mean	SD	Item Mean	Cronbach's $\alpha$
SRS	23.25	5.536	2.906	.882
SDS	32.67	10.600	2.042	.890
SD	20.67	2.279	1.590	.752
SDM	24.18	3.596	2.687	.645
SDN	22.91	3.734	2.545	.731
SDP	14.27	2.296	1.586	.400
M5-120	348.36	24.997	2.903	.884

*Note:* SRS is symbolic racism scale, SDS is social dominance scale, SD is social desirability, SDM is Machiavellianism, SDN is narcissism, SDP is psychoticism, and M5-120 is personality.

EXPLICIT BIAS SCALE FOR LAW ENFORCEMENT

Table 2.3  
*Measure Performance CJ Sample*

	Scale Mean	SD	Item Mean	Cronbach's $\alpha$
SRS	23.57	6.183	2.946	.882
SDS	36.07	15.064	2.254	.904
SD	18.86	2.276	1.451	.572
SDM	25.80	4.698	2.867	.813
SDN	23.37	4.055	2.597	.695
SDP	20.12	3.978	2.235	.677
M5-120	352.44	28.814	2.937	.879

*Note:* SRS is symbolic racism scale, SDS is social dominance scale, SD is social desirability, SDM is Machiavellianism, SDN is narcissism, SDP is psychoticism, and M5-120 is personality.

Table 2.4  
*Measure Performance SONA Sample*

	Scale Mean	SD	Item Mean	Cronbach's $\alpha$
SRS	18.03	5.864	2.253	.829
SDS	29.14	13.200	1.822	.899
SD	18.84	2.669	1.449	.653
SDM	25.42	5.922	2.824	.785
SDN	23.75	4.992	2.639	.633
SDP	19.10	4.230	2.123	.663
M5-120	373.08	41.718	3.109	.926

*Note:* SRS is symbolic racism scale, SDS is social dominance scale, SD is social desirability, SDM is Machiavellianism, SDN is narcissism, SDP is psychoticism, and M5-120 is personality.

**Appendix D**  
**EBLEO Performance**

Table 3.1  
*Final EBLEO Item Performance Combined Sample*

	Mean	SD	CITC	$\alpha$ if Removed
T1:1	2.46	1.196	.714	.939
T1:2	2.94	1.154	.635	.940
T1:3	1.95	1.085	.621	.940
T1:4	2.92	1.249	.718	.939
T1:5	3.76	1.124	.382	.942
T1:6	2.74	1.301	.802	.938
T1:7	2.13	1.130	.585	.940
T1:10	2.22	1.080	.633	.940
T2:1	2.34	1.212	.778	.938
T2:2	2.59	1.155	.756	.939
T2:3	2.18	1.058	.680	.939
T2:4	2.21	1.125	.702	.939
T2:6	2.24	1.118	.721	.939
T2:7	2.62	1.203	.822	.938
T2:8	2.38	1.209	.146	.944
T3:1	2.50	1.286	.636	.939
T3:2	2.34	1.212	.719	.939
T3:3	1.68	0.946	.645	.940
T3:4	1.72	0.977	.498	.941
T3:5	1.81	1.002	.495	.941
T3:6	2.34	1.141	.648	.939
T4:1	2.50	1.029	.544	.940
T4:3	3.76	0.870	.038	.943
T4:4	2.08	0.865	.210	.942
TU:1	2.83	1.122	.575	.940
TU:2	3.72	0.954	.020	.944
TU:3	3.80	1.019	.429	.941
TA:1	3.22	1.038	.491	.941
TA:3	2.16	1.106	.629	.940
TA:4	2.28	1.165	.696	.939
TA:5	3.09	1.007	.170	.943
TA:6	2.34	1.095	.594	.940
TA:7	2.39	1.093	.644	.939
TA:8	1.57	0.911	.393	.941
TA:9	1.47	0.790	.435	.941
TA:10	3.32	1.275	.311	.942
TI:1	1.54	0.871	.435	.941
TI:2	1.54	0.853	.164	.943
TI:3	1.62	0.829	.177	.943
TI:4	2.08	1.038	.354	.942
TI:6	2.41	1.212	.181	.943
Scale Mean	99.80			
Scale SD	24.363			
Item Mean	2.434			
Cronbach's $\alpha$	.942			

*Note:* Item letters denote theme and then item number.

EXPLICIT BIAS SCALE FOR LAW ENFORCEMENT

Table 3.2  
*Final EBLEO Item Performance Broad Sample*

	Mean	SD	CITC	$\alpha$ if Removed
T1:1	2.73	1.421	.817	.964
T1:2	3.18	1.401	.822	.964
T1:3	2.64	1.629	.729	.965
T1:4	3.45	1.293	.828	.964
T1:5	3.91	1.300	.600	.965
T1:6	3.55	1.440	.546	.966
T1:7	2.55	1.128	.742	.965
T1:10	2.45	1.128	.330	.967
T2:1	3.00	1.483	.899	.964
T2:2	3.00	1.549	.843	.964
T2:3	2.27	0.905	.787	.965
T2:4	2.27	0.905	.839	.965
T2:6	2.36	1.120	.825	.964
T2:7	3.27	1.421	.844	.964
T2:8	2.09	1.044	.668	.695
T3:1	2.73	1.555	.789	.964
T3:2	2.73	1.348	.858	.964
T3:3	1.82	0.751	.731	.965
T3:4	1.91	0.831	.301	.966
T3:5	2.09	1.044	.217	.967
T3:6	2.64	1.120	.768	.965
T4:1	2.64	0.505	.322	.966
T4:3	3.64	1.120	.194	.967
T4:4	2.18	0.982	.493	.966
TU:1	3.36	1.433	.818	.964
TU:2	3.91	1.136	.609	.965
TU:3	4.18	1.168	.647	.965
TA:1	4.00	0.775	.377	.966
TA:3	2.36	0.924	.761	.965
TA:4	2.55	1.036	.655	.965
TA:5	3.91	0.831	.699	.965
TA:6	2.91	1.136	.597	.965
TA:7	3.55	1.293	.841	.964
TA:8	1.45	0.688	.270	.966
TA:9	1.91	0.944	.687	.965
TA:10	2.73	1.348	.636	.965
TI:1	1.82	1.168	.623	.965
TI:2	1.64	0.924	.250	.967
TI:3	2.00	0.894	.181	.967
TI:4	2.18	1.079	.609	.965
TI:6	2.64	1.362	.483	.966
Scale Mean	112.18			
Scale SD	31.099			
Item Mean	2.736			
Cronbach's $\alpha$	.966			

*Note:* Item letters denote theme and then item number.

EXPLICIT BIAS SCALE FOR LAW ENFORCEMENT

Table 3.3  
*Final EBLEO Item Performance CJ Sample*

	Mean	SD	CITC	$\alpha$ if Removed
T1:1	3.04	1.169	.661	.932
T1:2	3.25	1.255	.537	.933
T1:3	2.00	0.894	.479	.933
T1:4	3.50	1.252	.791	.930
T1:5	3.93	1.030	.699	.932
T1:6	3.50	1.304	.826	.930
T1:7	2.89	1.399	.703	.931
T1:10	2.82	1.213	.543	.933
T2:1	3.07	1.209	.662	.932
T2:2	3.32	0.933	.552	.933
T2:3	2.71	1.287	.569	.932
T2:4	2.86	1.335	.631	.932
T2:6	2.71	1.121	.733	.931
T2:7	3.21	1.106	.727	.931
T2:8	2.32	1.127	-.042	.938
T3:1	3.00	1.461	.306	.935
T3:2	2.96	1.251	.799	.930
T3:3	2.11	1.220	.628	.932
T3:4	1.75	1.053	.514	.933
T3:5	1.86	1.087	.507	.933
T3:6	2.96	1.472	.708	.931
T4:1	2.93	1.209	.724	.931
T4:3	3.71	0.851	.724	.931
TU:1	2.79	1.076	.682	.932
TU:2	3.82	0.933	-.144	.938
TU:3	4.32	0.968	.247	.935
TA:1	3.36	1.007	.525	.933
TA:3	3.04	1.402	.746	.931
TA:4	3.07	1.413	.732	.931
TA:5	3.07	1.153	.210	.936
TA:6	2.43	0.946	.565	.933
TA:7	2.54	0.912	.458	.934
TA:8	1.57	0.946	.306	.935
TA:9	1.43	0.793	.056	.936
TA:10	3.39	1.220	.423	.934
TI:1	1.39	0.746	.080	.936
TI:2	1.89	1.075	.024	.937
TI:3	1.79	0.978	.121	.936
TI:4	1.89	0.869	.435	.934
TI:6	2.68	1.368	.539	.933
Scale Mean	111.18			
Scale SD	24.254			
Item Mean	2.779			
Cronbach's $\alpha$	.935			

*Note:* Item letters denote theme and then item number.

EXPLICIT BIAS SCALE FOR LAW ENFORCEMENT

Table 3.4  
*Final EBLEO Item Performance SONA Sample*

	Mean	SD	CITC	$\alpha$ if Removed
T1:1	2.24	1.174	.672	.928
T1:2	2.82	1.117	.623	.929
T1:3	1.85	1.099	.653	.928
T1:4	2.65	1.221	.623	.929
T1:5	3.68	1.198	.234	.933
T1:6	2.37	1.204	.799	.927
T1:10	1.97	1.006	.673	.928
T2:1	2.00	1.109	.747	.928
T2:2	2.28	1.119	.757	.927
T2:3	2.00	0.982	.697	.928
T2:4	1.99	1.047	.696	.928
T2:6	2.06	1.134	.679	.928
T2:7	2.34	1.171	.817	.927
T2:8	2.43	1.323	.204	.933
T3:1	2.32	1.208	.722	.928
T3:2	2.09	1.164	.608	.929
T3:3	1.52	0.862	.619	.929
T3:4	1.70	1.022	.557	.929
T3:5	1.76	1.020	.557	.929
T3:6	2.05	0.956	.535	.929
T4:1	2.35	1.018	.450	.930
T4:3	3.82	0.875	.027	.933
T4:4	1.99	0.799	.255	.932
TU:1	2.80	1.134	.519	.930
TU:2	3.66	0.993	-.072	.935
TU:3	3.57	1.002	.344	.931
TA:1	3.05	1.085	.481	.930
TA:3	1.82	0.888	.469	.930
TA:4	1.96	1.011	.635	.929
TA:5	3.00	0.982	.022	.934
TA:6	2.23	1.182	.614	.929
TA:7	2.18	1.095	.659	.928
TA:8	1.59	0.976	.505	.930
TA:9	1.43	0.802	.545	.930
TA:10	3.39	1.339	.292	.932
TI:1	1.56	0.915	.579	.929
TI:2	1.41	0.769	.100	.933
TI:3	1.49	0.774	.144	.932
TI:4	2.11	1.141	.385	.931
TI:6	2.27	1.179	-.076	.936
TI:7	1.72	0.835	.363	.931
Scale Mean	93.53			
Scale SD	22.424			
Item Mean	2.281			
Cronbach's $\alpha$	.932			

*Note:* Item letters denote theme and then item number.

## Appendix E

## Mean Differences

Table 4.1

*Results and Descriptive Statistics for Differences Due to LEO Status CJ Sample*

	LEO Status		<i>t</i>	<i>p</i>
	Civilian	LEO		
EBLEO	2.263(.707)	3.046(.346)	-3.957	<.001
SRS	2.359 (.928)	3.306 (.433)	-3.742	<.001
SDS	2.108 (1.124)	2.344 (.894)	-0.624	.538
SD	1.426 (.207)	1.466 (.168)	-0.573	.571
SDM	3.038 (.782)	2.761 (.301)	1.358	.186
SDN	2.633 (.575)	2.575 (.403)	0.321	.751
SDP	2.111 (.512)	2.311 (.418)	-1.145	.262
Pol	2.55(.934)	4.00(.594)	-5.146	<.001

*Note:* LEO is law enforcement officer. Standard Deviation in parentheses.

Table 4.2

*Results and Descriptive Statistics for M5 Differences Due to LEO Status CJ Sample*

	LEO Status		<i>t</i>	<i>p</i>
	Civilian	LEO		
Extra	2.917 (.492)	3.161 (.272)	-1.722	.096
Am	3.791 (.405)	3.460 (.405)	2.616	.014
Conc	3.957 (.489)	3.913 (.490)	0.237	.815
Neur	2.894 (.418)	1.466 (.168)	0.777	.444
Open	3.314 (.448)	2.937 (.492)	2.070	.048

*Note:* LEO is law enforcement officer. Standard Deviation in parentheses.

Table 4.3

*Results and Descriptive Statistics for Differences Due to Gender Broad Sample*

	Gender		<i>t</i>	<i>p</i>
	Male	Female		
EBLEO	2.903 (.416)	2.584 (.719)	0.830	.420
SRS	3.328 (.705)	2.766 (.778)	1.277	.222
SDS	2.318 (.393)	1.950 (.824)	0.847	.411
SD	1.545 (.287)	1.605 (.172)	-0.512	.617
SDM	2.788 (.148)	2.653 (.515)	0.506	.621
SDN	2.606 (.115)	2.525 (.540)	0.290	.776
SDP	1.793 (.239)	1.517 (.276)	1.782	.096

*Note:* Standard Deviation in parentheses.

Table 4.4

*Results and Descriptive Statistics for M5 Differences Due to Gender Broad Sample*

	Gender		<i>t</i>	<i>p</i>
	Male	Female		
Extra	3.346 (.119)	3.334 (.451)	0.049	.962
Am	3.912 (.123)	3.396 (.454)	-0.145	.887
Conc	4.050 (.374)	3.923 (.614)	0.387	.705
Neur	2.242 (.578)	2.621 (.495)	-1.277	.222
Open	3.064 (.299)	3.373 (.477)	-1.199	.250

*Note:* Standard Deviation in parentheses.

Table 4.5

*Results and Descriptive Statistics for M5 Differences Due to Gender CJ Sample*

	Gender		<i>t</i>	<i>p</i>
	Male	Female		
Extra	3.169 (.286)	2.843 (.483)	2.282	.031
Am	3.558 (.310)	3.648 (.477)	-0.608	.548
Conc	3.928 (.474)	3.934 (.525)	-0.030	.976
Neur	2.610 (.431)	3.213 (.469)	-3.389	.002
Open	2.987 (.428)	3.286 (.618)	-1.517	.141

*Note:* Standard Deviation in parentheses.

Table 4.6

*Results and Descriptive Statistics for Differences Due to Gender CJ Sample*

	Gender		<i>t</i>	<i>p</i>
	Male	Female		
EBLEO	2.996(.393)	2.192(.742)	3.765	<.001
SRS	3.156(.506)	2.480(1.129)	2.254	.033
SDS	2.553(.984)	1.591 (.555)	2.729	.011
SD	1.496 (.183)	1.349 (.138)	2.146	.041
SDM	2.763 (.285)	3.096 (.862)	-1.576	.127
SDN	2.695 (.475)	2.379 (.385)	1.752	.091
SDP	2.268 (.377)	2.161 (.622)	0.571	.572
Pol	3.85(.587)	2.56(1.236)	3.868	<.001

*Note:* Standard Deviation in parentheses.

Table 4.7

*Results and Descriptive Statistics for Differences Due to Gender SONA Sample*

	Gender		<i>t</i>	<i>p</i>
	Male	Female		
EBLEO	2.518(.602)	2.163(.511)	2.729	.008
SRS	2.469(.739)	2.139(.688)	2.000	.049
SDS	1.917(.887)	1.789(.763)	0.681	.498
SD	1.517(.177)	1.408(.204)	2.400	.019
SDM	2.916(.718)	2.774(.582)	0.957	.341
SDN	2.801(.452)	2.549(.557)	2.061	.043
SDP	2.219(.580)	2.109(.525)	0.863	.391
Pol	2.88 (1.03)	2.58 (1.05)	1.202	.233

*Note:* Standard Deviation in parentheses.

Table 4.8

*Results and Descriptive Statistics for M5 Differences Due to Gender SONA Sample*

	Gender		<i>t</i>	<i>p</i>
	Male	Female		
Extra	3.247(.488)	3.092(.502)	0.772	.187
Am	3.562(.511)	3.862(.466)	-2.661	.009
Conc	3.517(.509)	3.549(.559)	-0.248	.805
Neur	3.055(.524)	3.489(.547)	-3.448	<.001
Open	3.318(.419)	3.468(.441)	-1.476	.144

*Note:* Standard Deviation in parentheses.

**Appendix F**  
**Correlations**

Table 5.1  
Descriptive Statistics and Correlations for All Measures Combined Sample

Measure	Mean	SD	Correlations													
			1	2	3	4	5	6	7	8	9	10	11	12		
1 Extra	3.151	.454														
2 Am	3.737	.461	.048													
3 Conc	3.678	.548	.171*	.396**												
4 Neur	3.089	.626	-.254**	-.032	-.533**											
5 Open	3.317	.457	.103	.496**	.089	.240**										
6 EBLEO	2.434	.594	.108	-.379**	.092	-.304**	-.615**									
7 SRS	2.484	.780	.079	-.272**	.121	-.342**	-.556**	.842**								
8 SDS	1.955	.823	.010	-.465**	-.082	-.194*	-.385**	.610**	.481**							
9 SD	1.460	.192	.055	.182*	.229**	-.340**	-.063	.203*	.096	.140						
10 SD3M	2.822	.568	-.032	-.568**	-.210*	.148	-.225**	.244**	.231**	.296**	-.220*					
11 SD3N	2.618	.491	.515**	-.235**	-.009	-.187*	-.145	.206*	.115	.214*	.028	.360**				
12 SD3P	2.120	.192	.040	-.630**	-.463**	.204*	-.226**	.244**	.165	.348**	-.224**	.539**	.363**			
13 Pol	2.95	1.100	.100	-.186*	.219*	-.348**	-.543**	.633**	.677**	.317**	.040	.104	.164	-.007		

Note: \*  $p < .05$ , \*\*  $p < .01$

EXPLICIT BIAS SCALE FOR LAW ENFORCEMENT

Table 5.2  
Descriptive Statistics and Correlations for All Measures Broad Sample

Measure	Mean	SD	Correlations												
			1	2	3	4	5	6	7	8	9	10	11	12	
1 Pol	3.400	1.121													
2 EBLEO	2.664	.586	.675**												
3 SRS	2.906	.692	.763**	.892**											
4 SDS	2.042	.662	.212	.406	.372										
5 SD	1.590	.175	.096	.276	.117	-.070									
6 SD3M	2.687	.399	-.054	-.039	.010	.240	-.628**								
7 SD3N	2.546	.415	-.260	.024	-.031	.154	.404	-.446*							
8 SD3P	1.586	.255	.028	.249	.162	.502*	-.242	.621**	.051						
9 Extra	3.337	.347	-.350	-.318	-.296	-.449*	.463*	-.449*	.676**	-.191					
10 Am	3.947	.349	-.158	-.258	-.216	-.500*	.595**	-.851**	.480*	-.558*	.713**				
11 Conc	3.955	.493	.061	.224	.120	-.179	.690**	-.764**	.297	-.228	.446*	.665**			
12 Neur	2.527	.466	.040	.046	-.007	.104	-.610**	.557*	-.546*	.031	-.743**	-.719**	-.733**		
13 Open	3.296	.401	-.706**	-.750**	-.759**	-.487*	.097	-.260	.293	-.415	.695**	.470*	.174	-.293	

Note: \*  $p < .05$ , \*\*  $p < .01$

Table 5.3  
Descriptive Statistics and Correlations for All Measures CJ Sample

Measure	Mean	SD	Correlations												
			1	2	3	4	5	6	7	8	9	10	11	12	
1 Pol	3.450	1.021													
2 EBLEO	2.761	.480	.662**												
3 SRS	2.946	.773	.711**	.915**											
4 SDS	2.255	.942	.256	.562**	.386*										
5 SD	1.451	.175	.045	-.047	-.191	.179									
6 SD3M	2.867	.522	-.157	-.250	-.184	.047	-.266								
7 SD3N	2.597	.451	.341	.112	.028	.111	.182	.179							
8 SD3P	2.235	.442	.321	.295	.328	.248	-.044	.447*	.344						
9 Extra	3.050	.383	.454*	.450*	.326	.120	.162	-.510**	.282	.089					
10 Am	3.580	.353	-.276	-.280	-.386*	-.234	-.006	-.393*	.093	-.528**	.224				
11 Conc	3.901	.489	-.276	-.174	-.181	-.219	-.204	.048	-.059	-.475**	-.002	.397*			
12 Neur	2.790	.503	.041	-.094	.023	-.103	-.259	.104	-.310	.313	-.191	-.063	-.432*		
13 Open	3.077	.486	-.210	-.395*	-.522**	-.004	-.192	-.012	-.155	-.394*	-.017	.392*	.481**	-.122	

Note: \*  $p < .05$ , \*\*  $p < .01$

EXPLICIT BIAS SCALE FOR LAW ENFORCEMENT

Table 5.4  
Descriptive Statistics and Correlations for All Measures SONA Sample

Measure	Mean	SD	Correlations													
			1	2	3	4	5	6	7	8	9	10	11	12		
1 Pol	2.68	1.044														
2 EBLEO	2.280	.564	.550**													
3 SRS	2.253	.706	.591**	.768**												
4 SDS	1.833	.790	.295**	.674**	.490**											
5 SD	1.445	.197	-.010	.267*	.142	.157										
6 SD3M	2.823	.619	.274*	.487**	.440**	.403**	-.147									
7 SD3N	2.636	.524	.215	.330**	.223*	.285**	-.063	.502**								
8 SD3P	2.147	.533	-.089	.317**	.207	.413**	-.220*	.567**	.410**							
9 Extra	3.145	.490	.088	.110	.090	.057	-.067	.140	.571**	.119						
10 Am	3.746	.501	-.155	-.448**	-.260*	-.542**	.137	-.583**	-.406**	-.655**	-.121					
11 Conc	3.531	.533	.162	-.025	.023	-.133	.238*	-.255*	-.022	-.526**	.178	.416**				
12 Neur	3.333	.566	-.291**	-.275*	-.324**	-.179	-.297**	.131	-.187	.148	-.218*	.086	-.396**			
13 Open	3.411	.430	-.507**	-.641**	-.450**	-.485**	-.042	-.301**	-.245*	-.165	-.098	.537**	.097	.333**		

Note: \*  $p < .05$ , \*\*  $p < .01$

**Appendix G**  
**Regression**

Table 6  
*Regression Analysis Predicting Scores on EBLEO*

	<i>B</i>	<i>SE</i>	$\beta$	<i>t</i>	<i>p</i>	95% CI for <i>B</i>		Effect Size
						Lower	Upper	<i>r</i> <sub>sp</sub>
<b>Step 1</b>								
SDS	.321	.044	.443	7.258	<.001**	.233	.408	.417
SD	.407	.181	.131	2.255	.026*	.050	.765	.129
Pol	.275	.034	.487	8.041	<.001**	.208	.343	.462
<b>Step 2</b>								
SDS	.257	.048	.356	5.349	<.001**	.162	.353	.290
SD	.447	.190	.143	2.345	.021*	.069	.824	.127
Pol	.199	.039	.351	2.034	<.001**	.120	.277	.272
Extra	.081	.075	.061	1.078	.284	-.068	.229	.058
Am	-.117	.100	-.088	-1.177	.242	-.315	.080	-.064
Conc	.086	.081	.077	1.056	.293	-.075	.246	.057
Neur	.049	.072	.050	.672	.503	-.095	.192	.036
Open	-.343	.098	-.260	-3.481	<.001**	-.538	-.148	-.188
<b>Step 3</b>								
SDS	.246	.049	.340	5.044	<.001**	.149	.342	.273
SD	.475	.191	.152	2.482	.015*	.096	.854	.134
Pol	.203	.040	.359	5.088	<.001**	.124	.282	.275
Extra	.098	.091	.074	1.080	.282	-.082	.278	.058
Am	-.011	.122	-.008	-.087	.931	-.252	.231	-.005
Conc	.116	.085	.103	1.369	.174	-.052	.283	.074
Neur	.029	.074	.030	.393	.695	-.118	.177	.021
Open	-.352	.099	-.268	-3.566	<.001**	-.548	-.156	-.193
SD3M	.028	.079	.027	.355	.723	-.128	.184	.019
SD3N	-.067	.094	-.054	-.709	.480	-.252	.119	-.038
SD3P	.166	.099	.142	1.675	.097	-.030	.363	.091

*Notes:* \* = Significant at .05, \*\* = Significant at .01. CI = Confidence intervals. Effect  $r_{sp}$  = Pearson semi-partial correlation. Extra is extraversion, Am is agreeableness, Conc is conscientiousness, Neur is neuroticism, Open is openness to experience. SD3M is Machiavellianism, SD3N is narcissism, SD3P is psychoticism, SRS is Symbolic Racism Scale, SD is social desirability, SDS is Social Dominance Scale.

## Appendix H

## Exploratory Factor Analysis

Table 7.1  
*Exploratory Factor Analysis Initial Loadings*

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6
T1:1	<b>.507</b>	.429	.283	.043	.004	.109
T1:2	.418	<b>.439</b>	.260	.019	-.119	.156
T1:3	.316	<b>.551</b>	.179	.084	.036	-.120
T1:4	<b>.591</b>	.283	.175	.257	-.055	.037
<i>T1:5</i>	<b>.380</b>	.003	.162	.064	-.256	.009
<i>T1:6</i>	<b>.607</b>	.377	.304	.151	-.023	.304
<i>T1:7</i>	<b>.752</b>	.053	.193	.052	.013	-.159
<i>T1:10</i>	<b>.630</b>	.177	.104	.234	.115	.121
T2:1	.475	.468	<b>.493</b>	-.049	.047	-.115
T2:2	.456	.313	<b>.458</b>	-.038	.072	.025
T2:3	.264	.301	<b>.772</b>	.150	.135	.059
T2:4	.304	.268	<b>.896</b>	.147	.054	.001
T2:6	<b>.537</b>	.313	.278	.252	-.049	-.049
T2:7	<b>.588</b>	.458	.331	.041	-.079	.056
T2:8	-.243	<b>.429</b>	.169	.021	-.005	-.084
T3:1	<b>.596</b>	.237	.099	.180	.040	.245
T3:2	<b>.704</b>	.250	.135	.094	.145	.091
T3:3	<b>.601</b>	.151	.207	.394	.045	-.149
T3:4	.244	.197	.070	<b>.944</b>	.060	-.014
T3:5	.284	.146	.121	<b>.878</b>	.051	.026
<i>T3:6</i>	<b>.831</b>	-.023	.086	.093	.144	.070
T4:1	<b>.741</b>	.018	-.017	.066	.072	.003
T4:3	-.201	.221	.179	-.122	-.338	<b>.360</b>
<i>T4:4</i>	<b>.180</b>	.137	.041	-.051	.141	-.300
TU:1	<b>.425</b>	.412	.172	.048	-.160	-.174
TU:2	-.031	-.077	.035	<b>.054</b>	-.067	-.039
TU:3	<b>.371</b>	.112	.266	.023	-.269	-.051
<i>TA:1</i>	.326	<b>.353</b>	.177	.049	-.071	.165
<i>TA:3</i>	<b>.890</b>	-.087	.124	.170	.029	-.049
<i>TA:4</i>	<b>.876</b>	.165	.122	.140	-.003	.034
<i>TA:5</i>	-.013	<b>.350</b>	.056	-.008	-.230	-.017
<i>TA:6</i>	.253	<b>.705</b>	.150	.122	.030	.192
<i>TA:7</i>	.271	<b>.794</b>	.155	.105	.014	.198
<i>TA:8</i>	.031	<b>.502</b>	.297	.259	.149	.005
<i>TA:9</i>	.010	<b>.668</b>	.173	.168	.104	-.237
<i>TA:10</i>	.205	.145	.094	.068	.014	<b>.338</b>
<i>TI:1</i>	-.044	<b>.653</b>	.161	.235	.179	-.262
<i>TI:2</i>	.081	.091	.050	.037	<b>.898</b>	-.112
<i>TI:3</i>	.075	.075	.098	.068	<b>.904</b>	-.053
<i>TI:4</i>	.059	<b>.420</b>	.083	.163	.153	-.016
<i>TI:6</i>	<b>.371</b>	-.208	.069	-.058	.015	-.099
Eigenvalues	13.858	3.800	2.941	1.942	1.602	1.366
% of variance	32.995	9.048	7.002	4.642	3.815	3.252

Note. Italics = experimental items, Bold = strongest factor loading. Extraction: Generalized least squares; Rotation: Varimax.

EXPLICIT BIAS SCALE FOR LAW ENFORCEMENT

Table 7.2  
*Exploratory Factor Analysis Final Table*

	Denial	Attribution	Demands	Violence	Intercultural	Colorblindness
T1:1	.507					
T1:4	.591					
<i>T1:5</i>	.380					
<i>T1:6</i>	.607					
<i>T1:7</i>	.752					
<i>T1:10</i>	.630					
T2:6	.537					
T2:7	.588					
T3:1	.596					
T3:2	.704					
T3:3	.601					
<i>T3:6</i>	.831					
T4:1	.741					
<i>T4:4</i>	.180					
TU:1	.425					
TU:3	.371					
<i>TA:3</i>	.890					
<i>TA:4</i>	.876					
<i>TI:6</i>	.371					
T1:2		.439				
T1:3		.551				
T2:1		.468				
T2:8		.429				
<i>TA:1</i>		.353				
<i>TA:5</i>		.350				
<i>TA:6</i>		.705				
<i>TA:7</i>		.794				
<i>TA:8</i>		.502				
<i>TA:9</i>		.668				
<i>TI:1</i>		.653				
<i>TI:4</i>		.420				
T2:1			.493			
T2:2			.458			
T2:3			.772			
T2:4			.896			
T3:4				.944		
T3:5				.878		
<i>TU:2</i>				.054		
<i>TI:2</i>					.898	
<i>TI:3</i>					.904	
T4:3						.360
<i>TA:10</i>						.338
Eigenvalues	13.858	3.800	2.941	1.942	1.602	1.366
% of variance	32.995	9.048	7.002	4.642	3.815	3.252

*Note.* Italics = experimental items. Extraction: Generalized least squares; Rotation: Varimax