# POLITICAL IDENTITY PRIMING AND OWN-RACE BIAS IN CAUCASIAN AND HISPANIC/LATINO COLLEGE STUDENTS

by

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#### ABSTRACT

Own-race bias (ORB) occurs when individuals exhibit enhanced recognition memory for faces of one's own race as opposed to faces belonging to other races. Recent research indicates that promoting the salience of shared non-racial identity can foster in-group bias of face recognition for other-race faces. The purpose of this study is to assess whether ORB can be attenuated for faces belonging to members of one's political in-group in Hispanic/Latino and White college students. In this study, participants completed a survey containing items assessing their political group identification. Following this, participants were shown a series of Hispanic/Latino and White faces labeled as liberal or conservative. Participants then completed a backward digit span task as a filler task before completing a recognition test containing faces from the earlier task as well as faces that had not been shown before. Contrary to the hypothesis regarding ORB being reduced by the priming of political identity, participants did not exhibit greater recognition memory for other-race faces labeled as endorsing the same political ideology compared to other-race faces labeled as endorsing a different political ideology. Furthermore, recognition accuracy was not significantly greater for faces of one's own race, a result suggesting that ORB may not exist for Hispanic/Latino and White individuals living in a geographic region with large populations of each. More research is needed to further examine how various forms of non-racial identity may influence ORB.

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#### I. INTRODUCTION

Within the field of cognitive psychology, face recognition research has recently seen a resurgence in popularity (Hugenberg, Young, Bernstein, & Sacco, 2010). One particular aspect of face recognition research that is currently the subject of much investigation is other-race face perception. Specifically, own-race bias, or ORB, refers to an individual's enhanced recognition memory for faces of their own race or ethnic group as opposed to faces belonging to other races or ethnic groups (Hugenberg et al., 2010; Slone, Brigham, & Meissner, 2000). These findings have been replicated across a large number of studies using a variety of races/ethnicities, recognition memory tasks, and testing circumstances (Meissner & Brigham, 2001).

ORB has been a topic of interest for social scientists since the early 1900s (Meissner & Brigham, 2001). However, this phenomenon was not investigated empirically until Malpass and Kravitz's (1969) landmark study investigating college students' recognition memory. In their study, 26 participants (13 White, 13 Black) were shown projections of 20 pictures of faces (10 White, 10 Black) and were instructed to study them in preparation for a recognition memory test. After completing the study sequence, participants were given one minute before proceeding to the testing phase. During the testing phase, 80 pictures of faces were projected (40 White, 40 Black). Twenty of the 80 faces projected during the testing phase were previously displayed during the study sequence. Participants were given a paper and a pencil and asked to report whether they recognized the face being projected as having been seen before. The researchers found that on average, participants exhibited higher rates of recognition for faces of their own races as compared to faces of the other races. The procedure executed

in this study is still a widely accepted research paradigm and is commonly used in ORB research today. Since Malpass and Kravitz's (1969) experiment, a large body of evidence clearly supporting the existence of ORB in face recognition memory has been established. In response, psychological scientists have offered variety of theories including perceptual and social cognitive explanations for ORB (Slone et al., 2000).

#### **Perceptual Explanations for ORB**

Early research regarding ORB proposed perceptual explanations for this phenomenon. Many suggested that an individual's recognition bias for faces of their own race was primarily a function of perceptual deficits: specifically, failure to accurately encode, store, or retrieve other-race faces from memory (Marcon, Meissner, Frueh, Susa, & MacLin, 2009). The majority of these early perceptual explanations emphasize a lack of intergroup contact, resulting in underdeveloped perceptual expertise for other-race faces as the source of this recognition bias (Hugenberg et al., 2010; Slone et al., 2000). However, in a meta-analysis conducted by Meissner and Brigham (2001), it was discovered that contact or experience with the other race or ethnic group only accounted for 2% of the variance in recognition accuracy. While the perceptual expertise hypothesis is not the most effective explanation for ORB, it did generate a wealth of information about differential processing models for other-race face recognition (Marcon et al., 2009).

Throughout the face recognition literature, psychological scientists have proposed a number of differential processing models, offering a variety of explanations of the differing perceptual methods used to process same-race and other-race faces. While each model offers their own unique interpretations, the overwhelming majority of differential processing models point to two key types of face processing: holistic and featural

(Meissner & Brigham, 2001; Lampinen, Roush, Erickson, Moore, & Race, 2015). Featural processing refers to the allocation of selective attention to individual facial features, like the eyes, nose, and lips, that are thought to provide information relevant to encoding the target face. On the other hand, holistic processing refers to processing the target face by considering individual features and emphasizing the spatial configurations between them (Hugenberg et al., 2010). A large portion of differential processing models suggest that a holistic processing deficit may be responsible for our poor recognition memory for other-race faces when compared to own-race faces. Furthermore, this is thought to be due to perceptual expertise, by which the more practiced on is at processing other race faces, the more likely they are to engage in holistic processing (Hancock & Rhodes, 2008).

More recent perceptual research regarding ORB has moved away from determining which processing model offers the best explanation for ORB and is focused on cultivating a better understanding of the circumstances under which certain types of processing occur. For example, Lampinen et al. (2015) investigated how simulated distance influenced how people process faces. The purpose of this study was to determine whether individuals would engage in holistic processing when feature-specific details were no longer available for selective attention. Given previous assertions that a holistic processing deficit for other-race faces is responsible for ORB, researchers hypothesized that participants who experienced greater levels of simulated distance would exhibit greater levels of recognition for other race faces due to an inability to distinguish individuating features. Therefore, the promotion of holistic processing would lead to a reduction of ORB. In this first study, the researchers manipulated perceived distance

using the Gaussian blur function in Adobe Photoshop to obscure facial features in police lineup-style photos. Participants were asked to study 30 faces (10 same-race, 20 otherrace) presented at one of four levels of blur, after which they were given a recognition memory test and asked to indicate which faces they were previously shown. The second study used the same materials and procedures as the first study. However, perceived distance was manipulated by altering the size of the photos rather than the degree to which the photos were blurred.

In both studies, there was an overall decrease in recognition accuracy as blur level increased, but ORB remained intact. Lampinen et al. note that this finding is inconsistent with previous differential processing literature that emphasizes the role holistic processing deficits play in the maintenance of ORB. Instead, they suggest that individuals may rely on featural processing regardless of the visual information available to them. However, it is also noted that these findings could be attributed to the use of a flexible encoding model that allows the perceiver to shift from one form of face processing to another based on the information they are provided with (Lampinen et al., 2015). The idea of a flexible encoding model allows for one to account for circumstantial factors that may influence face processing. This concept is a central component of many social cognitive explanations for ORB (Slone et al., 2000).

#### Social Cognitive Explanations for ORB

There is a growing area of social cognitive research exploring how motivated processing influences other-race face perception (Sporer, 2001). Social cognitive explanations for ORB acknowledge that differential processing is the basis for the perceptual deficits underlying an individual's poor accuracy of recognition for other-race

faces. However, rather than teasing apart the subtle differences in same-race and otherrace face perception, social cognitive models move beyond the perceptual deficits themselves to focus on their causes (Hugenberg et al., 2010). One widely accepted social cognitive explanation for ORB is Hugenberg et al.'s (2010) Categorization-Individuation Model (CIM) (Marsh, Pezdek, & Ozery, 2016; Pauker, Ambady, & Freeman, 2013).

The CIM is heavily influenced by Sporer's (1996) In-Group Out-Group Model (Hugenberg, Miller, & Claypool, 2007). This model asserts that in-group/out-group membership categorization determines the level of processing the perceiver used to encode a face. The In-Group/ Out-Group Model is relatively flexible due to the fact that it acknowledges the potential for circumstantial factors to motivate the perceiver to engage in deeper, more holistic face processing (Sporer, 1996). Like the In-Group Out-Group model, CIM also recognizes that depth of processing for a face is determined by the face's group membership. However, it expands on this concept by suggesting that this determination is based on an immediate non-conscious judgment of the importance of accurate recognition memory for the target face. Once the face has been labeled as important or unimportant to encode, the perceiver will engage in forms of processing that promote categorical or individuating forms of processing (Hugenberg et al., 2007). Categorization-oriented processing occurs when the perceiver selectively attends to shallow group membership diagnostic features based on stereotypical expectations of features belonging to members of their out-group. Individuation-oriented processing occurs when the perceiver selectively attends to distinguishing facial features and their spatial configurations, promoting deeper and more meaningful processing (Hugenberg et al., 2010). CIM further expands upon the In-Group/Out-Group Model by suggesting that

perceivers' personal motives, individuation experience, and contextual cues influence the level of processing they choose to engage in when they encounter a new face.

Much of the current ORB research explores the impact of contextual cues on ORB within the CIM framework (Marsh et al., 2016; Pauker et al., 2013). Specifically, researchers are investigating the influence identity priming has over the reduction of ORB. For example, Pauker et al. (2013) used contextual cues to manipulate the salience of a single racial identity (Black or White) in biracial participants and found that participants exhibited ORB for the racial identity with which they had been primed. This line of research was extended to investigate the influence of identity priming on monoracial bicultural individuals. Marsh et al. (2016) primed Latino-American participants with one of their cultural identities (American or Latino). They found that ORB was exhibited by participants primed with their Latino cultural identity, but was reduced for participants primed with their American cultural identity. Consistent with the CIM, the findings of both experiments suggest that contextual cues, specifically cultural priming, have the potential to promote motivated face processing, and therefore influence ORB (Marsh et al., 2016).

#### **Non-Racial Identity Priming in ORB Research**

Research regarding how contextual cues influence face recognition is part of a much larger body of research oriented towards the reduction of ORB. Much of this research has focused on priming individuals with a specific aspect of their identity, like one's cultural identity, in order to ameliorate the effects of ORB (Marsh et al., 2016; Pauker et al., 2013). Such methods rely upon the principles of the Common Ingroup Identity Model, which is often promoted as a means of ingroup bias reduction (Gaertner

& Dovidio, 2000). This model suggests that when factors associated with a more inclusive, superordinate, group identity are made salient, one may be prompted to consider their identity as members of that group, as opposed to what one might consider to be their primary ingroup. In turn, this cognitive shift promotes ingroup favoritism toward individuals who share this more salient group identity and reduces the importance one places on the other group identity in the immediate context. Essentially, by recategorizing oneself as a member of the salient group one expands inclusionary criteria for ingroup membership in such a way that individuals who were formerly thought of as outgroup members may now be considered ingroup members, and therefor receive the benefits of ingroup bias (Gaertner & Dovidio, 2000; Heheman, Mania, & Gaertner, 2010).

A number of recent studies have used the Common Ingroup Identity Model to enhance the salience of a shared social category that supersedes race, like university affiliation, in order to promote in-group bias of face recognition (Bernstein, Young, & Hugenberg, 2007; Heheman et al. 2010; Shriver, Young, Hugenberg, Berstein, & Lanter, 2008). For example, Yan et al. (2017) asked Chinese participants to view 30 Chinese faces labeled as belonging to their university, a similarly ranked university in a distant geographical area, a prestigious university in a nearby area, or? a prestigious university in a geographically distant area. Following a brief rest, participants took a memory test for 60 faces (30 old, 30 new) and provided old/new ratings for each face. Results indicated that participants demonstrated greater recognition memory accuracy for faces labeled as belonging to their university as well as faces labeled as belonging to a nearby

universities, regardless of university reputation, as compared to faces labeled as belonging to geographically distant universities.

Using a similar research paradigm, Ray, Way, and Hamilton (2010) explored how membership to multiple political groups may influence interpersonal attraction as well as recognition. White male participants were asked to provide experimenters with information regarding to their political party affiliation (Democratic or Republican) and their stance on abortion (Pro-life or Pro-choice). Participants then viewed 24 photos of White male faces randomly labeled with various combinations of political party affiliation and abortion stance (Democrat and Pro-choice, Democrat and Pro-life, Republican and Pro-choice, and Republican and Pro-life). Experimenters found that interpersonal attraction ratings were additive such that attraction ratings were highest when people considered the target faces to be members of their in-group compared to partial ingroup members and outgroup members. Ratings were also higher for partial ingroup members compared to outgroup members. However, these findings differed slightly for the face recognition task. Recognition memory was greater for ingroup members compared to partial ingroup members, but there were no significant differences in memory for partial ingroup members and outgroup members. Overall, these findings indicate that one's political identity may modestly influence ingroup/outgroup categorization.

#### **Purpose and Hypotheses for the Current Research**

Previous research has explored how promoting the salience of one's political identity may foster in-group bias for face recognition. However, it has yet to be determined whether such categorizations could be leveraged to ameliorate ORB. The purpose of the

present study was to assess whether ORB could be attenuated for faces belonging to members of one's political in-group. I hypothesized (a) that accuracy would be greater when the participant's race (White or Hispanic/Latino) is the same as the race of the target faces, (b) that accuracy would be greater when the participant's political ideology (liberal or conservative) is the same as the political ideology label accompanying the target faces, (c) that the strength of one's identification with their ideological group would be positively correlated with their accuracy for target faces of the same ideology, and (d) that ORB can be reduced or eliminated with the political identity priming.

#### **II. METHOD**

#### **Participants**

Participants were recruited from the Department of Psychology's participant pool at Texas State University. Members of the participant pool were students enrolled in an introductory level psychology course which requires students to complete a research requirement. Participants were recruited via SONA and received class credit for their participation.

The face stimuli used in this experiment consisted of White and Hispanic/Latino males. Participants who solely identified as members of other races would have been incapable of exhibiting ORB on a recognition memory test. For this reason, individuals who did not identify as White or Hispanic/Latino were excluded from participation in this study. Additionally, individuals who reported being unsure of which political ideological group they most identified with were excluded from participating in the experiment.

The participants who completed the study were 46 students. Of those 46, 11 were excluded from analyses for failure to pass the manipulation check indicating that they did not identify as politically liberal or conservative. Analyses were conducted using data from the 35 remaining participants (29 women, 6 men) who ranged in age from 18 to 23 (M = 19.94, SD = 1.41). Regarding self-reported race and political ideology, 20 were Hispanic/Latino liberals, 2 were Hispanic/Latino conservatives, 5 were White liberals, and 8 were White conservatives.

#### Design

This study used a quasi-experimental mixed-subjects design. The betweensubjects variables were race of the participant (White, Hispanic/Latino) and political

ideology of participant (conservative, liberal), and the within-subjects variables were race of target face (White, Hispanic/Latino) and political ideology of target face (conservative, liberal). The dependent variables were hit rate (number of correctly recognized old faces / total number of old faces), false alarm rate (number of incorrectly recognized new faces / total number of new faces), and the nonparametric sensitivity and response bias measures of A' and B", respectively. For the A' sensitivity measure, scores range from 0.5 (chance performance) to 1 (perfect hit rate and no false alarms). For the B" bias measure, scores range from -1 (bias to respond "old face") to 1 (bias to respond "new face").

#### Materials

A set of 36 photographs featuring male faces (18 White, 18 Latino) were used as stimuli. This set of faces is a part of a larger database of faces managed by Dr. Meissner of the University of Texas at El Paso. Photographs in this set were previously used by Marcon et al. (2009) as well as Marsh et al. (2016), and have been pilot tested to control for attractiveness, race typicality, and memorability.

Participants also completed a series of questionnaires in the first phase of the study, a brief demographic questionnaire that consisted of three items in which the participants indicated their age, gender, and race. All items were multiple-choice. When completing the race item, participants were instructed to select all choices that apply to them.

In order to prime participants to consider their political identities, the Ideological Consistency Scale, developed by the Pew Research Center (2014), was administered. This scale consists of 10 sets of statements regarding political values that are thought to have traditionally conservative or liberal responses associated with them. Participants

were asked to choose the statement they most agreed with. One example of a statement set used on this scale is "Immigrants are a burden on our country because they take our jobs, housing, and healthcare" or "Immigrants today strengthen our country because of their hard work and talents." After completing the Ideological Consistency Scale, participants responded to a single forced-choice item asking them to indicate the political ideology they most identify with: conservative, moderate, liberal, or unsure.

Following this, participants completed a modified version of Greene's (1999) Identification with a Psychological Group (IDPG) scale. The IDPG consists of ten statements regarding the degree to which an individual self-identifies with a particular group, in this case, the participants' political ideological group. Participants responded using a 7-point Likert-like scale ranging from 1, *strongly disagree*, to 7, *strongly agree*. Examples of items on the IDPG include "This group's successes are my successes" and "When someone criticizes this group, it feels like a personal insult." Recently, Dvir-Gvirsman (2018) conducted research using the IDPG to assess identification with Israeli political ideological groups using the terms left-wing and right-wing (Cronbach's alpha: Left = .75, Right = .75).

Participants also completed a backward digit span task as a filler task. The backward digit span task is frequently used as an assessment of working memory. Employing the digit span task as a filler task ensured that participants were actively engaging their working memory to prevent rehearsal of the previously presented face stimuli. Participants were shown 10 sets of 10 numbers. During the presentation of a set, each number was presented individually. After all 10 numbers were presented, participants were asked to recall the numbers listing them from the most recently

presented digit to the first digit. For example, if the numbers are presented as 6295670928, then the correct response would be 8290765926.

#### Procedure

After providing informed consent, participants were seated at a computer and began the experiment. The first phase of the study was conducted using the web-based survey software, Qualtrics. Participants completed the demographic questionnaire, the Ideological Consistency Scale, and the IDPG scale. Following this, the participants began the face presentation phase of the study, which was complete using E-Prime 2.0 behavioral research software. Before beginning, participants were informed that the target faces presented at this stage would appear again during a recognition memory test. Photos of 16 male faces (8 White, 8 Latino) were presented on a standard computer screen. Each photo was shown for 3 seconds. Photos were separated into two groups of 8 faces (4 White, 4 Latino). One group of 8 faces were labeled "conservative". The faces in the other group were labeled "liberal". Faces were presented in a randomized order for each participant. Similarly, pairing of labels and faces were varied across participants. After the presentation phase, participants were given 10 minutes to complete the backward digit span task and record their responses on a worksheet they received upon arrival. Finally, participants completed a recognition memory test. In this phase of the study, 32 photos of male faces (16 White, 16 Latino) were projected. Of the 32 faces presented, 16 faces (8 White, 8 Latino) had been shown before during the presentation phase of the study. The other 16 faces (8 White, 8 Latino) had not been shown to participants before. All faces were presented for 3 seconds each. There were no political identification labels for any of the faces presented in this phase of the study. Participants were asked to

identify the faces as "old" or "new" and report their responses using the keyboard (0 for new, 1 for old). Once participants completed this phase of the study, they were thanked for their time and dismissed.

#### **III. RESULTS**

#### **ORB Results**

First, four 2 x 2 mixed-design ANOVAs were conducted in order to compare the effects of race on memory accuracy and bias, irrespective of political identity. For each analysis, the between-subjects factor was participant race (White, Hispanic/Latino), and the within-subjects factor was the race of the target faces (White, Hispanic/Latino). The dependent variables for these four analyses were hit rate, false alarm rate, A', and B".

The first ANOVA tested the effects of participant race and target race on hit rate. There was not a significant main effect of participant race, such that there were no significant differences in the hit rates for White participants (M = .76, SD = .23) and Hispanic/Latino participants (M = .73, SD = .21), F(1, 33) = .33, p = .57. Similarly, there was not a significant main effect of target race, such that the hit rate for the photographs of White men (M = .77, SD = .27) did not significantly differ from the hit rate for the photographs of Hispanic/Latino men (M = .74, SD = .21), F(1, 33) = .01, p = .94. Finally, the interaction between participant race and target race was also not significant, F(1, 33) = 1.37, p = .25.

The second ANOVA tested the effects of participant race and target race on false alarm rate. There was not a significant main effect of participant race, such that there were no significant differences in the false alarm rates for White participants (M = .39, SD = .05) and Hispanic/Latino participants (M = .36, SD = .05), F(1, 33) = 1.79, p = .19. Similarly, there was not a significant main effect of target race, such that the false alarm rate for the photographs with White men (M = .35, SD = .26) did not significantly differ from the false alarm rate for the photographs with Hispanic/Latino men (M = .40, SD = .22), F(1, 33) = .27, p = .61. Finally, the interaction between participant race and target race was also not significant, F(1, 33) = .04, p = .86.

The third ANOVA tested the effects of participant race and target race on A'. There was not a significant main effect of participant race, such that there were no significant differences in A' for White participants (M = .54, SD = .11) and Hispanic/Latino participants (M = .72, SD = .09), F(1, 32) = 1.69, p = .20. Similarly, there was not a significant main effect of target race, such that A' for the photographs with White men (M = .65 SD = .49) did not significantly differ from A' for the photographs with Hispanic/Latino men (M = .65, SD = .37), F(1, 32) = .16, p = .70. Finally, the interaction between participant race and target race was also not significant, F(1, 32) = 1.38, p = .25.

The fourth ANOVA tested the effects of participant race and target race on B". There was not a significant main effect of participant race, such that there were no significant differences in B" for White participants (M = .38, SD = .11) and Hispanic/Latino participants (M = .41, SD = .08), F(1, 33) = .07, p = .80. Similarly, there was not a significant main effect of target race, such that B" for the photographs with White men (M = .47, SD = .50) did not significantly differ from B" for the photographs with Hispanic/Latino men (M = .32, SD = .39), F(1, 33) = 3.71, p = .06. Finally, the interaction between participant race and target race was also not significant, F(1, 33) = .45, p = .51.

#### **Political Identity Priming Results**

Next, a 2 x 2 mixed-design ANOVA was conducted in order to compare the effects of political identity on memory accuracy, irrespective of race. For this analysis,

the between-subjects factor was participant political identity (liberal, conservative), the within-subjects factor was the political identity of the target faces (liberal, conservative), and the dependent variable was hit rate. There was not a significant main effect of participant political identity, such that there were no significant differences in the hit rates for liberal participants (M = .75, SD = .05) and conservative participants (M = .75, SD = .07), F(1, 33) = .13, p = .72. Similarly, there was not a significant main effect of target political identity, such that the hit rate for the photographs with men labeled liberal (M = .77, SD = .05) did not significantly differ from the hit rate for the photographs with men labeled liberal (M = .77, SD = .05) did not significantly differ from the hit rate for the photographs with men labeled conservative (M = .75, SD = .04), F(1, 33) = .75, p = .39. Finally, the interaction between participant political identity and target political identity was also not significant, F(1, 33) = .75, p = .39.

The relationship between the strength of one's identification with their political in-group and accuracy of recognition memory was assessed with Pearson correlation analyses. Identification with one's political in-group, as assessed by total score on the IDPG scale, was not significantly correlated with the hit rate for target faces labeled liberal, r(33)= -.06, p = .73. Likewise, IDPG scores were not significantly correlated with the hit rate for target faces labeled with the hit rate for target faces labeled conservative, r(33)= .12 p = .53.

Finally, one last 2 x 2 ANOVA was conducted in order to assess a potential interaction between race and political identity on recognition accuracy. For this analysis, the first within-subjects factor was race (participant race same as target race, participant race different than target race), the second within-subjects factor was the political identity (participant political identity same as target political identity, participant political identity different than target political identity), and the dependent variable was hit rate. There was

not a significant main effect of race, such that there were no significant differences in the hit rates for participants whose race was the same as the race of the target faces (M = .76 SD = .28) and participants whose race was different than the race of the target faces (M = .80, SD = .28), F(1, 34) = 1.54, p = .22. Similarly, there was not a significant main effect of political identity, such that there were no significant differences in the hit rates for participants whose political identity was the same as the political identity of the target faces (M = .71, SD = .25) and participants whose political identity was different than the political identity of the target faces (M = .74, SD = .27), F(1, 34) = 3.16, p = .08. Finally, the interaction between race and political identity was also not significant, F(1,34) = 0.00, p = 1.00.

#### **IV. DISCUSSION**

#### **Discussion of Results and Theoretical Implications**

The first hypothesis – that accuracy would be greater when the participant's race (White or Hispanic/Latino) was the same as the race of the target faces – was not supported. This finding contrasts with the ORB phenomenon found in so many other studies (for a review, see Meissner & Brigham, 2001). One possible explanation for these findings is that the racial differences between Hispanic/Latino and White individuals may not be as pronounced as the racial differences between Black, East Asian and White individuals, with whom most of the ORB research is conducted (Gross, 2009; MacLin & Malpass, 2003; Meissner & Brigham, 2001, Slone et al., 2000). In fact, the U.S. Census Bureau considers Hispanic/Latino to be an ethnic group rather than a racial group, such that a Mexican American would identify their race to be White, for example, despite some typical physical differences such as darker skin pigmentation. Further, an additional factor that may contribute to the lack of an ORB effect in the current study is the population in the geographic region. As a border state, Texas has a relatively greater population of Hispanic/Latino individuals, and in San Marcos in particular, based on the last census, 25,089 individuals self-identified as Hispanic, compared to 30,089 individuals who self-identified as non-Hispanic White (https://worldpopulationreview.com/). In such a region where people have such familiarity with both groups, a diminished and perhaps even non-existent ORB may not be too surprising.

The second and third hypotheses – that accuracy would be greater when the participant's political ideology (liberal or conservative) was the same as the political

ideology label accompanying the target faces, and that the degree of one's identification with their ideological group would be positively correlated with their accuracy for target faces of the same ideology – were also not supported. This contrasts with past research studies that found recognition accuracy to be greater for in-group members than for outgroup members of non-racial identity groups (Bernstein et al., 2007; Heheman et al. 2010; Marsh et al., 2016; Shriver et al., 2008; Yan et al., 2018). One plausible explanation for the lack of such an effect in the current study is that the political identity priming task may have failed to sufficiently prime participants to consider their political identities. Rather, it is possible that asking participants to identify their stances on policy issues may have provided them with the opportunity to evaluate the ways in which their views diverged from those of their ideological in-group. For example, when responding to items on the Ideological Consistency Scale relating to homosexuality and environmental protections, conservative participants' modal responses endorsed the "traditionally liberal" response. Likewise, liberal participants' responses to the item assessing beliefs about government regulation of business frequently endorsed "traditionally conservative" responses. Support for this interpretation can be found in Bougher's (2017) Belief Congruence Theory, which states that alignment on political issues, as opposed to partisan identity, influences ratings of favorability towards political in-group and out-group members. Extending Bougher's (2017) logic to the present research, one might argue that completing the Ideological Consistency Scale prompted participants to consider their personal stances on political issues associated with certain political ideological groups rather than their identification with groups themselves.

As a second explanation, the failure to find support for this second hypothesis may be attributed to the manner in which the stimuli were presented. For the purpose of this study, face stimuli were presented individually on a white background and labeled as "Conservative" or "Liberal" with no other indicators of political affiliation. While participants were instructed to attend to the face as well as the label, it is possible that participants predominantly focused on the face rather than the label. Much of the previous research regarding the promotion of common in-group identity to influence ORB has employed various elaborate methods for presenting stimuli to enhance the salience of the common in-group identity. Such methods include the simultaneous presentation of faces belonging to the same in-group, presenting faces in unique spatial arrangements in order to indicate group membership, and presenting faces on a colored background associated with a particular group (Heheman et al. 2010; Shriver et al., 2008; Yan et al., 2018). While the majority of researchers acknowledged that such presentation methods may make it more difficult to attribute the reduction of ORB specifically to ingroup bias, it should be noted that all of these methods placed further emphasis on the common in-group identities than a verbal label alone could.

Finally, the fourth hypothesis – that ORB would be reduced or eliminated with the political identify priming – was also not supported. Aside from the fact that this study failed to find a significant ORB, participants did not exhibit greater recognition memory for other-race faces labeled as endorsing the same political ideology compared to other-race faces labeled as endorsing a different political ideology. This finding may possibly be related to the two explanations given above: that the political identity label may not have been sufficiently salient, and that the political identity priming task may not have

sufficiently primed participants to consider their political identities. In addition, one's identification with a political-ideological in-group may simply not be an effective method for lessening the influence of ORB. According to Social Identity Theory (Tajfel & Turner, 1986), individuals have multiple, simultaneously occurring, identities that are occasionally in conflict with one another. Some of these identities are thought to be relatively stable, and therefore more readily accessible, like race and gender; while others are more situational, such as student status or political affiliation. It could be argued that the contextual information provided in this study failed to adequately promote the secondary status of political affiliation in a way that was meaningful enough to supersede participants' more stable racial identity.

While overall there were no significant results, there were some results approaching significance that are worth noting. First, when assessing the effects of participant race and target race on B", there was a marginally significant main effect of target race on B". Such results are supportive of previous findings suggesting that ORB is influenced by a bias to respond "seen before" when judging the familiarity of other-race faces (Hugenberg et al., 2007). When assessing a potential interaction between race and political identity on hit rates, there was a marginally significant main effect of political identity, such that the differences in hit rates for participants whose political identity was the same as the political identity of the target faces and participants whose political identity was different from the political identity of the target faces were approaching significance. One could potentially interpret these results as further evidence supporting the argument that the Ideological Consistency Scale failed to adequately prime participants to consider their political identities.

#### **Limitations and Directions for Future Research**

This research has several limitations that future studies may wish to address. Perhaps the largest limitation of this study is the number of participants in each condition. Initial power analyses indicated an optimal sample size of 80, with 20 participants in each group. In the present study, analyses were conducted using data from 35 participants. Due to the quasi-experimental nature of this research design, participants were unevenly distributed across conditions. There were 20 Hispanic/Latino liberals, 2 Hispanic/Latino conservatives, 5 White liberals, and 8 White conservatives. Given the large disparities between groups, the researchers remain cautious when drawing conclusions from the present data. It would be advisable to address this limitation in future research by conducting additional targeted recruitment of Hispanic conservatives and White liberals.

Another limitation of the current research is the limited number of face stimuli used in the presentation and memory test phases of the study. There were only four faces per condition (Hispanic/Latino liberal, Hispanic/Latino conservative, White liberal, and White conservative). Ideally, each condition would contain a minimum of eight faces, which is more consistent with previous research (Meissner & Brigham, 2001). However, the limited set of stimuli was ultimately chosen based on preliminary research conducted by Marsh et al. (2016), who noted that other faces from the larger database received lower ratings of race typicality and contained distinguishing information, like glasses or unique hairstyles. Future researchers may wish to explore the possibility of using more stimuli from the current database. Alternatively, one might opt to use a different, more extensive, database altogether.

One final limitation of the current research concerns the ability to generalize the results of this study to scenarios outside of the lab setting. The current study assessed face recognition capabilities by asking individuals to identify photographs of faces that had been presented to them previously. This research paradigm is widely accepted throughout the face recognition literature (Hugenberg et al. 2007; Meissner & Brigham, 2001; Sporer, 2001). However, it is important to acknowledge that face processing does not occur in a vacuum. Factors such as lighting, distance, and face position may all influence accuracy of recognition (Johnson, Hill, & Carman, 2013; Lui, Bhuiyan, Ward, & Sui, 2019). Such subtle influences cannot be captured in a single photograph. For this reason, additional research is also needed to disambiguate the role of stimuli presentation methods play in the amelioration of ORB. Future researchers should explore the use of identity priming to reduce or eliminate ORB in more ecologically valid settings, with an eye toward replicating well-established findings in the face recognition literature using research paradigms that involve interpersonal interaction in a more valid setting as opposed to the presentation of photographic stimuli.

#### **Summary and Conclusion**

In recent years, a large body of literature has been dedicated to exploring the relationship between contextual cues and ORB. Overall, the results of this research are inconsistent with the majority of the findings regarding the influence of identity priming on ORB. In the present research, there were no significant differences in measures of recognition memory when participant race was the same as the race of the target face versus when participant race differed from the race of the target face. Similarly, there were no significant differences in measures of recognition to the target face of the target face.

ideology was the same as the ideology of the target face versus when the participant ideology was not the same as the ideology of the target race. Finally, strength of identification with political groups was not significantly correlated with accuracy of recognition.

Despite these insignificant findings, the present research does offer valuable insight into ORB and identity priming. Namely, an ORB effect may not exist for Hispanic/Latino versus White individuals in communities with great populations of both, and research with identity priming must use sufficiently salient priming tasks and identity labels. Further research is needed to understand the mechanisms by which ORB can be maintained or eliminated, and to extend current lines of investigation to encompass more ecologically valid research paradigms.

## APPENDIX SECTION Appendix A: Ideological Consistency Scale

Directions: Please read the following pairs of statements regarding your personal beliefs about government and politics. Select the statement you most agree with in each set.

Set 1:

A) The government is always wasteful and inefficient.

B) The government generally does a better job than most people give it credit for.

Set 2:

A) Government regulation of business usually does more harm than good.

B) Government regulation in business is necessary to protect the public interest.

Set 3:

A) Poor people have it easy because they can get government benefits without doing anything.

B) Poor people today have hard lives because government benefits do not go far enough to help them live decently.

Set 4:

A) The government cannot afford to do much more to help the needy.

B) The government should do more to help needy Americans, even if it means going into debt.

Set 5:

A) Racial minorities who cannot get ahead in this country are mostly responsible for their own condition.

B) Racial discrimination is the main reason that minorities cannot get ahead these days.

Set 6:

A) Immigrants are a burden to our country taking up our jobs, housing, and healthcare.

B) Immigrants strengthen our country because of their hard work and talent.

Set 7:

A) The best way to ensure peace is by displaying military strength.

B) Good diplomacy is the best way to ensure peace.

Set 8:

A) Most corporations make a fair and reasonable amount of profit.

B) Most corporations make too much profit.

Set 9:

A) Stricter environmental laws and regulations result in the loss of too many jobs and hurt the economy.

B) Stricter environmental laws are worth the costs.

Set 10:

A) Homosexuality should be discouraged by society.B) Homosexuality should be accepted by society.

## **Appendix B: Identification with a Psychological Group Scale**

Directions: The following statements describe some of the ways people think about the groups they belong to. Consider the political ideological group you chose in the previous question when responding to the statements. Please indicate the extent to which you agree with each statement.

When someone criticizes this group, I take it as a personal insult.

- 1) Strongly agree
- 2) Agree
- 3) Somewhat agree
- 4) Neither agree nor disagree
- 5) Somewhat disagree
- 6) Disagree
- 7) Strongly disagree

I don't act like a typical person from this group. (Reverse scored)

- 1) Strongly agree
- 2) Agree
- 3) Somewhat agree
- 4) Neither agree nor disagree
- 5) Somewhat disagree
- 6) Disagree
- 7) Strongly disagree

I'm very interested in what others think about this group.

- 1) Strongly agree
- 2) Agree
- 3) Somewhat agree
- 4) Neither agree nor disagree
- 5) Somewhat disagree
- 6) Disagree
- 7) Strongly disagree

The limitations associated with this group apply to me also.

- 1) Strongly agree
- 2) Agree
- 3) Somewhat agree
- 4) Neither agree nor disagree
- 5) Somewhat disagree
- 6) Disagree
- 7) Strongly disagree

When I talk about this group, I usually say "we" rather than "they."

- 1) Strongly agree
- 2) Agree

- 3) Somewhat agree
- 4) Neither agree nor disagree
- 5) Somewhat disagree
- 6) Disagree
- 7) Strongly disagree

I have a number of qualities that are typical of members of this group.

- 1) Strongly agree
- 2) Agree
- 3) Somewhat agree
- 4) Neither agree nor disagree
- 5) Somewhat disagree
- 6) Disagree
- 7) Strongly disagree

This group's successes are my successes.

- 1) Strongly agree
- 2) Agree
- 3) Somewhat agree
- 4) Neither agree nor disagree
- 5) Somewhat disagree
- 6) Disagree
- 7) Strongly disagree

If a story in the media criticized this group, I would feel embarrassed.

- 1) Strongly agree
- 2) Agree
- 3) Somewhat agree
- 4) Neither agree nor disagree
- 5) Somewhat disagree
- 6) Disagree
- 7) Strongly disagree

When someone praises this group, it feels like a personal complement.

- 1) Strongly agree
- 2) Agree
- 3) Somewhat agree
- 4) Neither agree nor disagree
- 5) Somewhat disagree
- 6) Disagree
- 7) Strongly disagree

I act like a person of this group to a great extent.

- 1) Strongly agree
- 2) Agree
- 3) Somewhat agree

- 4) Neither agree nor disagree
   5) Somewhat disagree
   6) Disagree
   7) Strongly disagree

# Appendix C: Backward Digit Span Task Stimuli

- 1. 3702451792
- 2. 4125167843
- 3. 9865236817
- 4. 8547827068
- 5. 3042150728
- 6. 9486395857
- 7. 3078755629
- 8. 4130914905
- 9. 9627798548
- 10.3839878693

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