**Method**

**Participants**

Thirty-four healthy participants (12 women) ages 21-35 (M = 22.5) participated for $15 an hour. All participants were predominantly right-handed. Only In order to maintain racial homogeneity of the sample and to facilitate comparisons with the extant literature, only White/Caucasian individuals were recruited.

Individuals who indicated conditions that would contraindicate participation in an alcohol challenge (alcohol abstention, symptoms of alcohol or drug dependence, history of serious mental or physical illness, prescription medication other than oral contraception, pregnancy) were excluded from the sample. Participants needed to report drinking an average of 2-24 drinks per week in the past 3 months. Participants abstained from alcohol and drugs for 24 hours to their appointment. Participants were instructed to eat a light meal 4-6 hours prior to their arrival at the lab.

**Self-report Measures**

**Demographic information.**  Participants reported their age, gender, and race. Participants also reported whether they had consumed alcohol, tobacco, or caffeine in the past four hours, how many hours of sleep they’d had the night before, and how many hours of sleep they get in a typical night. Participants reported the environment they were raised in (urban, suburban, or rural) and a number of Likert-scale items regarding their history of interactions with Blacks (i.e. “Did you know many Blacks when you were growing up?” “Of the Blacks you knew, how many would you consider close friends?”). Participants also reported how aggressive, violent, and dangerous they felt White Americans and African Americans were.

**Positive and Negative Affect Scales.** The Positive and Negative Affect Schedule (PANAS) (Watson, Clark, & Tellegen, 1988) is a brief questionnaire composed of two 10-item mood scales which measure separable factors of positive and negative affect. Using Likert-type ratings, participants report the extent to which they are experiencing a variety of positive (i.e. “Strong”, “Active”) and negative (i.e. “Guilty”, “Nervous”) emotions.

**Motivation to Respond Without Prejudice.** Plant and Devine’s (1998) Internal (IMS) and External (EMS) Motivation to Respond Without Prejudice Scales measure individual differences in the extent to which people attempt to control racial prejudice when interacting with and making judgments about others, for both internal and external reasons. The IMS measures the degree to which participants attempt to avoid using stereotypes when making social judgments because of internal goals to be egalitarian (α=.81). The EMS measures the degree to which participants are motivated by external sources, such as the potential social stigma that results from appearing bigoted (α=.80). Together, the scales form a single 10-item questionnaire, with items rated from 1 (strongly disagree) to 9 (strongly agree). This measure was included because individual differences in these motivational factors has been shown in previous research to modulate ACC activation following race-biased errors in the WIT (Amodio et al., 2008) and may affect participants’ use of automatic and control-related processes following consumption of an alcohol placebo (Schlauch et al., 2009).

**Weapons Identification Task (WIT)**

The WIT (Payne, 2001) measures racial bias by assessing the extent to which priming with pictures of white versus black men’s faces affects the speed and accuracy with which participants can identify handguns (i.e., threat-related objects) and hand tools (i.e., harmless objects). Stimuli used in this task include pictures of four handguns, four tools, four white male faces, and four black male faces. Images are digitized at 228 x 172 pixels. On each trial of the WIT, participants are first primed with either a white face or black face prime for 200ms, then shown a tool or gun target for 200ms, which is subsequently covered by a pattern mask. Participants are asked to identify the object as being either a tool (left hand) or gun (right hand, counterbalanced across participants). The post-target pattern mask remains on the display until either the participant makes a response or 2000ms elapse. On trials which the participant fails to press a button within 500ms, the post-target pattern mask turns red, letting the participant know he or she was too slow on that trial. A schematic of the WIT is given in Figure 1.

Previous research indicates that participants make more errors on Black-tool trials and make faster responses on Black-gun trials, consistent with the idea that implicit biases (i.e., stereotypes linking young Black men with violence) shape performance in the task (e.g., Lambert et al., 2003; Payne, 2001, 2005; Payne, Shimozu, & Jacoby, 2005). As in previous research, participants were informed that errors on black-tool and on white-gun trials are indicative of race bias. These instructions have been demonstrated to increase the accessibility of racial bias and cause more errors on stereotype-incongruent trials (Payne et al., 2002; Schlauch et al., 2009). This task has been found to be highly socially motivating, and participants invest considerable effort attempting to overcome their innate biases. While the task does not give accuracy feedback, participants have no trouble recognizing their errors.

Participants first performed a single practice block of 24 trials. Participants with an excess of responses slower than 500ms repeated the practice until their reaction times improved. Following the practice, participants performed six blocks of the task while BOLD images were acquired with the fMRI. (FOV: 256mm X 256mm, TR/TE: 1700/28ms, Slice thickness: 4mm, Slice number: 27, Flip angle: 90°, Resolution: 64x64, Voxel size: 4mm x 4mm x 4mm) Each block of the task featured 16 trials of each face-object pairing; each block lasted about six minutes. The inter-trial interval (ITI) was jittered such that there were 0ms, 2000ms, or 4000ms of fixation between trials. This was expected to increase the total variability of the BOLD data, increasing analytical power.

**Beverage Administration**

To ensure that participants abstained from alcohol prior to the study, all participants received a test of breath alcohol concentration (BrAC) immediately prior to receipt of the beverage. Participants with a BrAC above .00 were dismissed (one participant was rescheduled and another was excluded from the study). Female participants were also asked to take a pregnancy test and, in the case of a positive test, excluded from the study (no participants).

Participants were randomly assigned to one of two beverage conditions. Participants in the control group consumed a beverage of tonic water which they knew contained no alcohol. Participants in the placebo condition consumed a beverage consisting mostly of tonic water but including a trivial amount of alcohol (0.04 g/kg ethanol), and were told that the beverage contained “a moderate amount” of alcohol. Women in the study were asked to self-administer a pregnancy test before receiving the beverage, and in the event of a positive test, excluded from the study.

In both beverage conditions, the beverage was poured in front of the participant. To bolster the placebo cover story, the placebo vodka (90% decarbonated tonic water; 10% 100-proof vodka) was kept in and poured from a Smirnoff 100-proof vodka bottle. To achieve the placebo alcohol dose, the placebo vodka is mixed with tonic water in a 5:1 tonic to placebo vodka ratio, yielding a beverage that is only trivially alcoholic. Participants were invited to add a small amount of cranberry or lime juice to improve the taste of the beverage. The control group consumed an isovolemic beverage of tonic water. In both groups, participants received their beverage in three servings. Participants had ten minutes to consume each serving.

**Functional Magnetic Resonance Imaging (fMRI)**

Brain imaging was carried out using a Siemens Trio 3T scanner. Upon entrance to the scanner, an initial localizer scan made certain that the participant’s head was properly oriented in the scanner (TR/TE: 8.6/4.0ms, Flip Angle: 20°, Thickness: 7.0mm, Sagittal alignment). Then, two high-resolution anatomical brain images were taken so as to align the functional brain images across participants. These were one high-resolution T1-weighted image (TR: 2400ms, TE: 3.16ms, Flip Angle: 8°, 176 slices, Thickness: 1.0mm, Sagittal alignment) and one high-resolution T2-weighted image (TR: 3200ms, TE: 455ms, 176 slices, Thickness: 1.0mm, Sagittal alignment). During this time, participants watched the TV show *Planet Earth* so as to remain alert and reduce fatigue and boredom.

During task performance, brain activity was measured with a T2\*-weighted blood-oxygenation-level-dependent (BOLD) scan. (FOV: 256mm X 256mm, TR/TE: 1700/28ms, Slice thickness: 4mm, Slice number: 27, Flip angle: 90°, Resolution: 64x64, Voxel size: 4mm x 4mm x 4mm)

**Procedure**

Upon arrival to the brain imaging center for their scheduled session, participants were greeted by an experimenter who escorted them to a private room to read the consent form and, following informed consent (no participants declined to give consent), to complete a brief interview to confirm their fMRI safety. Next, participants completed the questionnaire measures, including a baseline PANAS assessment, during which the experimenter randomly assigned the participant to a beverage condition and determined the appropriate amount of beverage. Following completion of these measures, participants were administered their beverages. Following completion of their final drink, participants sat idle for 5 min (ostensibly to allow alcohol absorption for those in the placebo condition), and then were given a second BrAC assessment and a second PANAS.

Next, and following a security procedure to ensure that participants had no ferrous metal on their person, participants were escorted into the scanner room. Next, an experimenter read the instructions for the WIT and participants performed a practice block on their own. Participants then performed six blocks of the WIT. After participants completed all blocks of the WIT, two additional “resting-state” scans measured spontaneous brain activity while the participant laid at rest with eyes closed.

Participants were then removed from the scanner, and PANAS and BrAC were measured for a third time. Participants then completed a brief set of post-experiment questionnaire items that asked participants how intoxicated they felt at various times throughout the experiment, to what degree they felt their performance on the task was affected by the beverage they consumed, and (for those in the placebo condition) how many standard drinks of alcohol they believe to have consumed at the start of the experiment.

Following the completion of this questionnaire, participants underwent a funneled debriefing. The experimenter asked the participant a series of questions: if they had any questions about the study, if anything about the study had been suspicious, when might the experimenter have lied, and whether they’d thought the experimenter had lied about the beverage. Finally, the participant was fully debriefed, thanked, and dismissed.